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| ARCHITECT | STUDIO NORTH ARCHITECTURE • 3315 NORTH OAK TRAFFICWAY • KANSAS CITY, MO 64116 • 816.888.7380 |
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION • 1307 UNION AVENUE • KANSAS CITY, MO 64101 • 816.608.1800 |

Tenant Improvements For:

H&R Block Depot

Located At:

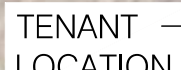
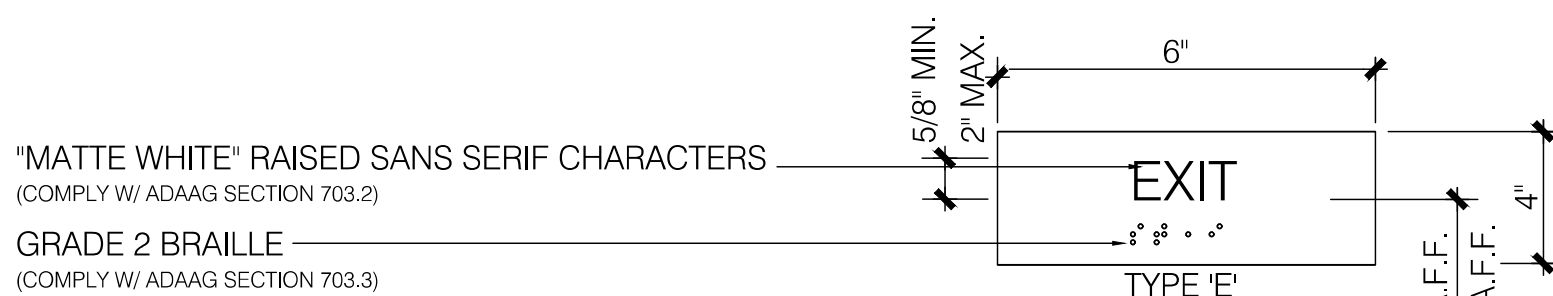
Lee's Summit Logistics

Building B • 1220 NW Main St • Lee's Summit, MO 64086

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|-------------------------------------|---|
| ARCHITECTURAL | MECHANICAL |
| A0.01 LEGENDS AND GENERAL NOTES | DESIGN-BUILD BY GEN CONTRACTOR TO BE SUBMITTED UNDER SEPARATE COVER |
| A0.02 SPECIFICATIONS | |
| A0.03 WALL TYPES DETAILS | |
| A2.01 FLOOR PLANS | PLUMBING |
| A4.01 INTERIOR ELEVATIONS DETAILS | DESIGN-BUILD BY GEN CONTRACTOR TO BE SUBMITTED UNDER SEPARATE COVER |
| A8.01 DOOR & WINDOW SCHEDULE | |
| A8.02 DOOR & WINDOW DETAILS | |
| A8.03 FINISH SCHEDULE FINISH PLAN | ELECTRICAL |
| A9.01 REFLECTED CEILING PLAN | DESIGN-BUILD BY GEN CONTRACTOR TO BE SUBMITTED UNDER SEPARATE COVER |

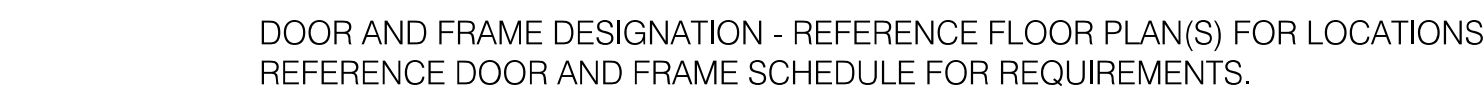
PERMANENT SIGNAGE COMPLYING WITH THE SPECIFICATIONS AND DETAILS BELOW SHALL BE FURNISHED AND INSTALLED AT THE FOLLOWING LOCATIONS:

1. INTERIOR AND EXTERIOR SIGNS IDENTIFYING PERMANENT ROOMS AND SPACES SHALL COMPLY WITH ADAAG SECTIONS 703.1, 703.2, 703.3, 703.4, AND 703.5.
2. WHERE PICTOGRAMS ARE PROVIDED AS DESIGNATIONS OF PERMANENT INTERIOR ROOMS AND SPACES, THE PICTOGRAMS SHALL COMPLY WITH ADAAG SECTION 703.6 AND SHALL HAVE TEXT DESCRIPTORS COMPLYING WITH ADAAG SECTIONS 703.2 AND 703.5, AND COMPLYED BY GRADE 2 BRAILLE COMPLYING WITH ADAAG SECTION 703.3.
3. SIGNS SHALL BE MOUNTED PER THE DETAIL BELOW AND SO THAT TACTILE CHARACTERS ARE A MINIMUM OF 48" ABOVE THE FINISHED FLOOR OR GROUND SURFACE AS MEASURED FROM THE BASELINE OF THE LOWEST CHARACTER AND A MAXIMUM OF 60" ABOVE THE FINISHED FLOOR OR GROUND SURFACE AS MEASURED FROM THE BASELINE OF THE HIGHEST CHARACTER
4. SIGNS SHALL BE MOUNTED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR, ON THE RIGHT HAND SIDE OF DOUBLE DOORS WITH 2 ACTIVE LEAFS, AND ON THE INACTIVE LEAF OF DOUBLE DOORS WITH ONE ACTIVE LEAF. IF NO LATCH SPACE EXISTS ON THE LATCH SIDE OF THE DOOR, SIGNS SHALL BE MOUNTED ON THE NEAREST ADJACENT WALL.



1. ALL CONSTRUCTION SHALL CONFORM TO THE MINIMUM STANDARDS OF THE APPLICABLE CODES INDICATED IN THE CODE SUMMARY COLUMN AND ALL LOCAL CODES PRESENTLY IN EFFECT UNLESS

1. ALL CONSTRUCTION SHALL CONFORM TO THE MINIMUM STANDARDS OF THE APPLICABLE CODES INDICATED IN THE CODE SUMMARY COLUMN AND ALL LOCAL CODES PRESENTLY IN EFFECT UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
2. ALL NEW CONSTRUCTION SHALL COMPLY W/ THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) AND CHAPTER 11 ACCESSIBILITY OF THE INTERNATIONAL BUILDING CODE.
3. THE OWNER SHALL OBTAIN AN PAY FOR ALL REQUIRED BUILDING PERMITS AND LICENSES, AND UTILITY CHARGES. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS.
4. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS & CONDITIONS ON THE JOB SITE PRIOR TO THE BIDDING OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
5. IN CASES OF DISCREPANCY CONCERNING DIMENSIONS, QUANTITIES AND LOCATION, THE CONTRACTOR SHALL, IN WRITING, CALL TO THE ATTENTION OF THE ARCHITECT ANY DISCREPANCIES BETWEEN SPECIFICATIONS, PLANS, DETAILS OR SCHEDULES. THE ARCHITECT WILL THEN INFORM THE CONTRACTOR, IN WRITING, WHICH DOCUMENT TAKES PRECEDENCE. THERE SHALL BE NO ADJUSTMENT TO THE COST OR TIME OF THE WORK, RESULTING FROM CLARIFICATION OF SUCH DISCREPANCIES.
6. DIMENSIONS ON DRAWINGS ARE SHOWN TO FINISHED FACE OF WALLS AND PARTITIONS OF EXISTING OR NEW CONSTRUCTION UNLESS OTHERWISE NOTED. CEILING HEIGHT, DIMENSIONS AND ALL OTHER VERTICAL DIMENSIONS ARE TO THE FINISHED FLOOR SURFACE UNLESS OTHERWISE NOTED.
7. ALL MATERIALS SPECIFIED OR NOTED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS, PRODUCT DATA, OR SAMPLES PER THE SPECIFICATIONS. PRIOR TO FORWARDING TO THE ARCHITECT FOR REVIEW, THESE SUBMITTALS MUST BE REVIEWED BY THE CONTRACTOR FOR CONFORMANCE WITH THE MEANS, METHODS, MATERIALS, AND SEQUENCES AND OPERATIONS OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS. INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL AFFIX HIS STAMP TO EACH SUBMITAL. INDICATING HIS REVIEW. SUBMITTALS FORWARDED WITHOUT A STAMP WILL BE RETURNED.
9. CONTRACTOR SHALL GUARANTEE ALL WORK AS OUTLINED IN THE OWNER-CONTRACTOR AGREEMENT.
10. ALL CHANGES PROPOSED DURING CONSTRUCTION WHICH RESULT IN A CHANGE TO THE CONTRACT TIME AND/OR SUM SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE OWNER BEFORE SUCH WORK SHALL COMMENCE.
11. CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED FIRE-RETARDANT TREATED WOOD BLOCKING BEHIND ALL WALL MOUNTED ITEMS AS REQUIRED FOR ADEQUATE SUPPORT.
12. CONTRACTOR SHALL COORDINATE ALL LOCK AND LATCH SETS AND FINAL KEYING WITH OWNER. DOUBLE KEYED LOCKS ARE NOT PERMITTED ON ANY REQUIRED OR MARKED EXIT. MATCH EXISTING KEYING SYSTEM IF ONE IS EXISTING.
13. ALL DOOR HARDWARE ON EXIT DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.
14. CONTRACTOR SHALL PREPARE ALL SURFACES SCHEDULED TO RECEIVE NEW FINISHES IN ACCORDANCE W/ THE MANUFACTURERS RECOMMENDATIONS FOR THE SUBSTRATE AND FINISH BEING APPLIED.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING CONSTRUCTION INDICATED TO REMAIN AND SHALL REPAIR AND/OR REPLACE ALL AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION AT A MINIMUM TO THE CONDITION WHICH EXISTED PRIOR TO CONSTRUCTION.
16. CONTRACTOR SHALL COORDINATE QUANTITY AND LOCATIONS OF FIRE EXTINGUISHERS WITH THE FIRE DEPARTMENT AND/OR BUILDING DEPARTMENT.
17. ALL HIGH-PILED STORAGE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE APPLICABLE EDITION OF THE INTERNATIONAL FIRE CODE
18. ALL NEW GLASS AND GLAZING LOCATED IN HAZARDOUS LOCATIONS AS DEFINED IN IBC CHAPTER 24 SHALL MEET THE REQUIREMENTS FOR SAFETY GLAZING AS DEFINED IN CHAPTER 24
19. FURNITURE AND APPLIANCES INDICATED ON PLANS ARE FOR CONCEPTUAL PLANNING PURPOSES ONLY, UNLESS NOTED OTHERWISE. CONTRACTOR SHALL VERIFY THE FINAL SPECIFICATIONS, LAYOUT, AND CLEARANCE REQUIREMENTS WITH LANDLORD OR TENANT.
20. CONTRACTOR SHALL COORDINATE CLEAR OPENINGS FOR ALL APPLIANCES PRIOR TO CONSTRUCTION OF CASEWORK.
21. CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED FIRE-RETARDANT TREATED WOOD BLOCKING BEHIND ALL CABINETS, TOILET ACCESSORIES, PLUMBING FIXTURES, AND OTHER WALL MOUNTED ITEMS AS REQUIRED FOR ADEQUATE SUPPORT.
22. INTERIOR FINISHES SHALL CONFORM TO IBC CHAPTER 8 AND SECTION 1210
23. ALL GYPSUM BOARD AT BATHROOMS, LAUNDRIES, AND WET WALLS SHALL BE MOISTURE RESISTANT.
24. ALL CONSTRUCTION MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A MAXIMUM FLAME SPREAD RATINGS OF 25 AND MAXIMUM SMOKE DEVELOPED RATINGS OF 50.
25. ALL PWRING LOW VOLTAGE WIRE AND CABLE, OPTICAL FIBER, PNEUMATIC TUBING, AND ALL DUCT AND DUCT COVERINGS, UNINGS AND CONNECTORS INSTALLED WITHIN PLENUMS MUST BE RATED FOR PLENUM USE.
26. TENANT SHALL BE RESPONSIBLE FOR COORDINATION AND INSTALLATION OF VOICE AND DATA CABLEING AND EQUIPMENT.



 SEMI-RECESSED FIRE EXTINGUISHER BY LARSEN'S MANUFACTURING COMPANY,
WWW.LARSENSMFG.COM, ARCHITECTURAL SERIES AL2409-6R, W/MP10 FIRE EXTINGUISHER, CLEAR
ALUMINUM SOLID DOOR, AND *FIRE* HANDLE W/ STANDARD FINSH. MOUNT SO CENTERLINE OF
CABINET HANDLE IS 47" A.F.F.

PROJECT INFORMATION

H&R BLOCK DEPOT TENANT IMPROVEMENT
1220 NW Main St, Lee's Summit, MO 64086
OFFICE, STORAGE

TERMINAL IMPROVEMENTS FOR A TECHNICAL OFFICE AND WAREHOUSE STORAGE COMPONENT SUPPORTING THE COMPANY'S EQUIPMENT NEEDS BY RECEIVING EQUIPMENT TO BE REPAIRED, STORED AND SHIPPED BACK OUT TO COMPANY SITES

INTERNATIONAL BUILDING CODE (IBC)
INTERNATIONAL FIRE CODE (IFC)
INTERNATIONAL MECHANICAL CODE (IMC)
INTERNATIONAL PLUMBING CODE (IPC)
NATIONAL ELECTRICAL CODE (NEC)
ICC/ANSI A117.1-2009, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

*2: BUILDING HEIGHT LIMITED TO 1 STORY PER INCREASED TRAVEL DISTANCE EXCEPTION TAKEN PER 1017.2.2

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| TOTAL ALLOWABLE HEIGHT | 60'-0", 2 STORIE |
| TOTAL CONSTRUCTED HEIGHT | 42'-0", 1 STOR |

ONE-STORY, GROUP B.F.M.S
Automatic Sprinkler System
Frontage: Automatic sprinkler system throughout per Section 903.3.1.
Surrounded and adjoined by public ways or yards not less than 60' in width

| | |
|---------------------------------------|-------------|
| TOTAL ALLOWABLE AREA | UNLIMITED |
| TOTAL CONSTRUCTED BUILDING SHELL AREA | = 113,615 S |
| TOTAL PROPOSED TENANT AREA | = 34,090 S |

| NON-SEPARATED OCCUPANCIES (most restrictive occupancy classification determines allowable area) | |
|---|--|
| MOST RESTRICTIVE OCCUPANCY GROUP | GROUP (S-1, S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-12, S-13, S-14, S-15, S-16, S-17, S-18, S-19, S-20, S-21, S-22, S-23, S-24, S-25, S-26, S-27, S-28, S-29, S-30, S-31, S-32, S-33, S-34, S-35, S-36, S-37, S-38, S-39, S-40, S-41, S-42, S-43, S-44, S-45, S-46, S-47, S-48, S-49, S-50, S-51, S-52, S-53, S-54, S-55, S-56, S-57, S-58, S-59, S-60, S-61, S-62, S-63, S-64, S-65, S-66, S-67, S-68, S-69, S-70, S-71, S-72, S-73, S-74, S-75, S-76, S-77, S-78, S-79, S-80, S-81, S-82, S-83, S-84, S-85, S-86, S-87, S-88, S-89, S-90, S-91, S-92, S-93, S-94, S-95, S-96, S-97, S-98, S-99, S-100) |
| ALLOWABLE AREA | GROUP S-1, TYPE II-B, 60' YARDS, FULLY SPRINKLERED = UNLIMITED |

| BUILDING ELEMENT | CONSTRUCTION TYPE (II-B) |
|--|--------------------------|
| Primary structural frame | 0 hours |
| Bearing walls (exterior) | 0 hours |
| Non-bearing walls and partitions (interior) | 0 hours |
| Non-bearing walls and partitions (exterior) | 0 hours |
| Roof construction and associated secondary members | 0 hours |
| | |

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| OFFICE (150 SF/OCCUPANT) | 8,027 SF/150 SF PER OCCUPANT = 54 OCCUPANTS |
| STORAGE (300 SF/OCCUPANT) | 1,331 SF/300 SF PER OCCUPANT = 6 OCCUPANTS |
| WAREHOUSE (500 SF/OCCUPANT) | 24,732 SF/500 SF PER OCCUPANT = 50 OCCUPANTS |
| TOTAL OCCUPANT LOAD | 109 OCCUPANTS |
| * ACCESSORY USE AREAS (SEE CODE PLAN) NOT ADDITIVE TO TOTAL OCCUPANT LOAD, EMPLOYEE USE ONLY | |
| TRAINING ROOM (20 SF/OCCUPANT) | 748 SF NET/20 SF PER OCCUPANT = 38 OCCUPANTS |

EGRESS WIDTH REQUIRED: (109 occupants) x (.2' per occupant) = 21.8'
EGRESS WIDTH PROVIDED: (4) Doors @ 33" CLR = 132"
EXIT ACCESS TRAVEL DISTANCE GROUP B SPRINKLERED = 300', GROUP S-1, SPRINKLERED = 400'
Smoke and heat venting None required w/ ESFR sprinkler system per IBC Section 910.1, Exception 2

| OCC | OCCUPANT LOAD | WATER CLOSETS | | LAVATORIES | | DINKING FOUNTAINS | OTHER |
|-------|-------------------------------|---------------|----------|------------|--------|-------------------|-----------------|
| | | MALE | FEMALE | MALE | FEMALE | | |
| B | 54 occ./2=27 men,27 women | 1.07 | 1.07 | .67 | .67 | .54 | |
| S | 55 occ./2=27.5 men,27.5 women | 1.07 | 1.07 | .67 | .67 | .55 | |
| TOTAL | | 1.34 | 1.34 | .94 | .94 | .59 | 1 service sinks |
| | | REQUIRED | PROVIDED | | | | 1 H, 1 LOW |

AN ENERGY COST BUDGET (ECB) COMPLIANCE REPORT OR TOTAL BUILDING PERFORMANCE-BASED COMPLIANCE REPORT SHALL BE PROVIDED AND SUBMITTED UNDER SEPARATE COVER BY THE OWNER.

ENERGY COST BUDGET (ECB) - THE REPORT SHALL COMPLY WITH THE CURRENT MANDATORY PROVISIONS OF ASHRAE 90.1 AS ALLOWED BY THE IECC. THE REPORT MUST DEMONSTRATE THE DESIGN ENERGY COST DOES NOT EXCEED THE ENERGY COST BUDGET AS CALCULATED BY THE SIMULATION PROGRAM REQUIREMENTS; AND THE ENERGY EFFICIENCY LEVEL OF COMPONENTS SPECIFIED IN THE BUILDING DESIGN MEET OR EXCEED THE EFFICIENCY LEVEL USED TO CALCULATE THE DESIGN ENERGY COST.

TOTAL BUILDING PERFORMANCE-BASED COMPLIANCE - THE REPORT SHALL MEET THE MANDATORY REQUIREMENTS OF THE IECC. THE REPORT MUST DEMONSTRATE THE PROPOSED BUILDING/ DESIGN HAS AN ANNUAL ENERGY COST THAT IS LESS THAN OR EQUAL TO THE ANNUAL ENERGY COST OF THE STANDARD REFERENCED DESIGN.

THIS DISCLAIMER SERVES NOTICE OF ACCEPTANCE OF RESPONSIBILITY AND DISCLAIMER OF RESPONSIBILITY AS TO THE CONTRACT DOCUMENTS PREPARED FOR H&R BLOCK DEPOT TENANT IMPROVEMENTS BY STUDIO NORTH ARCHITECTURE

STUDIO NORTH ARCHITECTURE AND THE UNDERSIGNED ARCHITECT, ARE RESPONSIBLE FOR PREPARATION OF THE FOLLOWING CONSTRUCTION DRAWINGS:

| NO | TITLE |
|-------|-------------------------------|
| A0.01 | LEGENDS AND GENERAL NOTES |
| A0.02 | SPECIFICATIONS |
| A0.03 | WALL TYPES DETAILS |
| A2.01 | FLOOR PLANS |
| A4.01 | INTERIOR ELEVATIONS DETAILS |
| AB.01 | DOOR & WINDOW SCHEDULE |
| AB.02 | DOOR & WINDOW DETAILS |
| AB.03 | FINISH SCHEDULE FINISH PLAN |
| A9.01 | REFLECTED CEILING PLAN |

THE UNDERSIGNED ARCHITECT AND STUDIO NORTH ARCHITECTURE DISCLAIM RESPONSIBILITY FOR ALL OTHER CONSTRUCTION DOCUMENTS, AND ANY OTHER SPECIFICATIONS, REPORTS, ESTIMATES, SHOP DRAWINGS, ETC. RELATING TO OR INTENDED TO BE USED FOR ANY PART OF THE ARCHITECTURAL OR ENGINEERING PROJECT, INCLUDING ANY GEOTECHNICAL ENGINEERING SERVICES, OR ENVIRONMENTAL REPORTS.

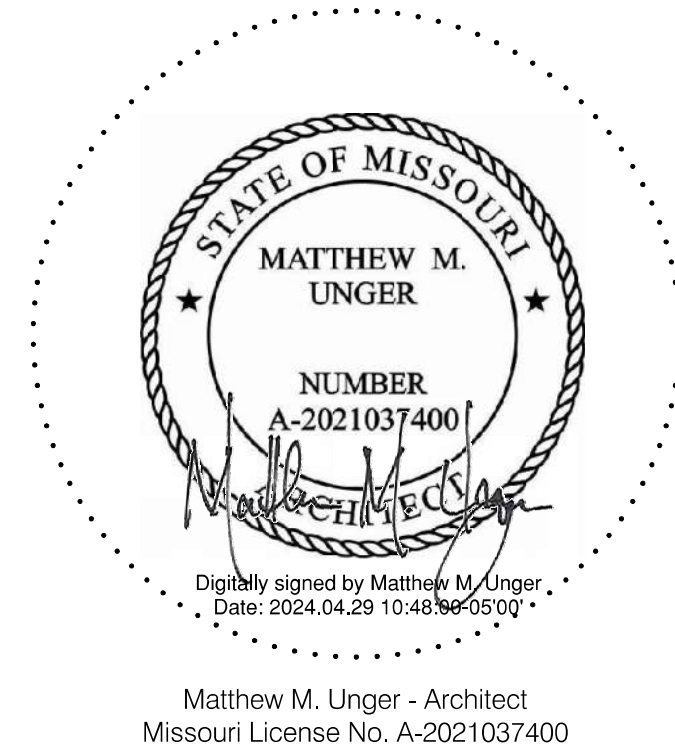
THIS NOTICE IS EXECUTED BY THE UNDERSIGNED AND AUTHENTICATED BY THE ARCHITECTURAL SEAL OF THE PERSON PREPARING THIS NOTICE.

ARCHITECT: MATTHEW M. UNGER

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| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

[illegible]

Matthew M. Unger - Architect
Missouri License No. A-2021037400

A0.01

DIVISION 1 - GENERAL REQUIREMENTS

- 1.1 TENANT FURNISHED ITEMS
- A. THE FOLLOWING ITEMS WILL BE FURNISHED AND INSTALLED BY THE TENANT. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE WORK WITH THE OWNER TO PROPERLY COORDINATE WITH THE OVERALL PROJECT SCHEDULE.
1. VOICE AND DATA CABLING AND EQUIPMENT
2. ELECTRONIC DOOR SECURITY HARDWARE
3. SYSTEMS OFFICE FURNITURE
4. WAREHOUSE PACKAGING AND PRODUCTION EQUIPMENT
5. APPLIANCES
- 1.2 ALLOWANCES
- A. IF ANY PORTIONS OF THE PROJECT ARE INDICATED TO BE BID BY A COST PER UNIT ALLOWANCE, THE ALLOWANCE STATED IN THE DOCUMENTS IS THE COST TO THE CONTRACTOR OF THE PRODUCTS OR MATERIALS ONLY. ANY TAXES, FREIGHT, MARKUP, DELIVERY, AND LABOR SHALL BE IN ADDITION TO THE MATERIAL ALLOWANCE.
- 1.3 ALTERNATES
- A. FOR ALTERNATES, THE CONTRACTOR SHALL FURNISH A SEPARATE ADD OR DEDUCTIVE PRICE FOR ALL MATERIAL, TAXES, FREIGHT, MARKUP, DELIVERY, LABOR, OVERHEAD AND PROFIT FOR THAT PORTION OF THE WORK WHICH IS PROPOSED AS AN ALTERNATE. ITEMS THEN BE ADDED OR DEDUCTED FROM THE CONTRACT SUM IF THE OWNER ACCEPTS THE ALTERNATE.
- 1.4 SUBMITTALS
- A. CONTRACTOR SHALL ELECTRONIC COPY OR FIVE (5) HARD COPIES OF EACH REQUIRED SHOP DRAWING OR PRODUCT DATA SUBMITTAL FOR ARCHITECTS REVIEW. ARCHITECT SHALL RETAIN TWO (2) COPIES AND RETURN THREE (3) MARKED UP SUBMITTALS TO THE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR ANY ADDITIONAL DUPLICATION IN THE NUMBER OF COPIES NECESSARY FOR DISTRIBUTION TO THE SUBCONTRACTOR, FIELD SUPERINTENDENT, ETC.
1. PRIOR TO FORWARDING TO THE ARCHITECT, SUBMITTALS SHALL BE REVIEWED BY THE CONTRACTOR FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL AFFIX HIS STAMP INDICATING HIS REVIEW AND APPROVANCE WITHOUT A STAMP WILL BE RETURNED TO THE CONTRACTOR UNREVIEWED.
2. SUBMITTALS SHALL BE MADE FAR ENOUGH IN ADVANCE OF SCHEDULED CONSTRUCTION ACTIVITY TO ALLOW ARCHITECT A MINIMUM OF TEN (10) BUSINESS DAYS FOR INITIAL REVIEW AND A MINIMUM OF FIVE (5) BUSINESS DAYS FOR REVIEW OF SUBMITTALS (IF REQUIRED).
- 1.5 REFERENCE STANDARDS
- A. CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE MOST RECENT STANDARDS IN EFFECT AS OF THE DATE OF THE CONSTRUCTION DOCUMENTS, UNLESS INDICATED OTHERWISE.
- 1.6 CLOSURE PROCEDURES
- A. PUNCHLIST - PRIOR TO SCHEDULING A SUBSTANTIAL COMPLETION WALK-THROUGH TO DEVELOP A PUNCHLIST OF ITEMS REQUIRING COMPLETION, PROJECT SHALL BE FINAL CLEANED, TOUCH-UP PAINTED, AND DAMAGED CEILING TILE REPLACED. UPON ARRIVAL, IF THE ARCHITECT DETERMINES THE PROJECT IS NOT READY FOR WALK-THROUGH, THE PUNCHLIST SHALL BE RESCHEDULED.
1. WHEN THE CONTRACTOR CONSIDERS THE PUNCHLIST ITEMS FULLY COMPLETED, A FINAL WALK-THROUGH SHALL BE SCHEDULED TO REVIEW THE COMPLETED CONSTRUCTION.
- B. PRIOR TO PROJECT COMPLETION, CONTRACTOR SHALL SUBMIT/COMPLETE THE FOLLOWING:
1. ONE (1) SET OF PROJECT COMPLETION DRAWINGS NEATLY MARKED UP TO SHOW ACTUAL INSTALLATION WHERE INSTALLATION VARIES FROM THAT SHOWN ON ORIGINALLY ON THE CONSTRUCTION DOCUMENTS.
2. TWO (2) COPIES OF OPERATION AND MAINTENANCE MANUALS INCLUDING SUBCONTRACTOR AND SUPPLIER CONTACT INFORMATION, MAINTENANCE AND SERVICE INSTRUCTIONS, SCHEDULES, EMERGENCY INSTRUCTIONS, SPARE PARTS LISTS, WIRING DIAGRAMS, AND WARRANTY INFORMATION.
3. TRAINING OF OWNER PERSONNEL ON USE AND MAINTENANCE OF MECHANICAL, ELECTRICAL, PLUMBING, FIRE SPRINKLER, ALARM, SECURITY, IRRIGATION, AND OTHER BUILDING SYSTEMS.

- 2.2 JOINT SEALANTS
- A. SUBMITTALS: PRODUCT DATA AND SCHEDULE OF LOCATIONS FOR EACH TYPE OF SEALANT SUBMITTED.
- B. ENVIRONMENTAL LIMITATIONS: DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER. JOINT SEALANTS SHALL BE APPLIED TO SUBSTRATES THAT ARE DRY, CLEAN, AND COMPATIBLE. PROVIDE JOINT SEALANTS, JOINT FILLERS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER SERVICE AND APPLICATION CONDITIONS.
- D. JOINT SEALANTS:
1. EXTERIOR TRAFFIC BEARING JOINTS: WHERE SLOPE PERMITS USE OF POURABLE SEALANT: SINGLE COMPONENT, POURABLE URETHANE SEALANT, ASTM C 820, TYPE S, GRADE P, CLASS 25; USES 1, M, G, A, AND Q.
2. INTERIOR JOINTS IN CERAMIC TILE AND OTHER HARD SURFACES IN KITCHENS, TOILET ROOMS, AND AROUND PLUMBING FIXTURES: SINGLE COMPONENT, MILDEW-RESISTANT SILICONE SEALANT, ASTM C 920, TYPE S, GRADE NS, CLASS 25; USES NT, G, A, AND Q, FORMULATED WITH FUNGICIDE.
3. INTERIOR JOINTS AROUND PERIMETERS OF DOORS AND FRAMES: LATEX SEALANT, SINGLE COMPONENT, NONSAG, MILDEW-RESISTANT, PAINTABLE, ACRYLIC EMULSION SEALANT COMPLYING WITH ASTM C 834.
4. ACQUASTICAL SEALANT FOR EXPOSED INTERIOR JOINTS: NONSAG, PAINTABLE, NONSTAINING, LATEX SEALANT COMPLYING WITH ASTM C 834.
5. ACQUASTICAL SEALANT FOR CONCEALED JOINTS: NONDRYING, NONHARDENING, NONSKINNING, NONSTAINING, GUNNABLE, SYNTHETIC-RUBBER SEALANT RECOMMENDED FOR SEALING INTERIOR LARGED JOINTS TO REDUCE TRANSMISSION OF AIRBORNE SOUND.
- E. JOINT SEALANT: SINGLE SEALANT FOR CONCEALED JOINTS: POLYURETHANE SEALANT C330, SIZE 30% TO 50% LARGER THAN JOINT WIDTH, ALL OPEN CELL BACKINGS SUCH AS "DENVER FOAM" ARE PROHIBITED.
- F. BOND-BREAKER TAPE: POLYETHYLENE TAPE OR OTHER PLASTIC TAPE RECOMMENDED BY SEALANT TRIMMER FOR PREVENTING SEALANT FROM ADHERING TO RIDG, INFLEXIBLE JOINT-FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT.
- G. INSTALLATION: COMPLY WITH ASTM C 1193, ASTM C 919 FOR ACQUASTICAL JOINTS; AND AS FOLLOWS:
1. REMOVE ALL LOOSE MATERIALS AND PREPARE SURFACES IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND PROTECT ADJACENT SURFACES.
2. INSTALL BOND-BREAKER TAPE WHERE JOINT BACKINGS ARE NOT USED.
3. INSTALL SEALANT TOOLED CONCAVE, FREE OF AIR POCKETS, FOREIGN EMBEDDED MATTER, RIDGES, AND SAGS, AND PROTECT UNTIL FULLY CURED. SEALANT WITH DUST AND DEBRIS EMBEDDED IN SURFACE SHALL BE CAUSE FOR REJECTION.

DIVISION 8 - DOOR AND WINDOWS

- 8.1 STEEL DOORS AND FRAMES
- A. SUBMITTALS: PRODUCT DATA AND DOOR SCHEDULE INDICATING DOOR AND FRAME SIZES, TYPES, ELEVATIONS, DETAILS, AND HARDWARE WITH MATERIALS AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.
- B. MATERIALS:
1. HOT-ROLLED STEEL SHEETS: ASTM A1011/A 1011M
2. COLD-ROLLED STEEL SHEETS: ASTM A 1008/A 1008M OR ASTM A 820/A 820M
3. GALVANIZED STEEL SHEETS: ASTM A 653/A 653M, A40 OR G40 (27/100 OR Z120) COATING
- C. STEEL DOORS: COMPLY WITH ANSI Z50.1 FOR LEVEL AND MODEL, AND ANSI A250.4 FOR PHYSICAL ENDURANCE LEVEL INDICATED. 1 1/2" THICK, PREPARED FOR MORTISED AND CONCEALED HARDWARE ACCORDING TO ANSI A 250.6 AND ANSI A115 SERIES STANDARDS AND REINFORCED TO RECEIVE SURFACE-APPLIED HARDWARE.
1. INTERIOR DOORS: LEVEL 2, PHYSICAL PERFORMANCE LEVEL B (HEAVY DUTY), MODEL 1 (FULL FLUSH)
- D. STEEL FRAMES: ANSI A 250.6, CONCEALED FASTENING, PREPARED FOR MORTISED AND CONCEALED HARDWARE ACCORDING TO ANSI A 250.6 AND ANSI A 115 SERIES STANDARDS AND REINFORCED TO RECEIVE SURFACE-APPLIED HARDWARE.
1. STEEL SHEET THICKNESS FOR INTERIOR FRAMES: PER DOOR SCHEDULE
- E. ACCESSORIES:
1. GLAZING STOPS: NONREMOVABLE ON SECURE SIDE OF INTERIOR DOORS; SCREW-APPLIED, REMOVABLE GLAZING STOPS ON INSIDE
2. DOOR SILENCERS: GRAY RUBBER PUSH-IN TYPE; THREE ON STRIKE JAMB OF SINGLE DOORS; TWO ON HEAD OF DOUBLE DOORS
3. SUPPORTS AND ANCHORS: MIN. 042" THICK GALVANIZED STEEL SHEET
4. PRIMER: MANUFACTURERS STANDARD FACTORY APPLIED COAT OF RUST-INHIBITIVE PRIMER COMPLYING WITH ANSI A250.10.
- F. INSTALLATION:
1. FRAMES: COMPLY WITH SDI 105
2. DOORS: COMPLY WITH ANSI A250.8. SHIM AS NECESSARY TO COMPLY WITH SDI 122 AND ANSI A115.1G.

- 8.2 FLUSH WOOD DOORS
- A. SUBMITTALS: PRODUCT DATA, PREFINISHED SHOP SAMPLES, AND DOOR SCHEDULE INDICATING DOOR AND FRAME SIZES, TYPES, ELEVATIONS, DETAILS, AND HARDWARE WITH DOOR AND HARDWARE NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.
- B. DOORS: SIZES, SPECIES, AND DESIGNS AS INDICATED COMPLYING WITH WDMA 1.5.1-A
- C. FINISHES:
1. GRADE: PREMIUM
2. VENEER MATCHING: BOOK AND RUNNING
3. PAIR MATCHING AND SET MATCHING
4. CONSTRUCTION:
- a. INTERIOR VENEER: FIVE OR SEVEN PLY, STRUCTURAL COMPOSITE LUMBER CORES
- F. FABRICATION AND FINISHING:
1. FACTORY FINISH: ORDER TO SUIT FRAME OPENINGS TO COMPLY WITH REFERENCED STANDARD. COMPLY WITH NFPA 80 FOR FIRE-RESISTANCE RATED DOORS.
2. FACTORY MAKE DOORS FOR HARDWARE THAT IS NOT SURFACE APPLIED.
3. CUT AND TRIM OPENINGS TO COMPLY WITH FINISHED STANDARDS.
4. LITE KITS: MATCHING WOOD STYLING
5. FACTORY FINISH DOORS FOR TRANSPARENT FINISH WITH STAIN AND MANUFACTURERS STANDARD FINISH COMPARABLE TO AWO SYSTEM TR-4, CONVERSION VARNISH OR AWO SYSTEM FINISH WITH POLYURETHANE FINISHING
- D. INSTALLATION: COMPLY WITH WDMA'S "HOW TO SYSTEM: HANDLE, FINISH, INSTALL, AND MAINTAIN WOOD DOORS" ALIGNED AND FITTED IN FRAMES WITH UNIFORM CLEARANCES AND BEVELS.

- 8.3 ACCESS DOORS AND FRAMES
- A. SUBMITTALS: PRODUCT DATA
- B. PRODUCTS: PRIME-PAINTED FLUSH, UNINSULATED ACCESS DOORS FOR WALLS AND CEILINGS WITH THIMLESS FRAME AND SCREWDRIVER OPERATED LOCK FLUSH WITH FINISHED SURFACE. FIRE-RATED, SELF-CLOSING, AUTOMATIC CLOSING AT FIRE-RATED WALLS OR CEILINGS.
- C. INSTALLATION: INSTALL FLUSH TO FINISHED DRYWALL SURFACE WITH FRAME TAPED AND SANDED FLUSH WITH WALL OR CEILING SURFACE AND FINISH TO MATCH ADJACENT SURFACE.

- 8.4 ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
- A. SUBMITTALS: PRODUCT DATA, FINISH SAMPLES, AND SHOP DRAWINGS INCLUDING DESIGN LOADS, SYSTEM DIMENSIONS, TOLERANCES, DETAILS AT JOINTS AND PERIMETER CONDITIONS, FLASHING, CONNECTIONS TO WALLS AND FLOOR, AND INFORMATION FOR CONSTRUCTION JOINT LOCATIONS, AND ANY FIELD WELDING. FOR ENTRANCES, INCLUDE HARDWARE SCHEDULE.
- B. FABRICATOR: COMPANY SPECIALIZING IN MANUFACTURING ALUMINUM GLAZING SYSTEMS WITH MINIMUM THREE-YEARS DOCUMENTED EXPERIENCE
- C. INSTALLER: COMPANY SPECIALIZING IN ALUMINUM GLAZING SYSTEMS WITH MINIMUM THREE-YEARS DOCUMENTED EXPERIENCE
- D. MATERIALS:
1. ALUMINUM SHEET: ASTM B 209 (ASTM B 209M), ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED.
- E. ALUMINUM EXTRUSIONS: ASTM B 221 (ASTM B221M), ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED.
- F. ALUMINUM FRAMED STOREFRONTS: AT INTERIOR LOCATIONS, PROVIDE MANUFACTURERS STANDARD NON-THERMALLY BROKEN STOREFRONT SYSTEM MATCHING THE EXTERIOR SYSTEM. AT EXTERIOR LOCATIONS, PROVIDE MANUFACTURERS STANDARD THERMALLY BROKEN, EXTRUDED ALUMINUM STOREFRONT SYSTEM CONSISTING OF FRAMING MEMBERS OF THICKNESS REQUIRED AND REINFORCED AS REQUIRED TO SUPPORT IMPOSED LOADS AND TO FIT THE DIMENSIONS AND DEPTHS INDICATED ON THE CONSTRUCTION DOCUMENTS AND COMPLYING WITH THE FOLLOWING:
1. STRUCTURAL PERFORMANCE: PROVIDE SYSTEMS, INCLUDING ANCHORAGE, CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
- a. MAX FRAMING MEMBER DEFLECTION: LIMITED TO 1/175 OF CLEAR SPAN OR 3/32"
- b. STRUCTURAL TESTING: SYSTEMS WHEN TESTED ACCORDING TO ASTM E 330 AT 150 PERCENT OF INWARD AND OUTWARD WIND-LOAD DESIGN PRESSURE DO NOT EVIDENCE MATERIAL FAILURES, STRUCTURAL DISTRESS, DEFLECTION FAILURES, OR PERMANENT DEFORMATION OF MAIN FRAMING MEMBERS EXCEEDING 0.2 PERCENT OF CLEAR SPAN.
- c. AIR INFILTRATION: LIMITED TO 0.06 CFM/50 FT. (0.03 U.S. PER SQ. IN.) OF SYSTEM SURFACE AREA WHEN TESTED ACCORDING TO ASTM E 283 AT 1.5 INCHES AT A STATIC-AIR-PRESSURE DIFFERENCE OF 1.57 INCHES H₂O (77 Pa)
- d. WATER PENETRATION: SYSTEMS DO NOT EVIDENCE WATER LEAKAGE WHEN TESTED ACCORDING TO ASTM E 331 AT MINIMUM DIFFERENTIAL PRESSURE OF 20 PERCENT OF POSITIVE WIND-LOAD DESIGN PRESSURE, BUT NOT LESS THAN 6.24 INCHES H₂O (1,600 Pa)
- e. AVERAGE U-FACTOR: NOT MORE THAN 0.69 Btu/h-ft² x h x deg. F (3.92 W/m² x m x K) PER ASMA 1503.
- f. DOORS: 1 1/2" THICK GLAZED DOORS WITH MINIMUM 0.125" THICK EXTRUDED TUBULAR RAIL AND STYLE MEMBERS, MECHANICALLY FASTENED CORNERS WITH REINFORCED BRACKETS THAT ARE DEEP PENETRATION AND FILLET WELDED OR THAT INCORPORATE CONCEALED TIE RODS, SNAP-ON EXTRUDED ALUMINUM GLAZING STOPS, AND PREFORMED GASKETS.
- a. INTERIOR DOORS: GLAZE WITH 1/2" CLEAR TEMPERED GLASS. PROVIDE ANSI/BHMA A156.16 SILENCERS, THREE ON STRIKE JAMB OF SINGLE DOOR FRAMES AND TWO ON HEAD OF DOUBLE DOOR FRAMES.
- b. EXTERIOR DOORS: GLAZE WITH INSULATED TEMPERED GLASS UNITS MATCHING STOREFRONT GLASS OR CLEAR INSULATED GLASS PER CONSTRUCTION DOCUMENTS. PROVIDE COMPRESSION WEATHERSTRIPPING AT FIXED STOPS; AT OTHER LOCATIONS, PROVIDE SLIDING WEATHERSTRIPPING RETAINED IN ADJUSTABLE STRIP MORTISED INTO DOOR EDGE.
- c. HARDWARE: PER DOOR SCHEDULE
- d. FASTENERS AND ACCESSORIES: COMPATIBLE WITH ADJACENT MATERIALS. CORROSION-RESISTANT, NONSTAINING, AND NONBLEEDING, USE CONCEALED FASTENERS EXCEPT FOR APPLICATION OF DOOR HARDWARE. FURNISH THERMALLY BROKEN HEAD AND JAMB CLIPS AND FURNISH END DAMS AT ALL SILL FLASHING.
- e. FABRICATION: FABRICATE FRAMING IN PROFILES INDICATED. PROVIDE SUBFRAMES AND REINFORCING AS REQUIRED FOR A COMPLETE SYSTEM. FACTORY ASSEMBLE COMPONENTS TO GREATEST EXTENT POSSIBLE. DISASSEMBLE COMPONENTS ONLY AS NECESSARY FOR SHIPMENT AND INSTALLATION.
- a. DOORS FRAMING: REINFORCE TO SUPPORT IMPOSED LOADS. FACTORY ASSEMBLE DOOR AND FRAME UNITS AND FACTORY INSTALL HARDWARE TO GREATEST EXTENT POSSIBLE. REINFORCE DOOR AND FRAME UNITS FOR HARDWARE INDICATED, CUT, DRILL, AND TAP FOR FACTORY-INSTALLED HARDWARE BEFORE FINISHING COMPONENTS.
- b. ALUMINUM FINISH: COMPLY WITH WDMA'S METAL FINISHES MANUAL FOR ARCHITECTURAL AND METAL PRODUCTS: CLEAR ANODIC, ARCHITECTURAL CLASS 1; AA-M12224M1, COMPLYING WITH AAMA 611
- F. INSTALLATION:
1. ISOLATE METAL SURFACES IN CONTACT WITH INCOMPATIBLE MATERIALS, INCLUDING WOOD, BY PAINTING CONTACT SURFACES WITH BITUMINOUS COATING OR PRIMER, OR BY APPLYING SEALANT TAPE RECOMMENDED BY MANUFACTURER. FURNISH THERMALLY BROKEN HEAD AND JAMB CLIPS AND FURNISH END DAMS AT ALL SILL FLASHING.
2. INSTALL FRAMING COMPONENTS TO PROVIDE A WEATHER-PROOF SYSTEM AND TRUE IN ALIGNMENT WITH ESTABLISHED UNITS AND GRADES TO THE FOLLOWING TOLERANCES:
- a. VARIATION FROM PLANE: LIMIT TO 1/8" IN 12 FEET; 1/2" OVER TOTAL LENGTH
- b. ALIGNMENT: FOR SURFACES ABUTTING LINE, LIMIT OFFSET TO 1/8"; FOR SURFACES MEETING AT CORNERS, LIMIT OFFSET TO 1/16"
- c. DIAGONAL MEASUREMENTS: LIMIT DIFFERENCE BETWEEN DIAGONAL MEASUREMENTS TO 1/8"
- d. PERIMETER JOINTS: 1/2" MAXIMUM
3. INSTALL DOORS WITHOUT WARP OR RACK. ADJUST DOORS AND HARDWARE TO PROVIDE TIGHT FIT AT CONTACT POINTS AND SMOOTH OPERATION.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- 7.1 BUILDING INSULATION
- A. SUBMITTALS: PRODUCT DATA FOR EACH TYPE OF INSULATION SPECIFIED
- B. SURFACE BURNING CHARACTERISTICS:
1. FLAME SPREAD INDEX: 25 OR LESS
2. SMOKE DEVELOPED INDEX: 50 OR LESS IN EXPOSED AREA PLenums.
3. SMOKE DEVELOPED INDEX OF 450 OR LESS IN ONE STORY APPLICATIONS COVERED WITH AN ALUMINUM FACER, 032" THK OR CORROSION RESISTANT STEEL, 0189" THK PER ASTM A303.4.1.4
- C. INSULATION PRODUCTS:
1. NON-STRUCTURAL, RIGID BOARD INSULATION: GLASS-FIBER-REINFORCED POLYISOCYANURATE FOAM CORE, LAMINATED BETWEEN MIN. 1/25 MIL EMBOSSED, WHITE ACRYLIC COATED ALUMINUM FACER ON EXPOSED FACE AND MIN. 0.9 MIL 3M/COAT ALUMINUM ON CONCEALED FACE AND LISTED AS SUITABLE FOR INSTALLATION EXPOSED TO THE INTERIOR WITHOUT A THERMAL BARRIER, (DOW THERMAX WHITE FINISH INSULATION, OR APPROVED EQUAL)
- a. SIZE: 4 WIDE X 8 HIG. MAX. LENGTH X THICKNESS AS REQUIRED TO ACHIEVE SPECIFIED R-VALUE
- b. EDGE TREATMENT: SHIRAP
- c. WARRANTY: 15 YEAR THERMAL PERFORMANCE
- d. FASTENERS: HILTI-X-6-6 WITH PLASTIC WASHERS
- e. ADHESIVE: MANUFACTURERS APPROVED ADHESIVE FOR ADHERING INSULATION BOARDS TO WALL SURFACE
- f. JOINT SEALANT: MANUFACTURERS APPROVED SEALANT FOR SEALING CONCEALED SHIRAP JOINTS
- g. TRIM SYSTEM: PVC TOP AND BOTTOM CHANNELS AND T-BAR BATTEN CLOSURE SYSTEM SPECIFICALLY DESIGNED FOR USE WITH PANELS
- h. TAPE: MANUFACTURERS STANDARD WHITE FOIL TAPE FOR SEALING JOINTS IN FACE OF BOARDS
2. MINERAL FIBER OR GLASS FIBER BLANKET INSULATION: TYPE II, CLASS A, NON-REFLECTIVE VAPOR RETARDER MEMBRANE ON ONE FACE. FIBERS MANUFACTURED FROM GLASS, SLAG WOL, OR ROCK WOOL.
- D. INSTALLATION:
1. INSTALL RIGID INSULATION IN AREAS AND IN THICKNESSES INDICATED OR AS REQUIRED TO PRODUCE R-VALUES INDICATED.
- a. INSTALL EACH BOARD WITH A CONTINUOUS BEAD OF ADHESIVE AROUND THE PERIMETER OF THE BOARD AND A 2" PATTERN THROUGH THE MIDDLE OF EACH BOARD FOR THE HEIGHT OF THE BOARD AND THEN MECHANICALLY FASTEN EA. BOARD W/ HILTI FASTENERS W/ PLASTIC WASHERS @ 48" O.C. EA
- b. SEAL ALL CONCEALED SHIRAP JOINTS W/ APPROVED SEALANT
- c. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS AND FILL VOIDS WITH SPRAY FOAM INSULATION SUITABLE FOR EXPOSURE.
- d. CONTINUOUSLY SEAL ALL JOINTS IN FACE OF INSULATION W/ MANUFACTURERS APPROVED SEALANT AND JOINT CLOSURE SYSTEM OR FOIL TAPE AS DETAILED.
2. INSTALL BATT INSULATION IN AREAS AND IN THICKNESSES INDICATED OR REQUIRED TO PRODUCE R-VALUES WHERE INDICATED. CUT AND FIT TIGHTLY AROUND OBSTRUCTIONS AND FILL VOIDS WITH INSULATION.
3. EXTEND VAPOR RETARDER TO EXTREMITIES OF AREAS TO BE PROTECTED FROM VAPOR TRANSMISSION. SECURE IN PLACE WITH ADHESIVES OR OTHER ANCHORAGE AS RECOMMENDED BY MANUFACTURER. OVERLAP AND SEAL WITH SUITABLE TAPE (JOINT TAPE IS NOT SUITABLE).

- 8.5 DOOR HARDWARE
- A. SUBMITTALS: PRODUCT DATA AND HARDWARE SCHEDULE INDICATING HARDWARE ITEM, FINISH, AND QUANTITY LOCATED ON EACH DOOR WITH DOOR AND HARDWARE SET NUMBERING CORRESPONDING TO THOSE USED IN CONSTRUCTION DOCUMENTS.
- B. HARDWARE: FURNISH PRODUCTS AS SPECIFIED IN THE HARDWARE SETS CONTAINED IN THE CONSTRUCTION DOCUMENTS AND AS FOLLOWS:
1. HINGES:
- a. APPROVED MANUFACTURERS: HAGER, MCKINNEY, IVES, AND STANLEY
- b. QUANTITY: 3 HINGES FOR DOORS 90" OR LESS IN HEIGHT; 4 HINGES FOR DOORS MORE THAN 90" IN HEIGHT
- c. BEARING: BALL BEARING HINGES AT ALL LOCATIONS
- d. MATERIAL: STAINLESS STEEL OR BRASS-BRONZED HINGES WITH STAINLESS STEEL PINS FOR EXTERIOR
- e. PINS: NONREMOVABLE PINS FOR EXTERIOR AND PUBLIC INTERIOR EXPOSURE; NON-RISING ELSEWHERE
2. LOCKSETS AND LATCHES:
- a. BORED LOCKS AND LATCHES: BHMA A156.2, SERIES 4000, GRADE 1
- (1) APPROVED PRODUCTS: SCHLAGE NO. SARGENT 10 LINE, CORBIN RUSSWIN, CL3300
- b. EXT. DEVICES: BHMA A156.3, GRADE 1
- (1) APPROVED PRODUCTS: SARGENT 80 SERIES, CORBIN RUSSWIN, VON DUPRIN 9899
- c. AUXILIARY LOCKS: BHMA A156.5, GRADE 1
- d. INTERCONNECTED LOCKS AND LATCHES: BHMA A156.12, SERIES 5000, GRADE 1
- e. MORTISE LOCKS AND LATCHES: BHMA A156.13, SERIES 1000, GRADE 1
- (1) APPROVED PRODUCTS: SCHLAGE L SERIES, SARGENT 8000 SERIES, CORBIN RUSSWIN ML 2000 SERIES
- f. TRIM: LEVER HANDLE STYLE PER CONSTRUCTION DOCUMENTS OR IF NOT SPECIFIED, MATCH BUILDING STANDARD. IF NOT SPECIFIED AND NO STANDARD EXISTS, MATCH SCHLAGE "1900DES"; TRIM ON EXIT DEVICES SHALL MATCH LOCKSETS.
- g. CORNERS: FULL SIZE INTERCHANGEABLE W/ EVEREST 28 1/2 KEY STANDARD
- h. KEYING: PROVIDE FULL SIZE INSTRUCTION KEYING AND COORDINATE MANUAL KEYING WITH OWNERS MASTER-KEY SYSTEM, FURNISH KEY CONTROL SYSTEM, INCLUDING CABINET.
3. CLOSERS:
- a. APPROVED MANUFACTURERS: LCN, NORTON, SARGENT
- b. LOCATION: MOUNT CLOSERS ON INTERIOR (ROOM SIDE) OF DOOR OPENING. PROVIDE REGULAR-ARM, PARALLEL-ARM, OR TOP-JAMB MOUNTED CLOSERS AS NECESSARY.
- c. OPTIONS: FURNISH ADJUSTABLE DELAYED OPENING (ADA ACCESSIBLE) FEATURE ON ALL CLOSERS.
4. STOPS: FURNISH AND INSTALL WALL OR FLOOR STOPS AS APPROPRIATE FOR ALL DOORS WHETHER INDICATED OR NOT.
5. WEATHERSTRIPPING: ALL EXTERIOR DOORS AND AS SCHEDULED, PROVIDE WEATHERSTRIPPING ON HEAD AND JAMBS AND DRIP-SWEEP AT SILL.
6. SMOKE GASKETING: PROVIDE SMOKE GASKETING AT ALL FIRE-RATED DOORS.
7. THRESHOLDS: THRESHOLDS AT ALL EXTERIOR DOORS AND AS SCHEDULED.
- C. INSTALLATION: MOUNT HARDWARE IN LOCATIONS RECOMMENDED BY THE DOOR AND HARDWARE INSTITUTE, UNLESS OTHERWISE INDICATED.

8.6 GLAZING

- A. QUALITY STANDARDS:
1. SAFETY GLASS: CATEGORY I MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1.
2. GLAZING PUBLICATIONS: WHERE APPLICABLE, COMPLY WITH THE PUBLISHED RECOMMENDATIONS OF THE FOLLOWING:
- a. GANA PUBLICATIONS: "GLAZING MANUAL" AND "LAMINATED GLASS GUIDE".
- b. SIGMA PUBLICATIONS: SIGMA TM-3000, "VERTICAL GLAZING GUIDELINES"
- B. GLASS:
1. FLOAT GLASS: ASTM C 1036, TYPE 1, QUALITY Q3
2. HEAT-TREATED FLOAT GLASS: ASTM C 1048, TYPE 1, QUALITY Q3, HEAT STRENGTHENED OR FULLY TEMPERED WHERE INDICATED AND WHERE REQUIRED BY CODE OR INSTALLATION CONDITIONS.
3. MIRROR GLASS: ASTM C 1036, TYPE 1, CLASS 1, QUALITY Q1, SILVER COATED PER FSD DM111C, 6.0mm THICK, WITH EDGES FLAT POLISHED.
- C. FABRICATED GLASS PRODUCTS:
1. SEALED INSULATING GLASS UNITS: PREASSEMBLED UNITS COMPLYING WITH ASTM E 774 FOR CLASS CBA UNITS WITH TWO SHEETS OF GLASS SEPARATED BY A 1/2-INCH DEHYDRATED SPACE FILLED WITH AIR, EXTERIOR GLASS COLOR TO MATCH EXISTING. INTERIOR GLASS SHALL BE CLEAR.
- a. WARRANTY: 10 YEAR WARRANTY TO INCLUDE REPLACEMENT OF SEALED UNITS EXHIBITING SEAL FAILURE, INTERFASE CUSTING OR MISTING.
- E. INSTALLATION:
1. COMPLY WITH COMBINED RECOMMENDATIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT REQUIREMENTS ARE CONTAINED IN GANA'S "GLAZING MANUAL."
2. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.
3. AFTER GLASS INSTALLATION IS COMPLETE, REMOVE GLAZING MATERIALS AND LABELS FROM FINISHED SURFACES, AND THOROUGHLY CLEAN GLASS AND ADJACENT FRAMING AND SURFACES. REPEAT AS NECESSARY PRIOR TO FINAL WALK-THROUGH.

DIVISION 9 - FINISHES

- 9.1 GYPSUM BOARD ASSEMBLIES
- A. STEEL FRAMING MEMBERS: COMPLY WITH ASTM C754 IN DEPTHS AND GAGES AS INDICATED IN THE CONSTRUCTION DRAWINGS AND AS FOLLOWS:
1. STEEL SHEET COMPONENTS: COMPLY WITH ASTM C845 WITH MANUFACTURERS STANDARD
2. CORROSION-RESISTANT ZINC COATING
3. TIE WIRE: ASTM A 618/A 618M, CLASS 1, ZINC COATING, SOFT TEMPER, .0625" DIAMETER OR DOUBLE STRAND OF .0475" DIAMETER WIRE
4. WIRE HANGERS: ASTM A 641/A 641M, CLASS 1, ZINC COATING, SOFT TEMPER, .0162" DIAMETER
- B. PANEL PRODUCTS: PROVIDE IN THICKNESS AND TYPE INDICATED IN THE CONSTRUCTION DRAWINGS IN MINIMUM LENGTHS AVAILABLE TO MINIMIZE END-TO-END BUTT JOINTS AND AS FOLLOWS:
1. GYPSUM WALLBOARD: ASTM C 1396, TYPE X WITH TAPERED EDGES, 54G-RESISTANT TYPE FOR CEILING SURFACES
2. WATER-RESISTANT GYPSUM BACKING BOARD: ASTM C 830, TYPE X ON ALL TOILET ROOM AND SHOWER ROOM WALLS, BEHIND ALL PLUMBING FIXTURES, AND AS INDICATED
- C. ACCESSORIES:
1. TRIM: ASTM 1047, FORMED FROM GALVANIZED OR ALUMINUM COATED STEEL SHEET, ROLLED ZINC, OR PLASTIC
2. OUTSIDE CORNERS: PROVIDE CORNER BEAD UNLESS NOTED OTHERWISE
- b. EXPOSED PANEL EDGES: PROVIDE L-BOARD (J-BEAD) UNLESS NOTED OTHERWISE; USE TEAR-AWAY BEAD WHERE GYP. BD. MEETS WINDOW FRAMES OR CEILING GRID
- c. CONTROL JOINTS: PROVIDE WHERE INDICATED OR APPROXIMATELY 30'-0" MAX. PROVIDE ARCHITECT FOR LOCATIONS IF NOT INDICATED.
2. SOUND-ATTENUATION BACKINGS: ASTM C 665, TYPE X, UNPAINTED
- D. ACQUASTICAL SEALANT: COMPLY WITH ASTM C 834, NONSAG, PAINTABLE, NONSTAINING LATEX.
- D. INSTALLATION:
1. FRAMING: COMPLY WITH ASTM C 754 AND ASTM C 840 AND WITH U.S. GYPSUM'S "GYPSUM CONSTRUCTION HANDBOOK" ISOLATE FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF LOADING IMPOSED BY STRUCTURAL MOVEMENT AND PROVIDE BRACKS AS NECESSARY FOR PROPER SUPPORT WHETHER INDICATED OR NOT.
2. GYPSUM PANELS AND FINISH: COMPLY WITH ASTM C 840 AND GA-216. ISOLATE GYPSUM BOARD ASSEMBLIES FROM ADJACENT WALLS AND FLOOR AND FINISH AS FOLLOWS:
- a. LEVEL 1 (EMBED TAPE AT JOINTS): AT CONCEALED AREAS UNLESS A HIGHER LEVEL IS INDICATED OR REQUIRED FOR FIRE-RESISTANCE-RATED ASSEMBLY.
- b. LEVEL 2 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT SUBSTRATES BEHIND TILE.
- c. LEVEL 4 (EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING FLAT, EGGSHELL, OR SATIN SHEEN PAINT OR WALL COVERING
- d. LEVEL 5 (EMBED TAPE, APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY THIN SKIN COAT OF JOINT COMPOUND OVER ENTIRE SURFACE AND SAND SMOOTH AFTER EACH COAT): AT ALL WALLS RECEIVING SEMI-GLOSS OR GLOSS SHEEN PAINT, AND ALL GYPSUM BOARD CEILINGS

9.2 CERAMIC TILE

- A. SUBMITTALS: PRODUCT DATA FOR SETTING AND GROUTING MATERIALS AND THREE (3) SAMPLES OF EACH TILE SPECIFIED FOR VERIFICATION PURPOSES
- B. ATTIC STOCK: FURNISH ONE (1) BOX FOR EACH TYPE OF CERAMIC TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE
- C. TILE: COMPLY WITH STANDARD GRADE REQUIREMENTS IN ANSI A137.1 "SPECIFICATIONS FOR CERAMIC TILE" FOR PRODUCTS AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS.
- D. INSTALLATION MATERIALS
1. THINSET MORTAR
- a. TYPICAL INTERIOR INSTALLATIONS: LATEX-POLYMER MODIFIED PORTLAND CEMENT COMPLYING WITH ANSI A108.5 AND ANSI 118.4
- b. GROUT: UNSANDED POLYMER MODIFIED PORTLAND CEMENT, MATCHING COLOR OF TILE, OR EQUAL
2. SETTING BED ACCESSORIES: ANSI A 108.1A
- E. INSTALLATION METHODS: COMPLY WITH TILE INSTALLATION STANDARDS IN ANSIS' "SPECIFICATIONS FOR THE INSTALLATIONS OF CERAMIC TILE" AND TCAS' HANDBOOK FOR CERAMIC TILE INSTALLATION THAT APPLY TO THE MATERIALS AND METHODS INDICATED BELOW.
1. OVER GYPSUM BOARD: TCA W243 (THIN-SET MORTAR BONDED TO GYPSUM BOARD)
2. ELEVATED CONCRETE SLABS: TCA F113 (THIN-SET MORTAR BONDED TO CONCRETE SLAB)
- F. TERMINATIONS: WHERE TILE IS SPECIFIED AS THE TOP COURSE ON WALL WANSICOTING OR WALL BASE WITH AN EXPOSED TOP EDGE, THE FACTORY EDGE SHALL BE USED AS THE EXPOSED EDGE. G. CONFLICTS: IF NOT ADDRESSED ON DRAWINGS, WHERE ELECTRICAL DEVICES OR TOILET ACCESSORIES STRADDLE A TRANSITION FROM THE TOP EDGE OF WANSICOT WALL TILE TO GYPSUM BOARD SUBSTRATE, CONTACT ARCHITECT FOR RESOLUTION.
- H. GROUT JOINTS
1. JOINT SET: SET TILE WITH THE SMALLEST GROUT JOINT ACHIEVABLE AND AS RECOMMENDED BY THE MFR., BASED ON THE TILE PRODUCT AND SUBSTRATE CONDITIONS, UNLESS NOTED OTHERWISE.
2. TILE PATTERN: LAY TILE IN PATTERNS AS INDICATED IN THE CONSTRUCTION DOCUMENTS. ADJUN JOINTS WHERE ADJOINING TILES ARE NOTED ON FLOOR, BASE, WALLS, AND TRIM ARE THE SAME SIZE, UNLESS INDICATED OTHERWISE.
3. INSTALLATION: INSTALL GROUT PER MANUFACTURERS INSTRUCTIONS, EXERCISING CARE TO AVOID REMOVAL OF SETTING MATERIALS OR EXCESS WATER DURING INSTALLATION, FACED OR CHALKY GROUT SHALL BE CAUSE FOR REJECTION.
4. SEALER: AFTER FULLY CURED, GROUT SHALL BE SEALED WITH TWO (2) COATS OF COMMERCIAL QUALITY PENETRATING SILICONE SEALER.

- 9.3 ACOUSTICAL TILE CEILINGS
- A. SUBMITTALS: PRODUCT DATA ONLY
- B. ATTIC STOCK: FURNISH ONE (1) EACH TYPE OF CEILING TILE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE
- C. ACOUSTICAL TILE PRODUCTS: PROVIDE CEILING TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM E 1284, CLASS A MATERIALS, TESTED PER ASTM E 84
- D. SUSPENSION SYSTEM: PROVIDE HEAVY DUTY, DIRECT-HUNG, SUSPENSION SYSTEMS AS INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH ASTM C 635. FURNISH ALUMINUM GRID IN SHOWERS, KITCHENS, AND OTHER HIGH-HUMIDITY AREAS.
1. ATTACHMENT DEVICES: SIZE FOR FIVE (5) TIMES THE DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1. DIRECT HUNG UNLESS OTHERWISE INDICATED.
2. WIRE HANGERS, BRACES, AND TIES: ZINC-COATED CARBON-STEEL WIRE, ASTM A 641 (A 641 M), CLASS 1 ZINC COATING, SOFT TEMPER WITH A YIELD STRENGTH AT LEAST THREE (3) TIMES THE HANGER DESIGN LOAD (ASTM C 635, TABLE 1, DIRECT HUNG), BUT NOT LESS THAN 0.135" DIAMETER WIRE.
3. SEISMIC STRIPS: MANUFACTURERS STANDARD PRODUCT DESIGNED TO ACCOMMODATE SEISMIC FORCES.
4. HOLD-DOWN CLIPS: PROVIDE HOLD-DOWN CLIPS ON CEILING TILE IN ENTRANCE VESTIBULES, COMPUTER ROOMS EMPLOYING DRY CHEMICAL FIRE-SUPPRESSION SYSTEMS, AND OTHER AREAS AS INDICATED.
- E. INSTALLATION: COMPLY WITH ASTM C 636 AND OCSAS' "CEILING SYSTEMS HANDBOOK"
1. SEQUENCE WORK TO ENSURE ACOUSTICAL CEILINGS ARE NOT INSTALLED UNTIL BUILDING IS ENCLOSED, SUFFICIENT HEAT IS PROVIDED, DUST GENERATION ACTIVITIES HAVE TERMINATED, AND OVERHEAD WORK IS COMPLETED, TESTED, AND APPROVED.
2. INSTALL CEILING GRID AS INDICATED TO BE SYMMETRICAL ABOUT BOTH AXES OF EACH ROOM USING NOT LESS THAN HALF-SIZE TILE UNLESS INDICATED OTHERWISE ON THE REFLECTED CEILING PLAN.
3. SUPPORT SUSPENSION SYSTEM INDEPENDENTLY OF DUCTS, PIPES, AND CONDUTS.
4. SUPPORT FIXTURE LOADS USING SUPPLEMENTARY HANGERS LOCATED WITHIN 6" OF EACH CORNER OR SUPPORT FIXTURES INDEPENDENTLY.
5. PROVIDE MATCHING PERIMETER MOLDING INSTALLED IN BEAD OF ACOUSTICAL SEALANT AT ALL LOCATION WHERE CEILING INTERSECTS VERTICAL SURFACES, USE MATCHING PRE-FORMED CLOSURES AT ROUND OR CURVED OBSTRUCTIONS.
6. FIELD-CUT EDGES SHALL MATCH PROFILE OF FACTORY EDGES.

- 9.4 RESILIENT FLOOR TILE AND WALL BASE
- A. SUBMITTALS: PRODUCT DATA AND THREE (3) SAMPLES OF EACH TILE AND BASE SPECIFIED FOR VERIFICATION PURPOSES
- B. ATTIC STOCK: FURNISH ONE (1) BOX FOR EACH 50 BOXES OR FRACTION THEREOF OF EACH TYPE OF FLOOR TILE AND 20' OF EACH COLOR AND TYPE OF WALL BASE PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE
- C. INSTALLATION: PROVIDE FLOOR TILE IN TYPE AND SIZES INDICATED IN THE CONSTRUCTION DOCUMENTS COMPLYING WITH THE FOLLOWING:
1. VINYL COMPOSITION TILE: 12"x12"x1/8" COMPLYING WITH ASTM F 1066
2. SOLID VINYL TILE: 12"x12"x1/8" COMPLYING WITH ASTM F 1700
3. RUBBER FLOOR TILE: 24"x24"x1/8" COMPLYING WITH ASTM F 1344
4. STATIC DISSIPATIVE TILE: 12"x12"x1/8" GROUNDED PER MFR. RECOMMENDATIONS.
- D. RESILIENT WALL BASE: ASTM TYPE TS (RUBBER, VULCANIZED THERMOSET) 1/2" THICK, FURNISHED IN 4' X 8' PANELS AS INDICATED IN THE CONSTRUCTION DOCUMENTS WITH JOB-FORMED INSIDE AND OUTSIDE CORNERS.
- E. INSTALLATION ACCESSORIES:
1. LEVELING AND PATCHING COMPOUNDS: LATEX-MODIFIED PORTLAND CEMENT, OR BLENDED HYDRAULIC CEMENT-BASED FORMULATION PROVIDED OR APPROVED BY FLOORING MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS.
2. ADHESIVES: WATER-RESISTANT TYPE RECOMMENDED BY MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE CONDITIONS.
- F. TILE INSTALLATION:
1. PREPARE CONCRETE SUBSTRATES PER ASTM F 710. VERIFY THAT SUBSTRATES ARE DRY AND FREE OF CURING COMPOUNDS, SEALERS AND HARDENERS
2. LAY OUT TILES SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN HALF-WIDTH
3. LAY TILES IN PATTERNS INDICATED WITH GRAIN DIRECTION ALTERNATING IN ADJACENT TILES, UNLESS NOTED OTHERWISE.
4. CLEAN, SEAL, AND WAX RESILIENT FLOORING IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- G. WALL BASE AND ACCESSORY INSTALLATION:
1. CONFIRM THAT SOLID BACKING IS PROVIDED BEHIND ALL WALL BASE. AREAS WHERE GYPSUM BOARD IS HELD MORE THAN 1/2" ABOVE SLAB SHALL BE FILLED IN PRIOR TO BASE INSTALLATION.
2. INSTALL WALL BASE WITH MANUFACTURERS RECOMMENDED ADHESIVE IN MAXIMUM LENGTHS POSSIBLE. APPLY TO WALLS, COLUMNS, PLASTER, CASEWORK, AND OTHER PERMANENT PRODUCTS AND SUBSTRATE CONDITIONS.
3. INSTALL TRANSITION STRIPS WHERE FLOORING MATERIALS MEET OR WHERE EDGE OF TILE IS EXPOSED AS INDICATED IN THE FINISH SCHEDULE.

- 9.5 CARPET AND CARPET TILE
- A. SUBMITTALS: THREE (3) SAMPLES OF EACH CARPET OR CARPET TILE SPECIFIED FOR VERIFICATION PURPOSES
- B. ATTIC STOCK: FURNISH FULL-WIDTH CARPET EQUAL TO 5% OF EACH TYPE AND COLOR CARPET INSTALLED, PACKAGED WITH PROTECTIVE COVERING AND LABELED FOR STORAGE
- C. CARPET PRODUCTS: PROVIDE CARPET IN PATTERNS AND COLORS AND WITH BACKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS WITH CRITICAL RADIANT FLUX CLASSIFICATION CLASS I, NOT LESS THAN 0.45 W/50, OR PER ASTM E 648, ORDER ALL MATERIALS FROM THE SAME FACTORY DYE LOT
- D. INSTALLATION: COMPLY WITH CRI 104, SECTION 6.1, "SITE CONDITIONS," TEMPERATURE AND HUMIDITY, FOR BROADLOOM PRODUCTS COMPLY WITH CRI 104, SECTION 8, "DIRECT GLUE-DOWN" AND SECTION 9, "CARPET ON STAIRS" FOR CARPET TILE COMPLY WITH CRI 104, SECTION 13 "CARPET MODULES (TILES)"
1. VERIFY CARPET MATCH PRIOR TO CUTTING TO CONFIRM NO VARIATION BETWEEN DYE LOTS
2. LAY CARPET TILE IN PATTERN AS INDICATED ON CONSTRUCTION DOCUMENTS AND SO WIDTHS AT OPPOSITE EDGES OF ROOM ARE EQUAL AND NOT LESS THAN HALF-WIDTH
3. LAY OUT BROADLOOM CARPET TO LOCATE SEAMS IN AREAS OF LEAST TRAFFIC, AND OUT OF AREAS OF PIVOTING TRAFFIC, AT DOORWAYS, CENTER SEAMS UNDER DOOR IN CLOSED POSITION. BIND OR SEAL CUT EDGES AS RECOMMENDED BY CARPET MANUFACTURER.
4. MAINTAIN UNIFORMITY OF CARPET DIRECTION AND LAY OF PILE WITH PATTERN PARALLEL TO WALLS.
5. INSTALL BROADLOOM CARPET IN MANUFACTURERS RECOMMENDED CONTACT ADHESIVE AND CARPET TILE IN IN MANUFACTURERS RECOMMENDED EASY RELEASE ADHESIVE. ROLL WITH APPROPRIATE ROLLER FOR COMPLETE CONTACT OF ADHESIVE TO CARPET BACKING.
6. TRIM CARPET NEATLY AND TIGHT TO WALLS AND AROUND INTERRUPTIONS
7. INSTALL TRANSITION STRIPS AT CARPET TERMINATIONS AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS

- 9.6 PAINTING
- A. SUBMITTALS: PRODUCT DATA AND THREE (3) DRAW-DOWN SAMPLES OF EACH COLOR AND SHEEN
- B. ATTIC STOCK: FURNISH ONE (1) GALLON OF EACH PAINT COLOR AND SHEEN IN CONTAINERS, PROPERLY LABELED AND SEALED
- C. PRODUCTS: PROVIDE MANUFACTURERS BEST QUALITY PAINTS OF COLOR AND SHEEN AS INDICATED IN THE CONSTRUCTION DOCUMENTS THAT ARE FORMULATED AND RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED. PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES.
- D. APPLICATION:
1. EQUIPMENT: APPLY COATINGS BY BRUSH, ROLLER, SPRAY, OR OTHER APPLICATIONS ACCORDING TO COATING MANUFACTURERS WRITTEN INSTRUCTIONS, WHEN SPRAYED, EXTERIOR COATINGS SHALL BE BACK-ROLLED FOLLOWING SPRAY APPLICATION. USE ROLLERS FOR FINISH COAT ON INTERIOR WALLS AND CEILINGS.
2. PIGMENTED (OPAQUE) FINISHES: COMPLETELY COVER SURFACES TO PROVIDE A SMOOTH, O

Diagram 1 (Left):

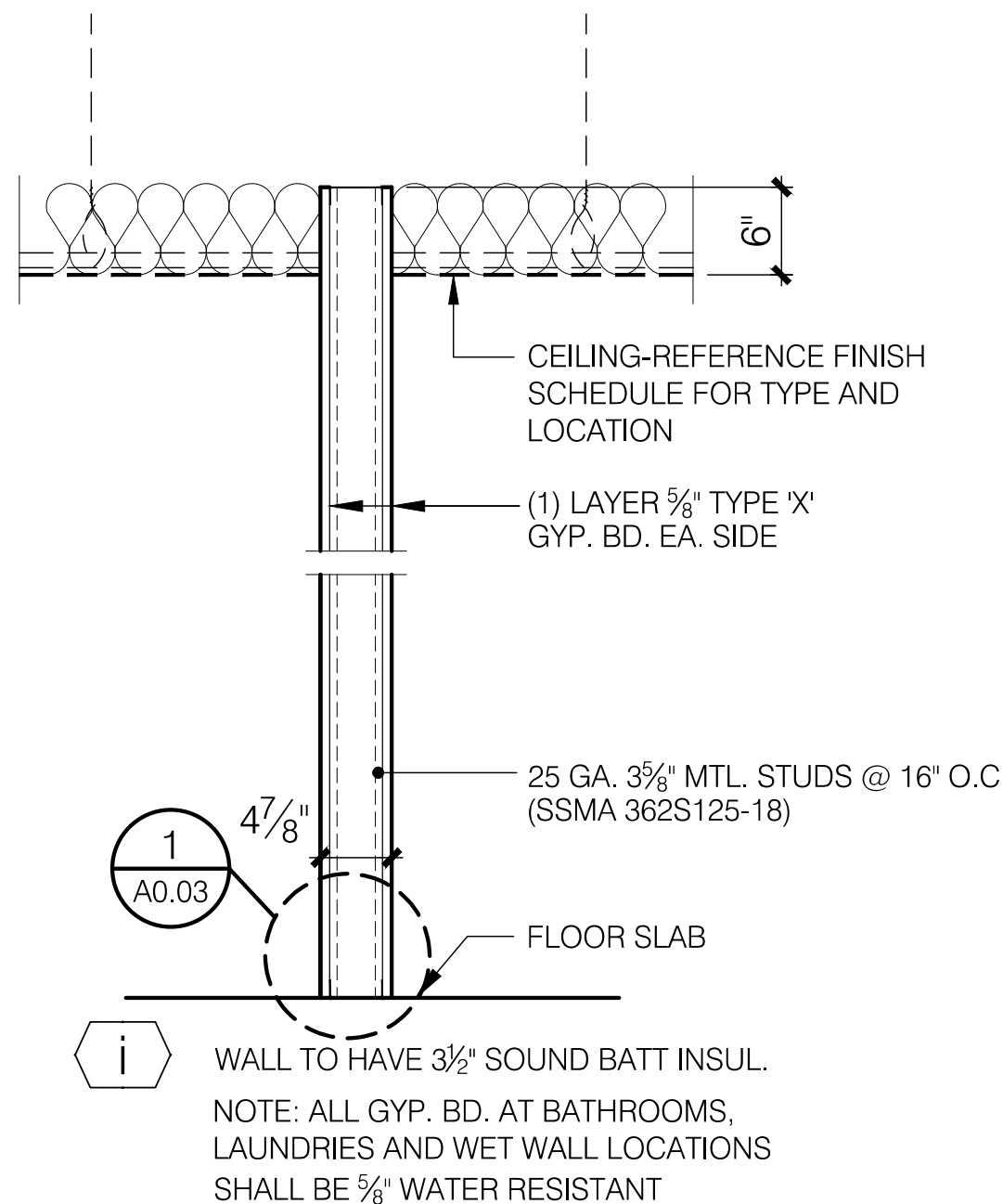
- CEILING-REFERENCE FINISH SCHEDULE FOR TYPE AND LOCATION
- (1) LAYER $\frac{1}{2}$ " TYPE "X" GYP. BD. EA. SIDE
- 25 GA. 6" MTL. STUDS @ 16" O.C. (S.S.M.A. 600S125-18)
- FLOOR SLAB
- Detail: 1 A0.03, $\frac{7}{8}$ "

Diagram 2 (Right):

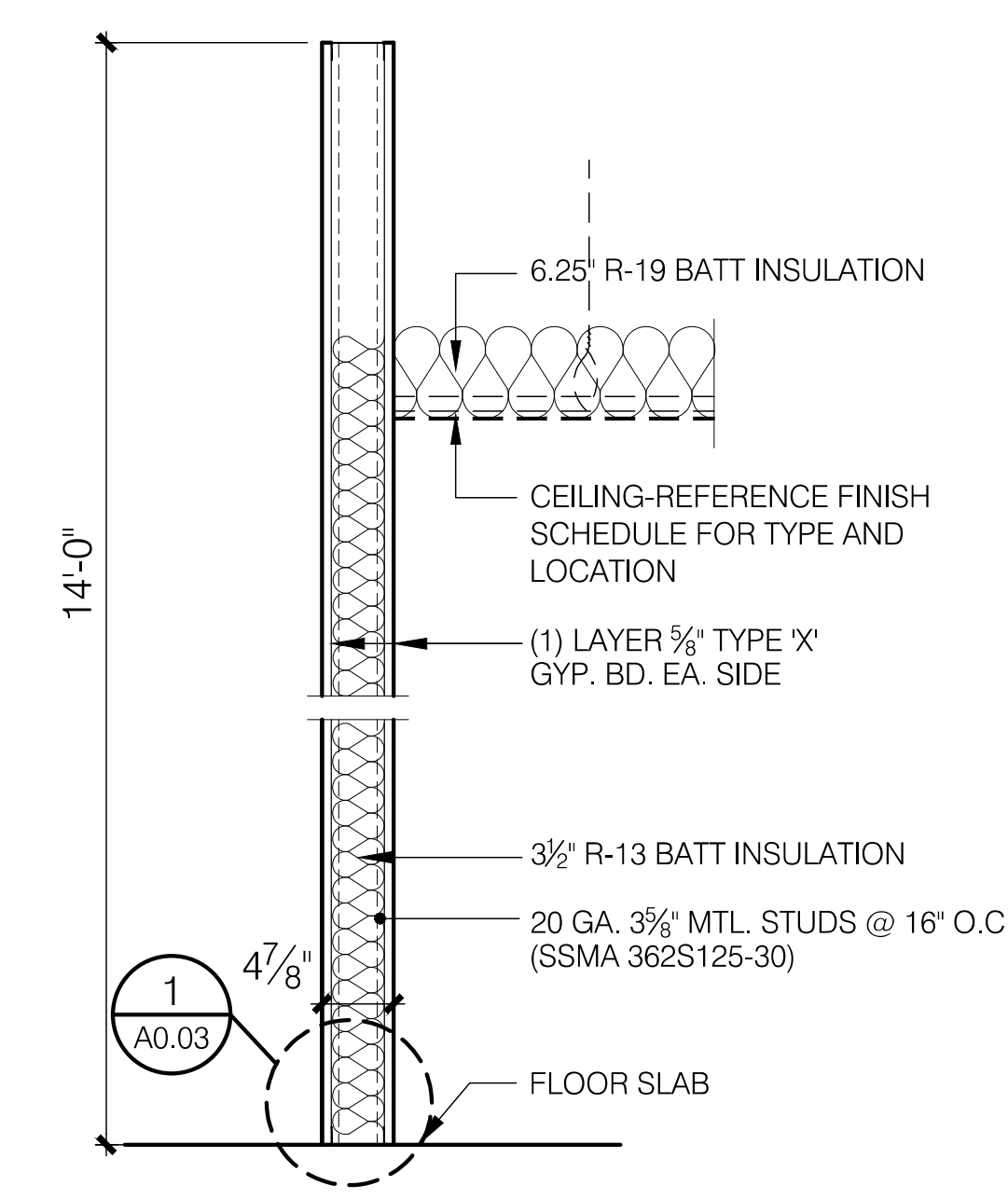
- CEILING-REFERENCE FINISH SCHEDULE FOR TYPE AND LOCATION
- (1) LAYER $\frac{1}{2}$ " TYPE "X" GYP. BD.
- 25 GA. $\frac{3}{8}$ " MTL. STUDS @ 16" (S.S.M.A. 362S125-18)
- FLOOR SLAB
- Detail: 1 A0.03, $\frac{4}{4}$ "

WALL TO HAVE $\frac{3}{8}$ " SOUND BATT INSUL.
NOTE: ALL GYP. BD. AT BATHROOMS, LAUNDRIES AND WET WALL LOCATIONS SHALL BE $\frac{1}{2}$ " WATER RESISTANT

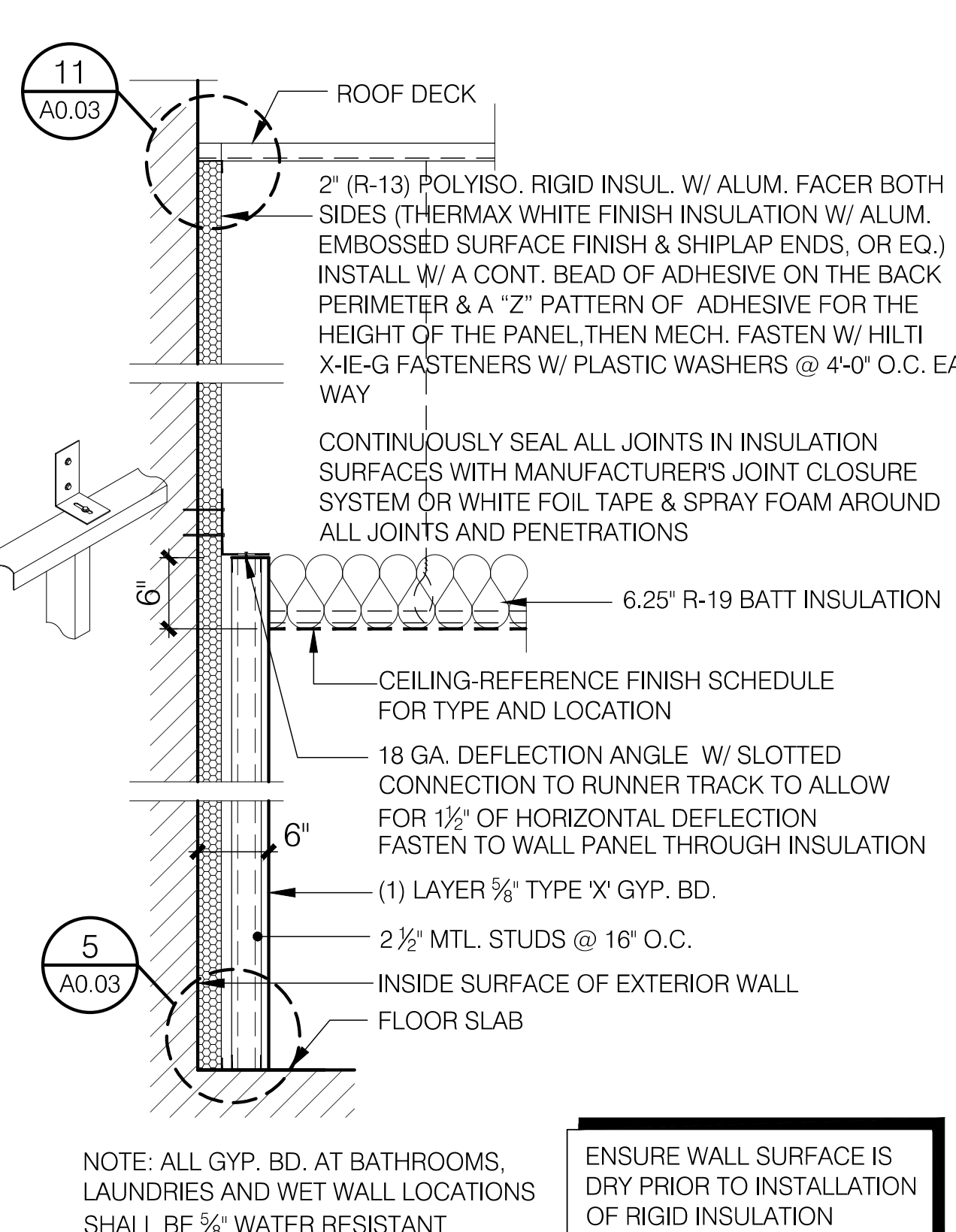
Scale: $\frac{3}{4}" = 1'-0"$



Scale: $\frac{3}{4}'' = 1'-0''$



Scale: $\frac{3}{4}" = 1'-0"$



Scale: $\frac{3}{4}" = 1'-0"$

| STUD SIZE | GA. | Fy (ksi) | SMA SECTION | COMPOSITE MAX. HEIGHT (GYP. BD. ON BOTH SIDES) | NON COMPOSITE MAX. HEIGHT FULLY BRACED) |
|-----------|-----|----------|-------------|--|---|
| 1 1/2" | 25 | 33 | 162S125-18 | 10-11" | 6-11" |
| | 22 | 33 | 162S125-17 | 10-7" | 8-2" |
| | 20 | 33 | 162S125-30 | 10-9" | 8-5" |
| | 22S | 33 | 162S125-33 | - | 9-8" |
| 2 1/2" | 25 | 33 | 250S125-18 | 12-10" | 9-7" |
| | 22 | 33 | 250S125-27 | 13-11" | 11-3" |
| | 20 | 33 | 250S125-30 | 14-5" | 11-7" |
| | 22S | 33 | 250S125-33 | 14-3" | 12-0" |
| 3 1/2" | 18 | 33 | 362S125-43 | - | 13-0" |
| | 25 | 33 | 362S125-18 | 15-2" | 12-2" |
| | 22 | 33 | 362S125-27 | 16-6" | 15-0" |
| | 20 | 33 | 362S125-30 | 16-7" | 15-6" |
| 4" | 22S | 33 | 362S125-33 | 17-5" | 18-0" |
| | 18 | 33 | 362S125-43 | - | 17-5" |
| | 16 | 50 | 362S125-54 | - | 18-7" |
| | 14 | 50 | 362S125-68 | - | 19-11" |
| 4 1/2" | 25 | 33 | 400S125-18 | 15-11" | 12-10" |
| | 22 | 33 | 400S125-27 | 17-4" | 16-2" |
| | 20 | 33 | 400S125-30 | 17-8" | 16-8" |
| | 22S | 33 | 400S125-33 | 18-3" | 17-3" |
| 5" | 18 | 33 | 400S125-43 | - | 18-10" |
| | 16 | 50 | 400S125-54 | - | 20-2" |
| | 14 | 50 | 400S125-68 | - | 21-6" |
| 6" | 25 | 33 | 600S125-18 | 20-1" | - |
| | 22 | 33 | 600S125-27 | 24-4" | 21-6" |
| | 20 | 33 | 600S125-30 | 24-7" | 22-11" |
| | 22S | 33 | 600S125-33 | 25-6" | 23-9" |
| 8" | 18 | 33 | 600S125-43 | - | 26-11" |
| | 16 | 50 | 600S125-54 | - | 27-0" |
| | 14 | 50 | 600S125-68 | - | 30-11" |
| | 12 | 50 | 800S125-68 | - | 32-9" |
| 10" | 16 | 50 | 800S125-54 | - | 35-2" |
| | 14 | 50 | 800S125-68 | - | 38-1" |
| | 12 | 50 | 800S137-97 | - | 43-11" |

1. LIMITING HEIGHTS ARE BASED ON 16" STUD SPACING, 5 PSF LOAD, AND L/240 MAX ALLOWABLE DEFLECTION AS CONTAINED IN THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) SPAN TABLES.
2. MATERIAL DESIGN THICKNESS IS THE BASE METAL THICKNESS IN MILS.
3. F_y = YIELD STRENGTH OF STEEL
4. COMPOSITE LIMITING HEIGHTS ARE BASED ON A SINGLE LAYER OF TYPE X GYF 80 INSTALLED IN THE VERTICAL ORIENTATION TO BOTH SIDES OF THE WALL OVER FULL HEIGHT USING MIN. NO. 6 TYPE S DRYWALL SCREWS SPACED A MAXIMUM OF 16" O.C.
5. NON-COMPOSITE LIMITING HEIGHTS ARE BASED ON STEEL PROPERTIES ONLY WITHOUT THE CONTRIBUTION OF SHEAR STRENGTH AND STIFFNESS OF THE ASSEMBLY. PROPERLY FASTENED SHEATHING IS REQUIRED FOR MEMBERS TO BE CONSIDER FULLY BRACED.
6. ALL RUNNER TRACK SHALL MATCH THE GAUGE/THICKNESS OF THE STUDS.
7. LIMITING HEIGHTS W/ AN "W" DESIGNATION REQUIRE WEB STIFFENERS AT ENDS.

1. DIMENSIONS ARE TO FACE OF GYP. BD. UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE FIELD VERIFIED.

2. ALL GYPSUM BD. SHALL BE 5/8" TYPE "X".

3. ALL GYPSUM BD. AT BATHROOMS, LAUNDRIES, AND WEI-
LL WALL LOCATIONS SHALL BE 5/8" TYPE "X" MOISTURE
RESISTANT.

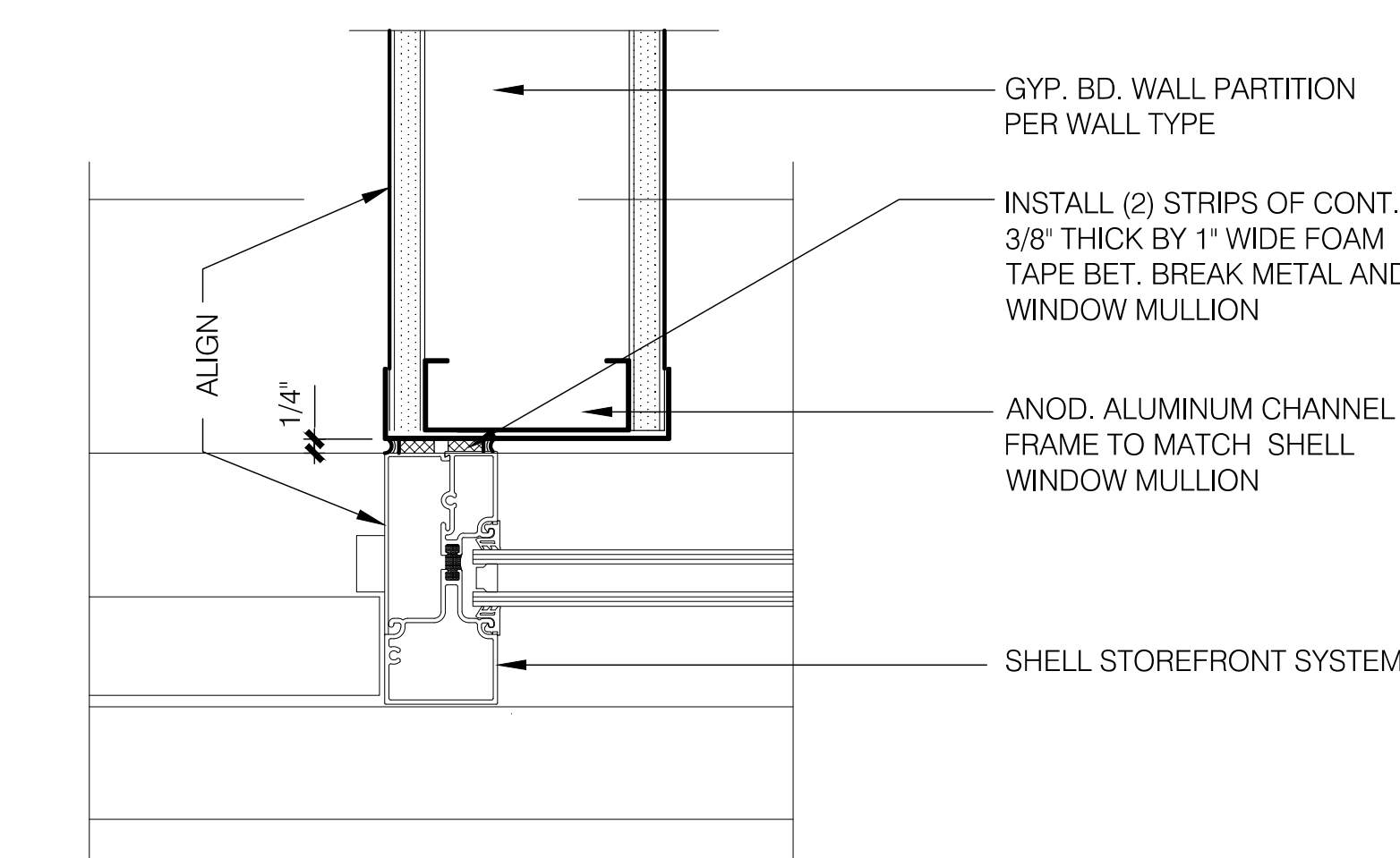
4. SHEATHING ELEVATED TO "DENS-SHIELD" SHALL BE PROVIDED
BENEATH TILED SHOWERS AND BATHS.

5. GYPSUM BD. CONTAINING PLANT'S SHALL BE INSTALLED WHERE
INDICATED. OR AT 30' ON C.C. MAX. SPACING IF NOT
INDICATED.

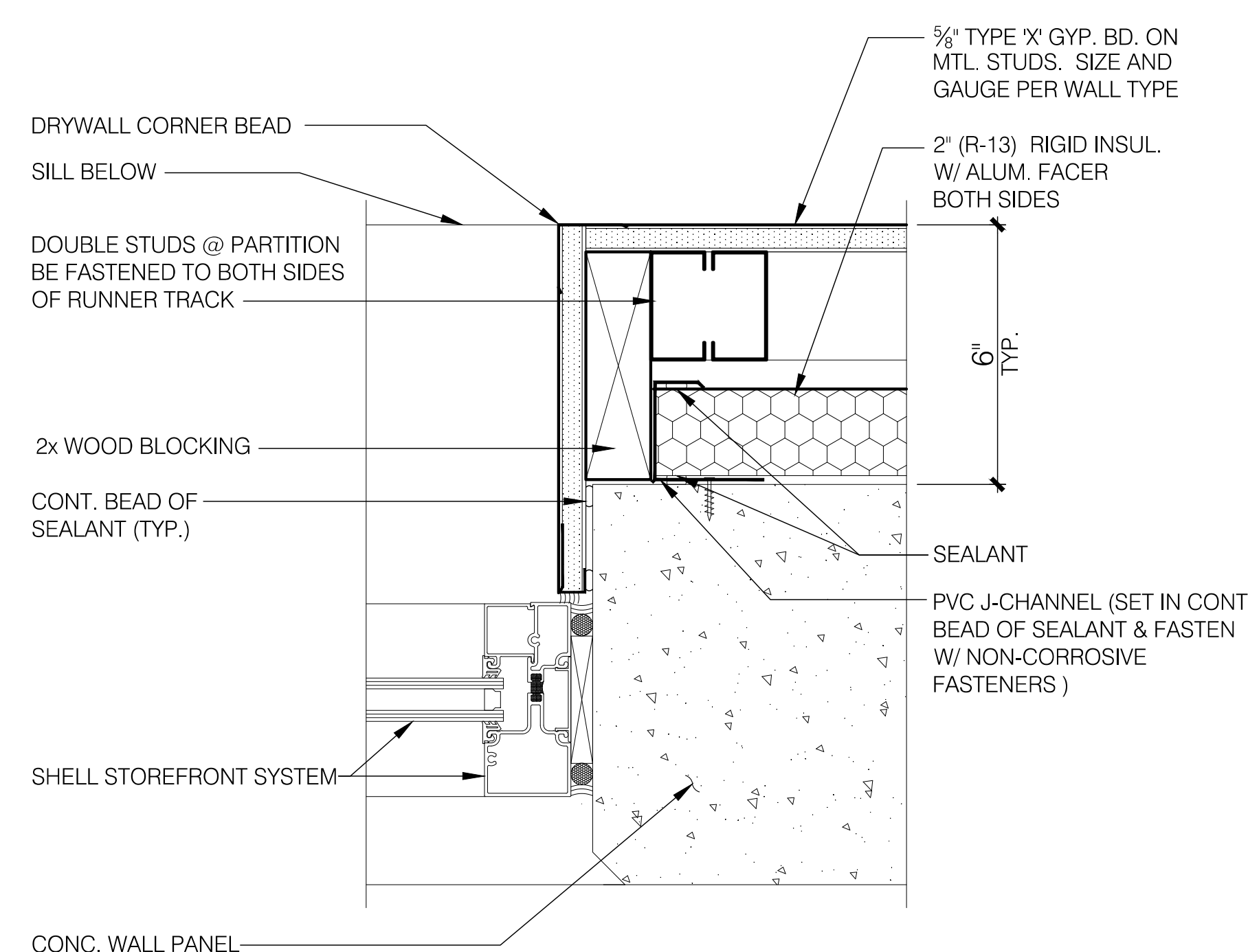
6. CONCRETE JOINER TRACK SHALL BE FASTENED TO SLAB W/
HILTI POWER DRIVEN ANCHORS ICBO #23828. 0145' DIA.
SHANK W/ MIN. 1/2" PENETRATION @ 24" O.C.

7. PARTITIONS NOT EXPOSED TO UNDERSIDE OF STRUCTURE
OR TO EXTERIOR SHALL BE TYPED "X" PARTITIONS.

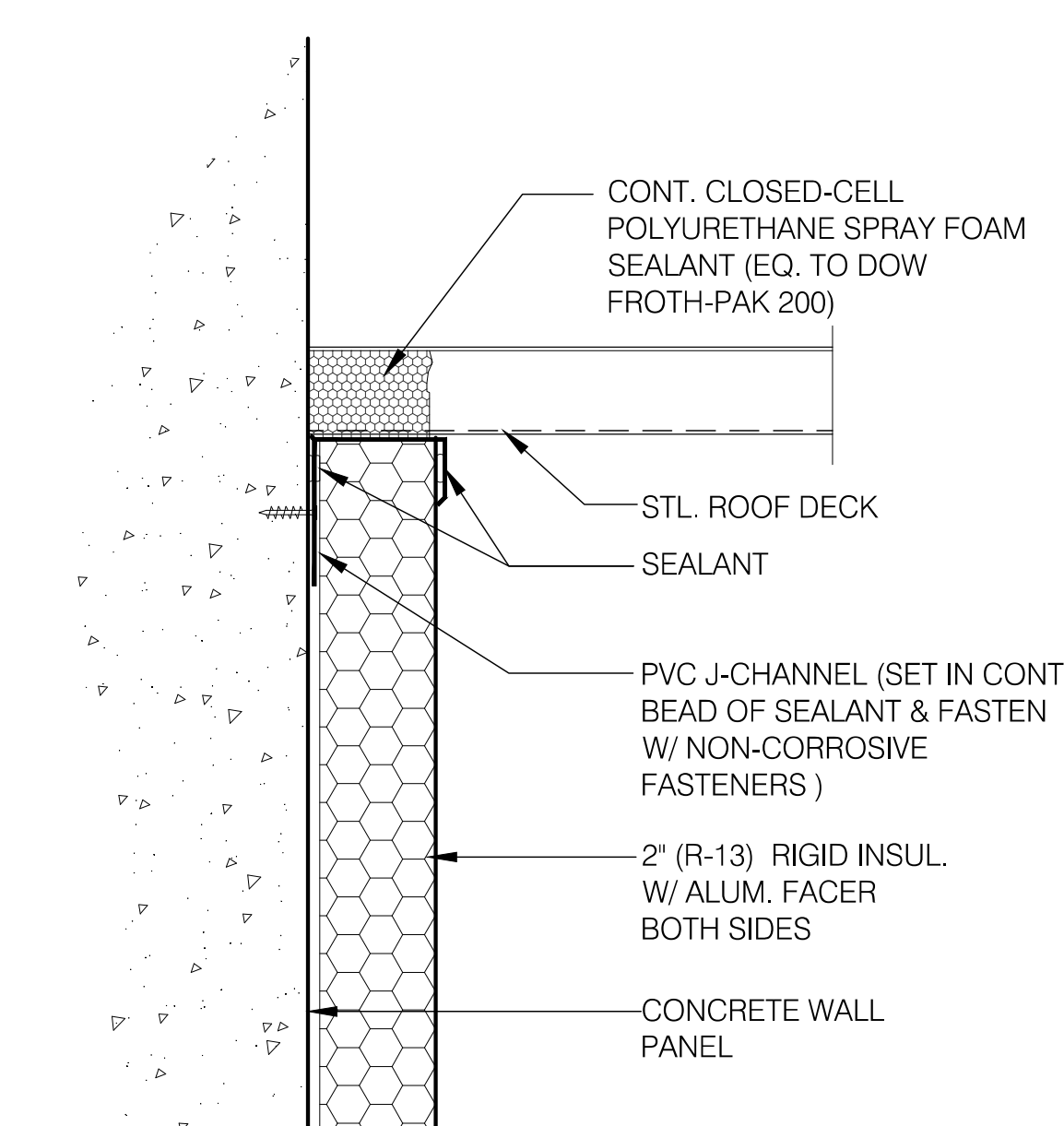
8. CONCEALED FIRE RETARDANT TREATED WOOD BLOCKING
SHALL BE INSTALLED BEHIND ALL CABINETS, TOILET
ACCESSORIES, PLUMBING FIXTURES, HANDRAILS, AND
OTHER WALL MOUNTED ACCESSORIES AS REQUIRED FOR
ADEQUATE SUPPORT.



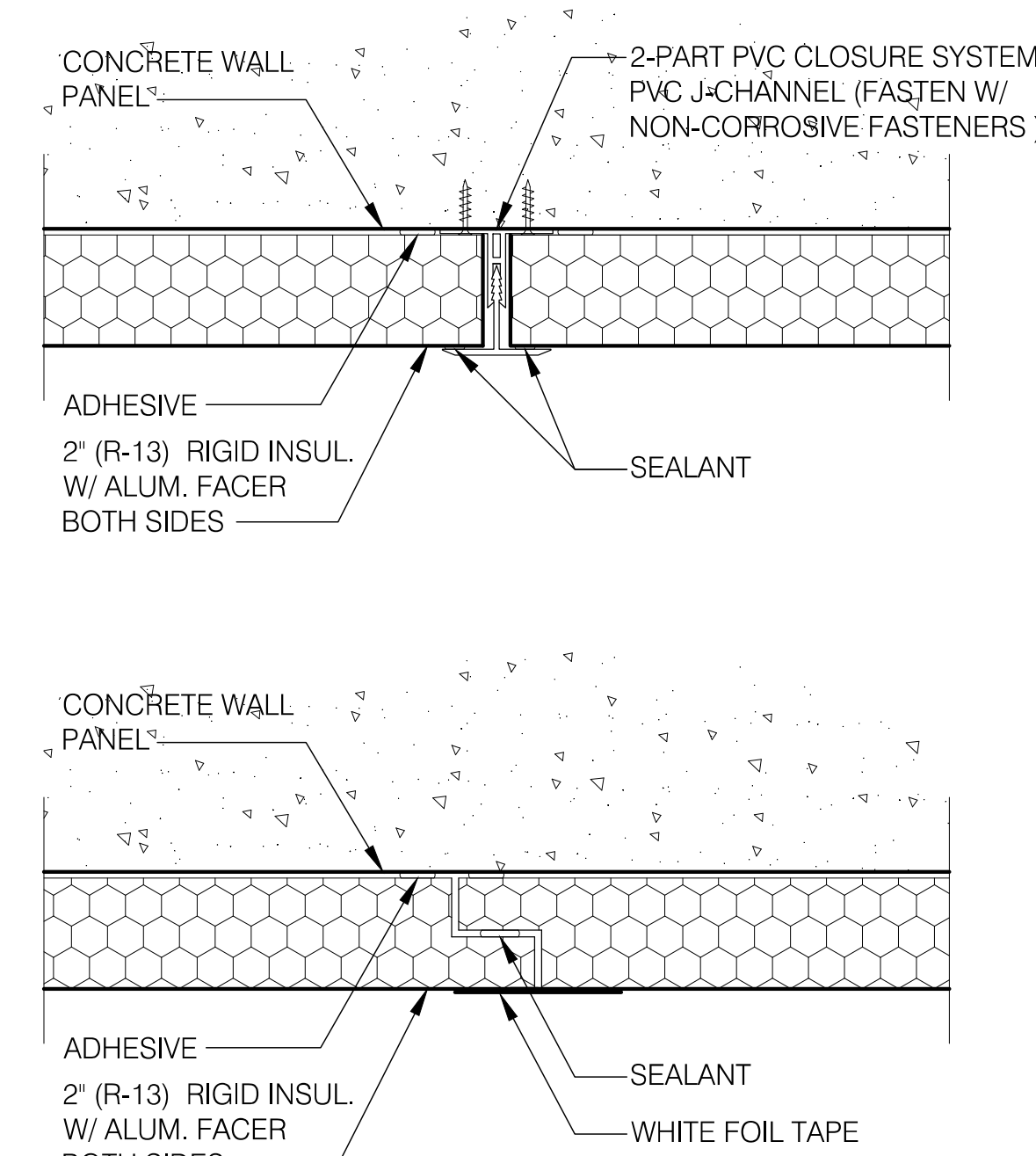
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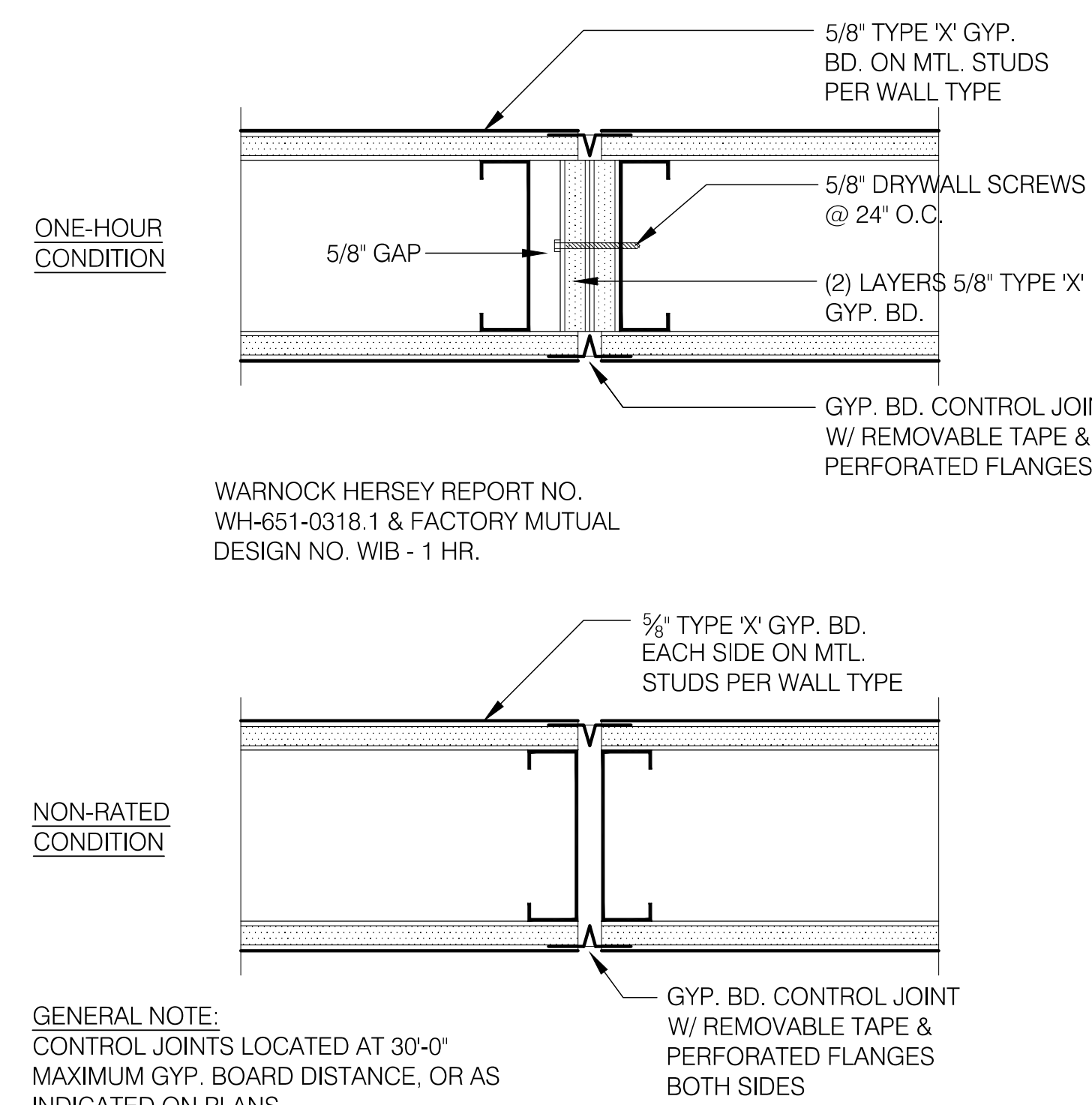
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SCALE: 3" = 1'-0"

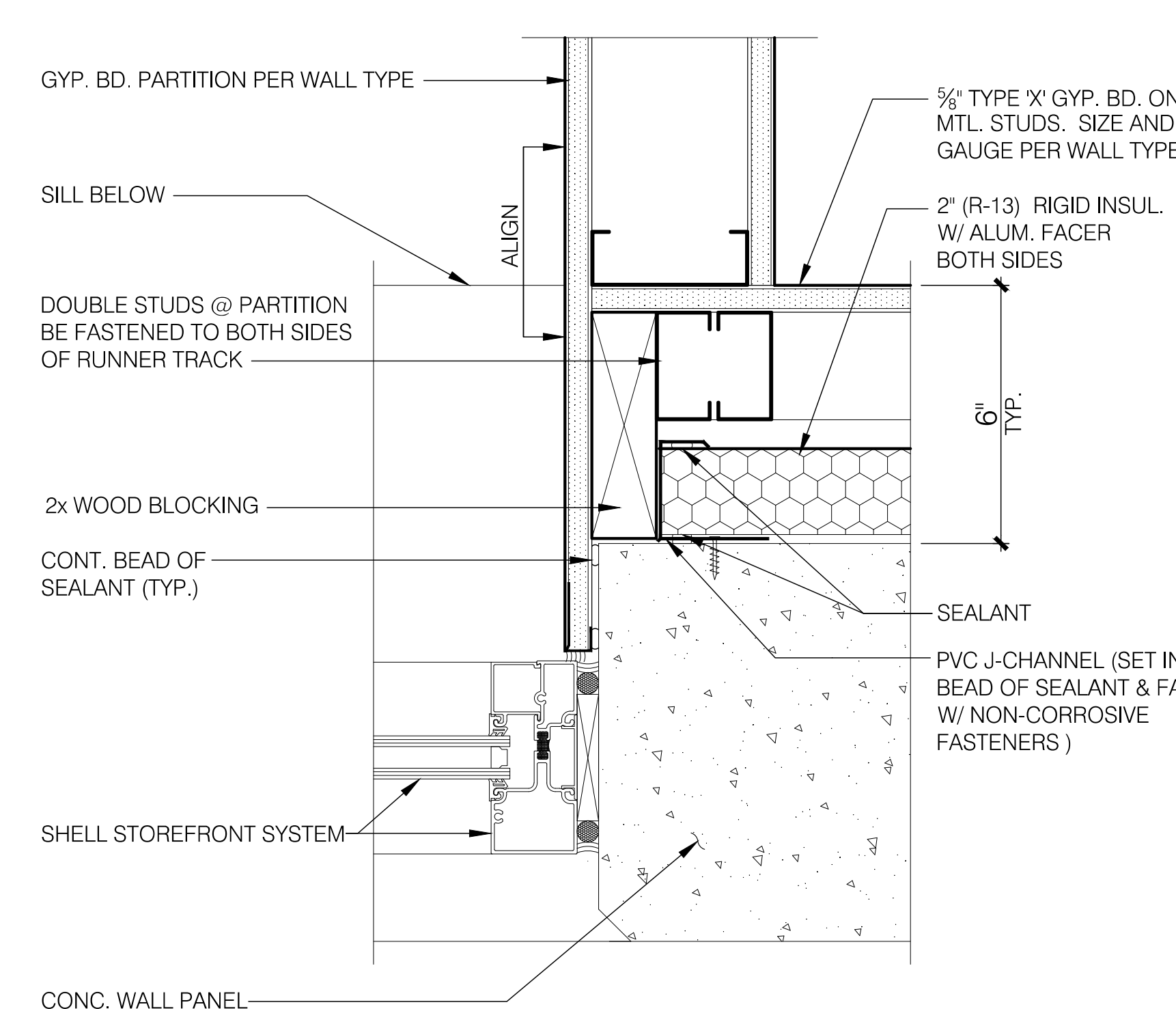


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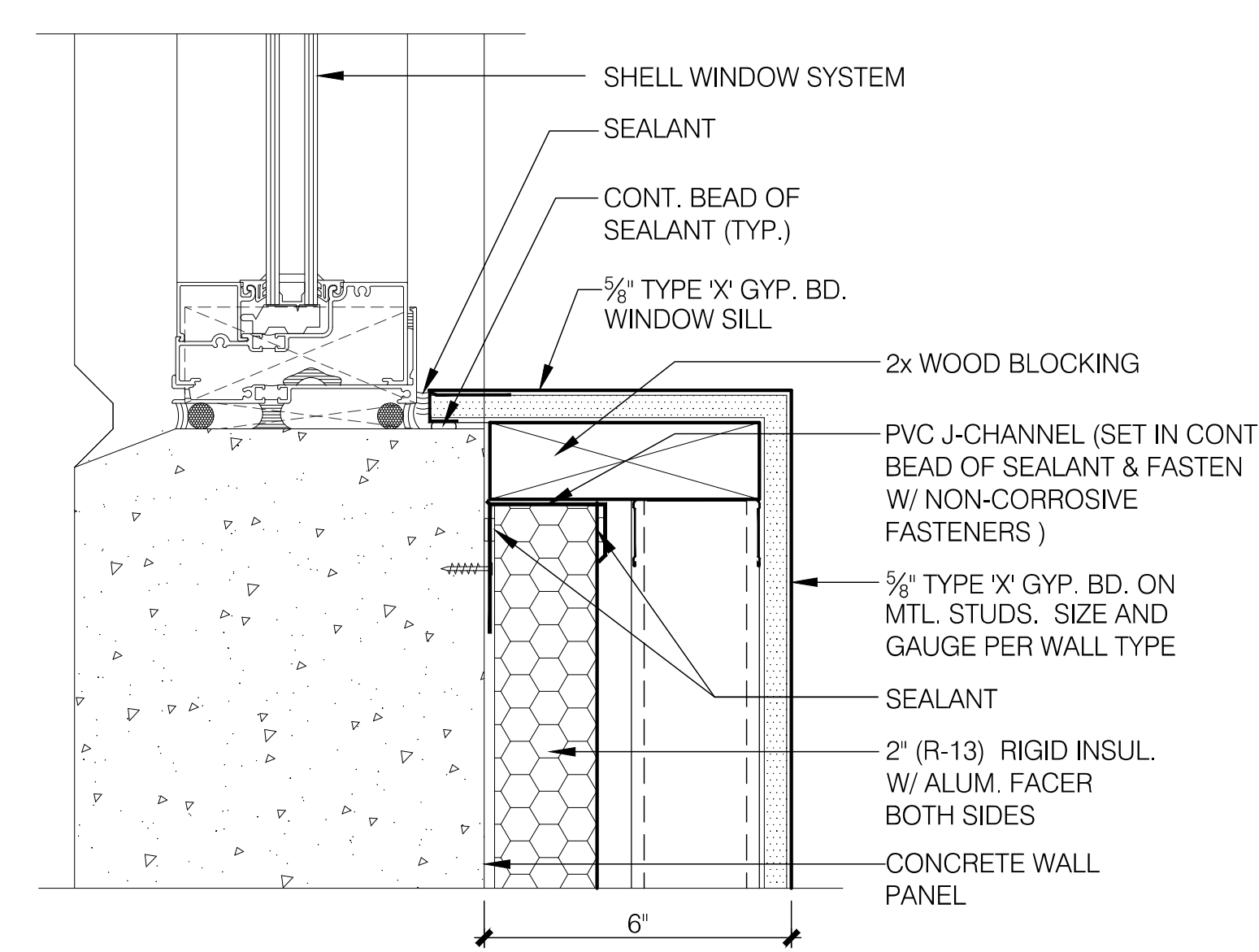


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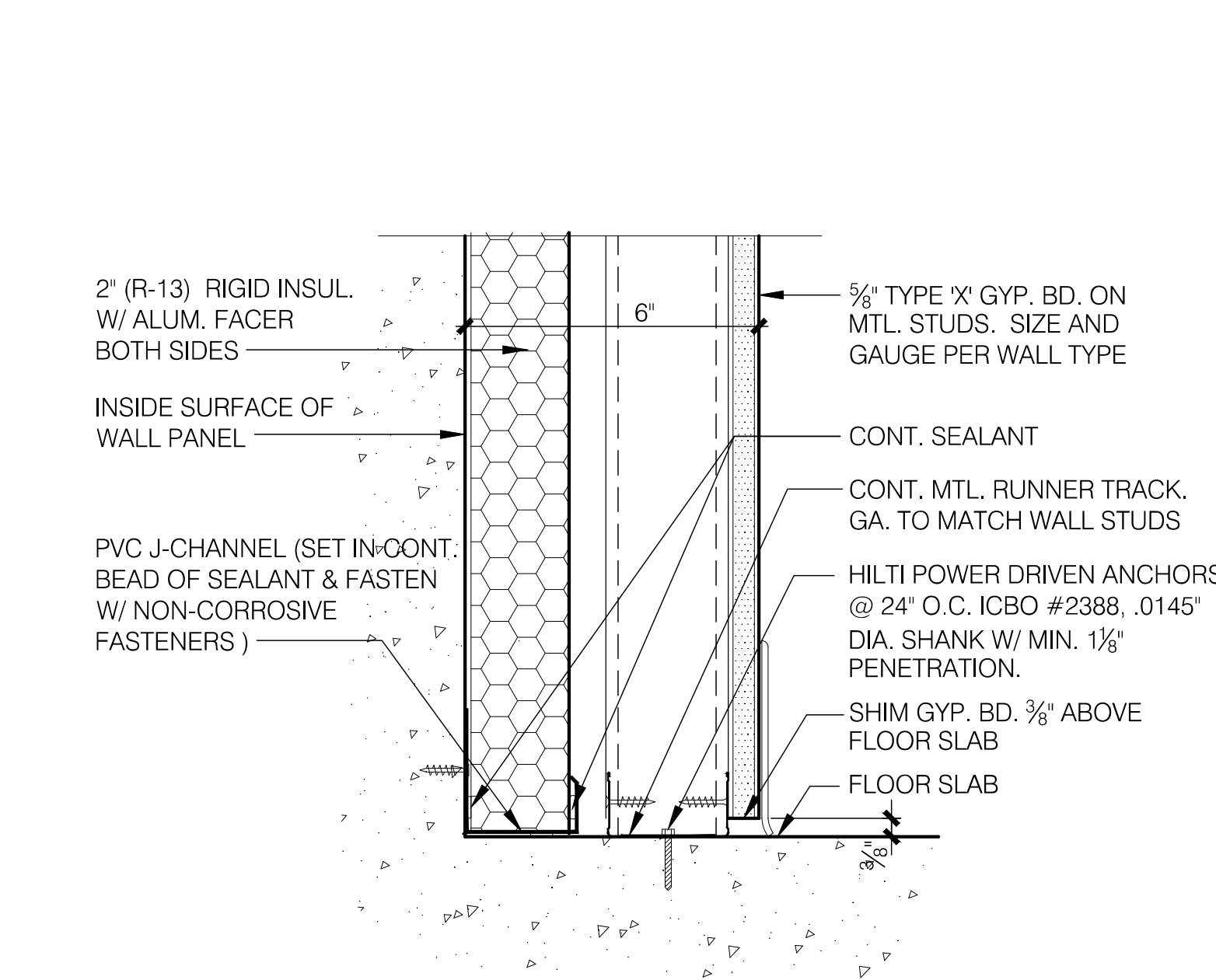
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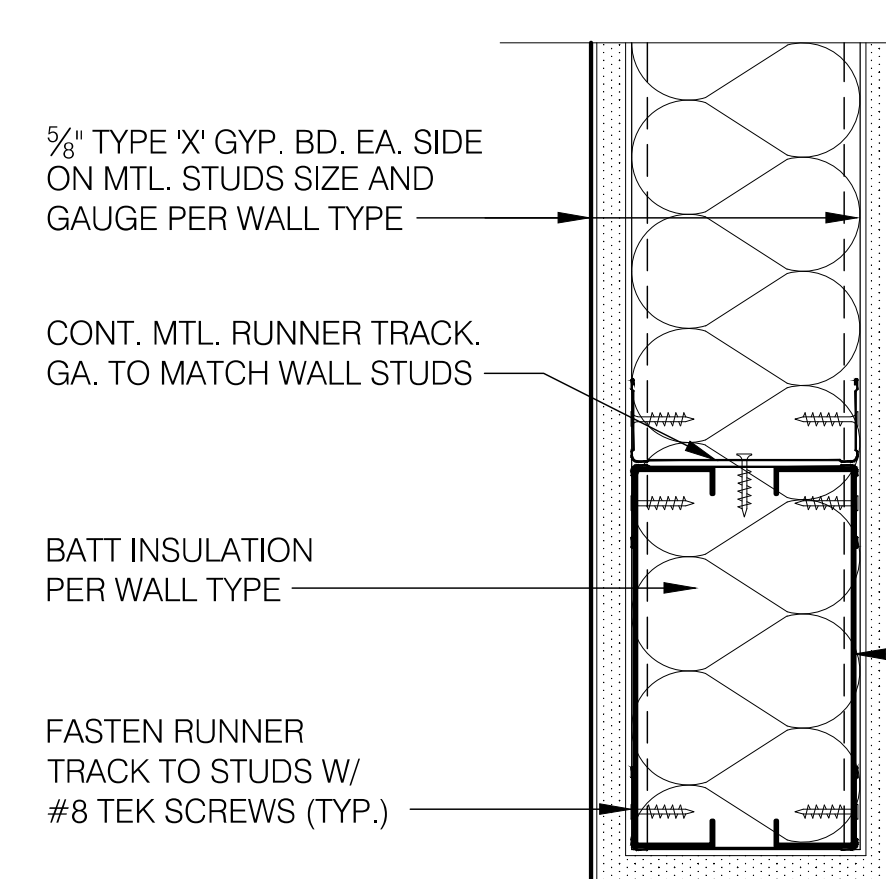
Scale: 3" = 1'-0"



SCALE: 3" = 1'-0"

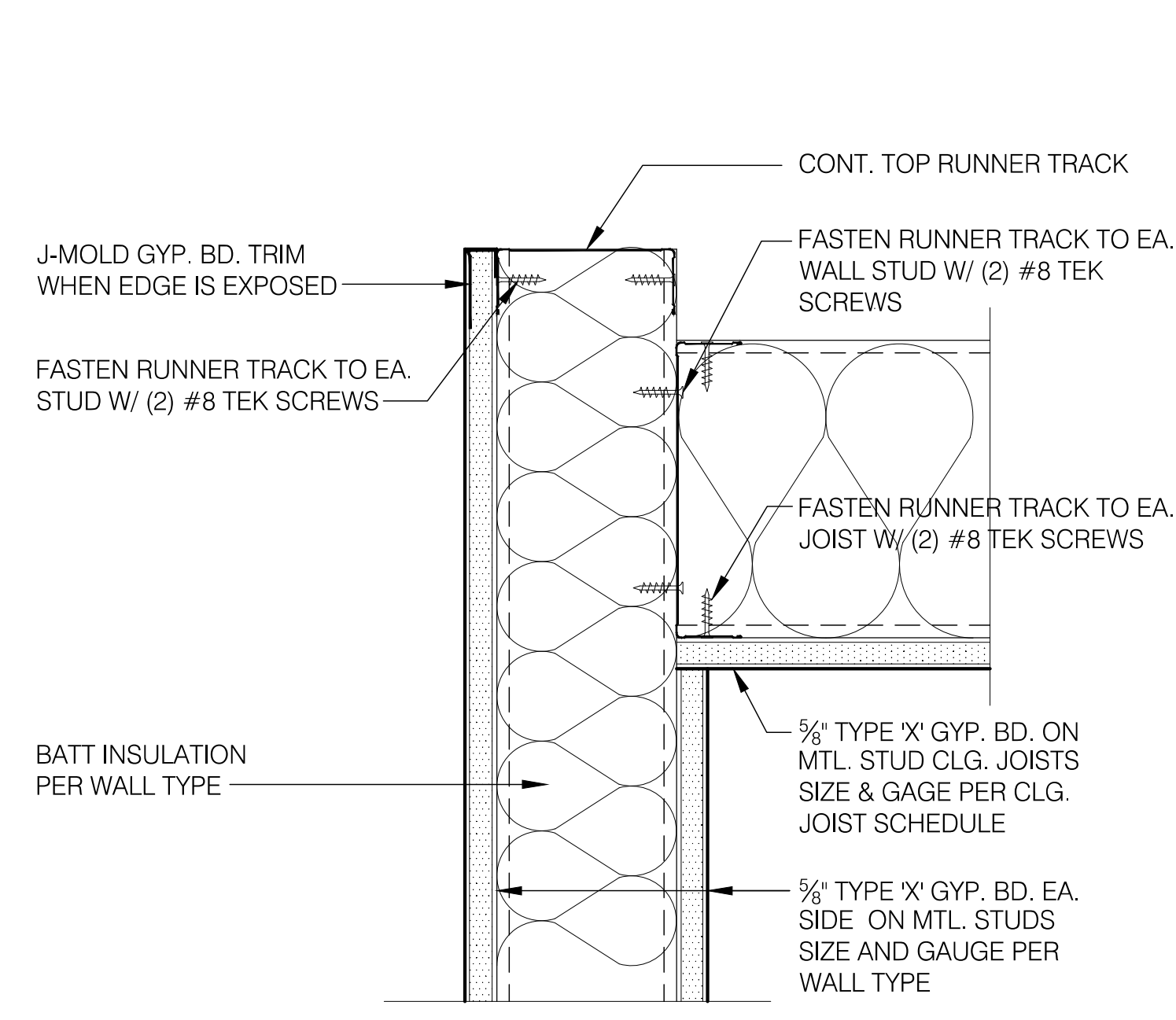


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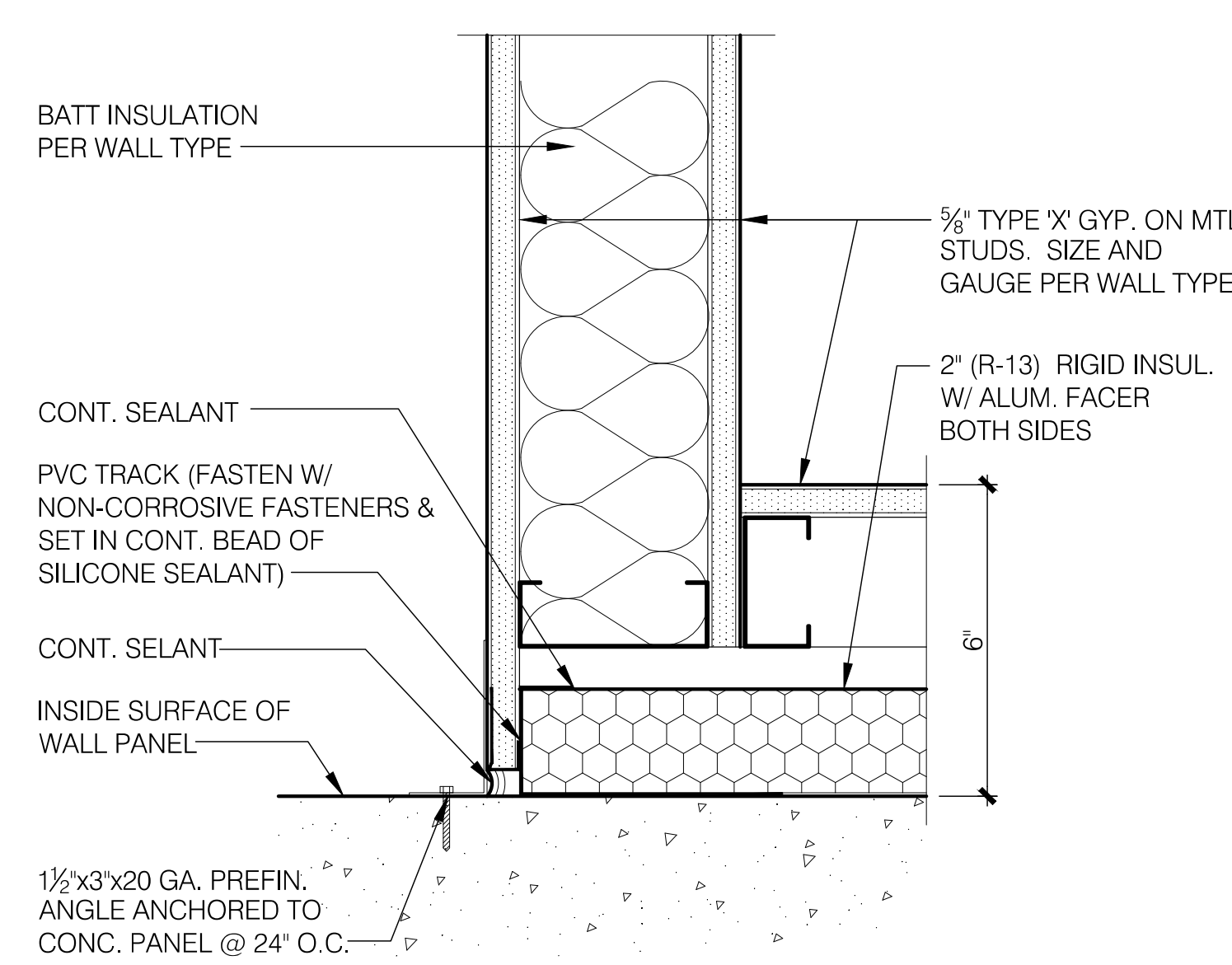


- HEADER/JAMB SCHEDULE**
- 0'-0" - 3'-11": (2) 6" x 20 G.A. W/ DOUBLE JAMB STUDS AND CRIPPLE STUD
 - 4'-0" - 7'-11": (2) 6" x 18 G.A. W/ DOUBLE JAMB STUDS AND CRIPPLE STUD
 - 8'-0" - 12'-0": (2) 8" x 18 G.A. W/ TRIPLE JAMB STUDS AND CRIPPLE STUD
- BOX HEADER CONSTRUCTED W/ (2) HORIZ. STUDS W/ CONT. TOP AND BOTTOM TRACK BASED ON SPAN PER HEADER/JAMB SCHEDULE

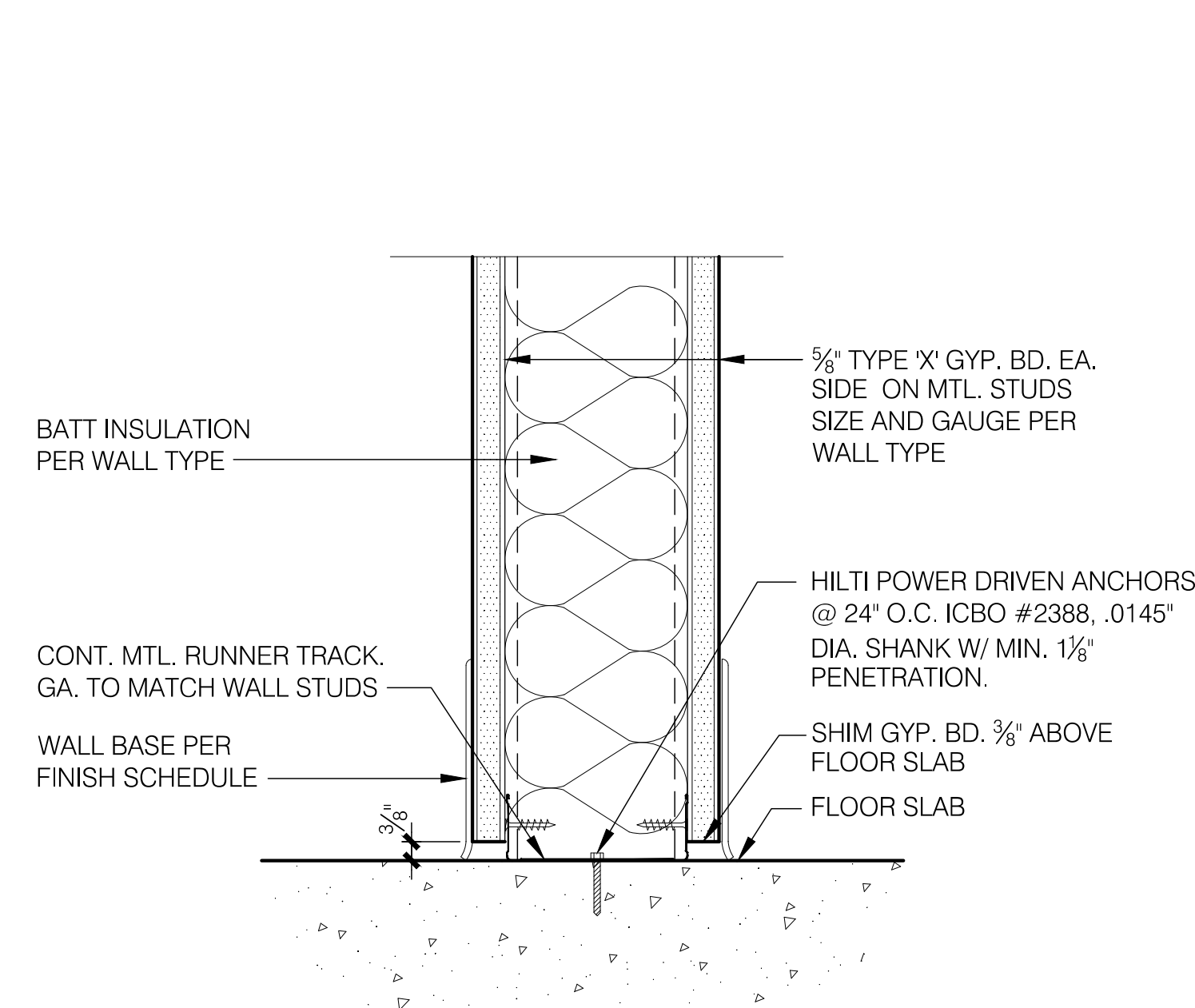
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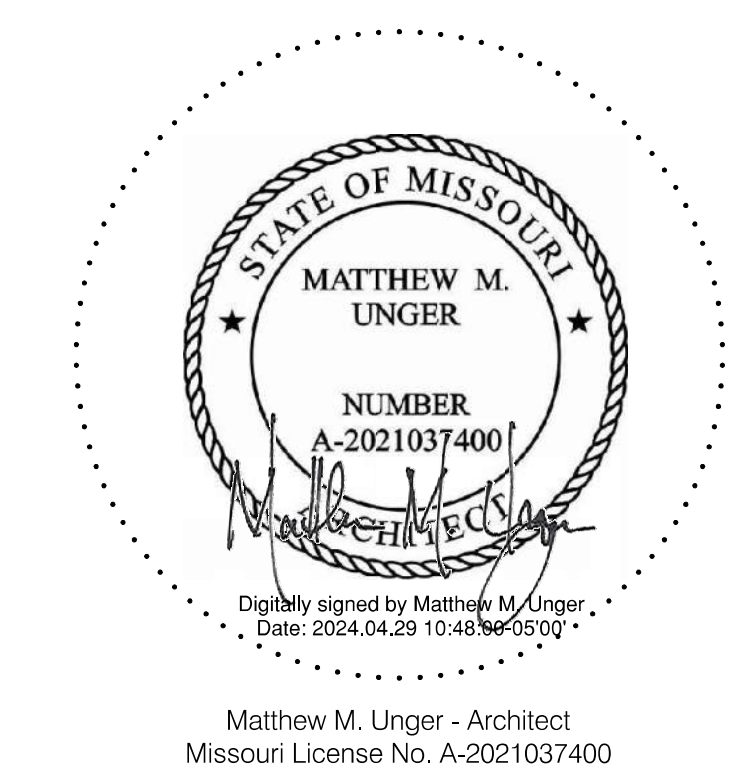
| | |
|-----------------|-----------------------------------|
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

TENANT IMPROVEMENTS FOR

H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04.26.24
Issued For: Permit Submittal
Drawn By: F. Crubaugh
Reviewed By: F. Crubaugh


[illegible]


Matthew M. Unger - Architect
Missouri License No. A-2021037400

A0.03

| | |
|-----------------|-----------------------------------|
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

CONSTRUCTION NOTES:

 CARD READER AT DOOR (VERIFY FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION. NOTE: SHELL DOORS ARE NOT SCHEDULED COORDINATE ALL SECURITY REQUIREMENTS WITH EXISTING CONDITIONS)


 PROVIDE RECESSED FLOOR BOX AS SHOWN ON PLAN NECESSARY CONDUIT FOR POWER ROUTED TO PANEL BOARD AND NECESSARY CONDUIT(S) FOR DATA/VOICE ROUTED TO LAN ROOM. (VERIFY FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION)

- | | |
|----|--|
| 1 | FURNISH AND INSTALL MANUAL FABRIC ROLLER SHADES. 3% OPENNESS. MATCHING ALUMINUM FASCIA COVERS. SHADE TO EXTEND FROM WINDOW TO FINISH FLOOR OR SILL WHERE EXISTS. FABRIC TBD. |
| 2 | FURNISH AND INSTALL GYPSUM BOARD WINDOW HEAD, JAMB & SILLS PER DETAILS 8/40.03, 7/40.03, 6/40.03 |
| 3 | FURNISH & INSTALL RUBBER BASE AND PAINT ON WAREHOUSE SIDE OF GYP. BD. WALL. |
| 4 | FURNISH AND INSTALL PIPE BOLLARD PER DETAIL 3/48.01 |
| 5 | INSTALL 3/2" A-C GRADE FIRE RESISTIVE PLYWOOD BACK BOARD OVER GYP. BD. WALL FROM 36" ABOVE F.F. TO 84" AFF. FOR THE FULL WIDTH OF WALL ON ALL WALLS. GRADE SHALL FACE OUT & BE PERMITTED TO MATCH ADJACENT WALL WITH FIRE LABEL MASKED AND LEFT UNPAINTED. INSTALL COUPLER AND GROUND WIRE AS REQUIRED |
| 6 | PROVIDE POWER SUPPLY & WOOD BACKING FOR OWNER FURNISHED AND INSTALLED FLAT SCREEN TV. (5) PER ELECT. DOWNS. |
| 7 | PROVIDE EPOXY COATING AT FLOOR AND CURBS OF SCRUBBER DUMP |
| 8 | PROVIDE RECESSED WATER SUPPLY BOX BEHIND TENANT FURNISHED COFFEE, ICE & WATER DISPENSERS |
| 9 | PROVIDE (2) 48X SHETS OF FRP-1 WITH TRIM BEHIND FLOOR SINK AND SCRUBBER DUMP |
| 10 | CARD READER TO BE ADDED TO EXISTING DOOR PER TENANTS SECURITY REQUIREMENTS |
| 11 | CONTRACTOR TO PROVIDE LIFTS ON ALL EXISTING DOCK DOOR POSITIONS |
| 12 | CMU CURB BOARDING DUMP. REF. PLAN AND SECTION T.V.S. 1/48.01 & 2/48.01 |
| 13 | PROVIDE BLOCKING IN WALL FOR TENANT PROVIDED GLASS MARKER BOARDS. |

CODE GENERAL NOTES

1. PROVIDE FIRE DEPARTMENT SIGNAGE AT ALL OVERHEAD, DRIVE-IN AND PEDESTRIAN DOORS AS REQUIRED BY THE LOCAL JURISDICTION. NUMBER SEQUENCING, SIZE, COLOR AND LOCATION SHALL BE COORDINATED WITH THE PROPERTY MANAGER AND THE LOCAL JURISDICTION TO ENSURE COMPLIANCE WITH THE PARK STANDARDS
2. REFERENCE ELECTRICAL DRAWINGS FOR EXIT SIGNAGE, EMERGENCY AND EGRESS LIGHTING
3. QUANTITY AND LOCATIONS OF FIRE EXTINGUISHERS SHOWN SHALL BE COORDINATED WITH THE LOCAL FIRE MARSHAL

CODE PLAN SYMBOLS LEGEND

FE
 WALL AND/OR COLUMN MOUNTED FIRE EXTINGUISHER (UL RATING 4A-80B:C) W/ MOUNTING BRACKET. ORDINARY HAZARD RATED FOR 1,500 SF PER UNIT OF A (6,000 SF PER EXTINGUISHER). REFERENCE FLOOR PLAN(S) FOR LOCATIONS. MOUNT SO CENTERLINE OF EXTINGUISHER IS 47' A.F.F. (CONFIRM WITH FIRE MARSHAL)

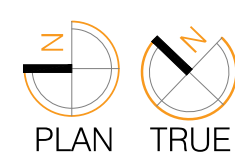
 SEMI-RECESSED FIRE EXTINGUISHER BY LARSEN'S MANUFACTURING COMPANY, WWW.LARSENSMFG.COM ARCHITECTURAL SERIES AL2409-6R, W/MP10 FIRE EXTINGUISHER, CLEAR ALUMINUM SOLID DOOR, AND 'FIRE' HANDLE W/ STANDARD FINISH, MOUNT SO CENTERLINE OF CABINET HANDLE IS 47" A.F.F.

 EXIT LOCATION, WIDTH, AND CLEAR WIDTH. ACCESSIBLE EXIT

■ ■ ■ ■ EXIT ACCESS PATH OF TRAVEL


2 ENLARGED RESTROOM PLAN


Scale: $1/4" = 1'-0"$





TOILET ACCESSORY LEGEND


ALL ACCESSORIES SHALL BE STAINLESS STEEL UNLESS NOTED OTHERWISE.
ALL ACCESSORIES SHALL BE DESIGNED TO MEET ADA STANDARDS.


- 


① COMBINATION PAPER TOWEL DISPENSER/TRASH RECEPTACLE - SEMI-RECESSED (C-FOLD: BOBRICK B-3944)
 - 


② LIQUID SOAP DISPENSER - COUNTER TOP (AUTOMATIC: BOBRICK B-826 WITH B-826.18 STARTER KIT)
 - 


③ CHANNEL FRAMED MIRROR (BOBRICK B-165 2436)
 - 

④ TOILET TISSUE DISPENSER (ROLL-IN-RESERVE: BOBRICK B-2888)
 - 

⑤ GRAB BARS AS SHOWN ON PLAN AND ELEVATIONS (BOBRICK B-6806 SERIES, 42" SIDE, 36" BACK, 18" VERTICAL)
 - 

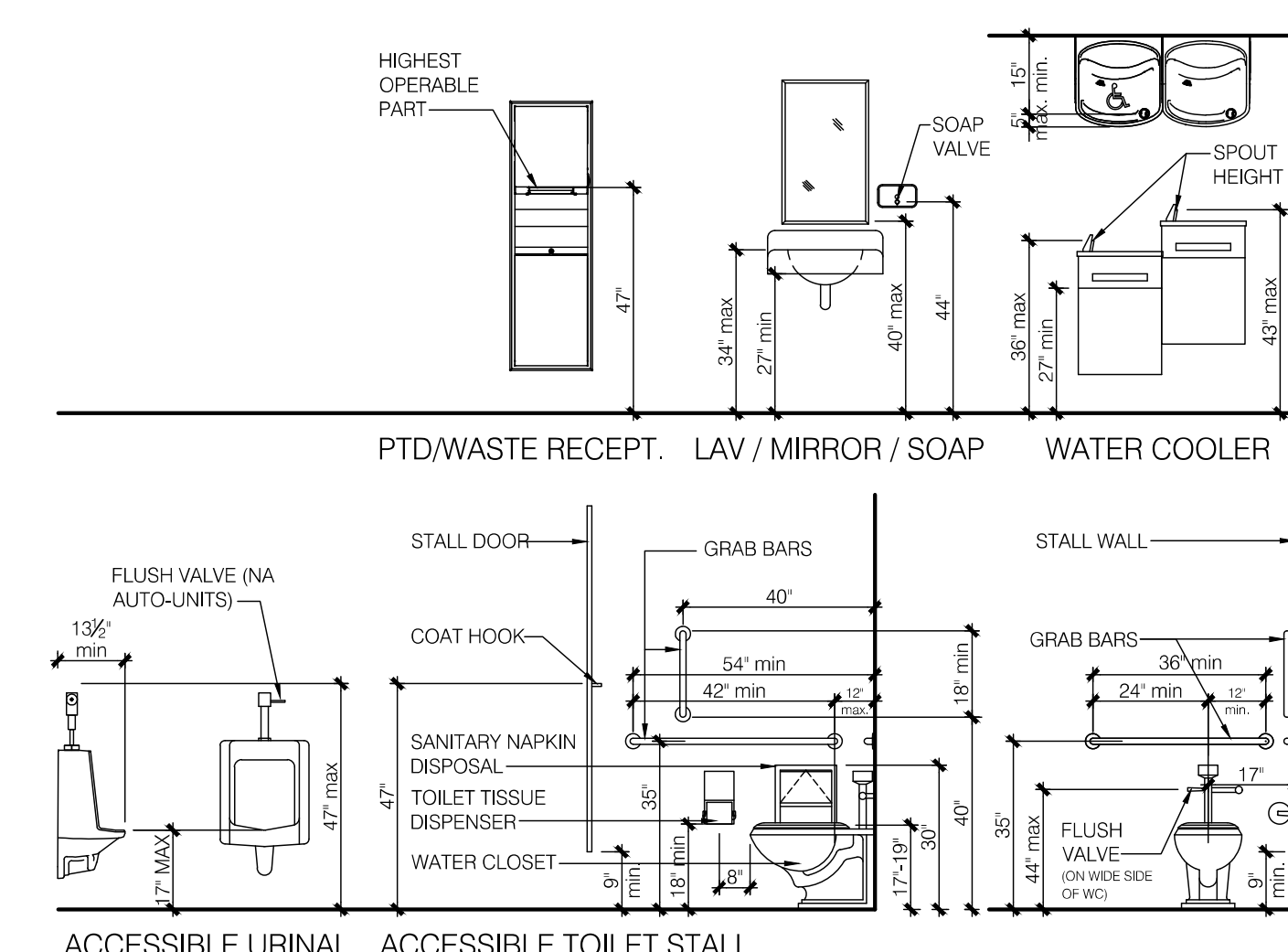
⑥ SANITARY NAPKIN DISPOSAL (SURFACE: BOBRICK B-270)
 - 

⑦ FLOOR MOUNTED OVERHEAD BRACED STEEL PARTITIONS W/ BAKED ENAMEL FINISH (COLOR TBD)
 - 

⑧ B-LEVEL ELECTRIC WATER COOLER (ELUKAY-EZ2SL8C)
 - 

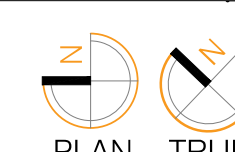
⑨ UTILITY SHELF WITH MOP/BROOM HOLDERS AND RAG HOOKS (BOBRICK B-224, 36"L x 6"H x 8"D)

TOILET ACCESSORY MOUNTING LOCATIONS | HEIGHTS



OVERALL FLOOR PLAN

Scale: $1/8" = 1'-0"$

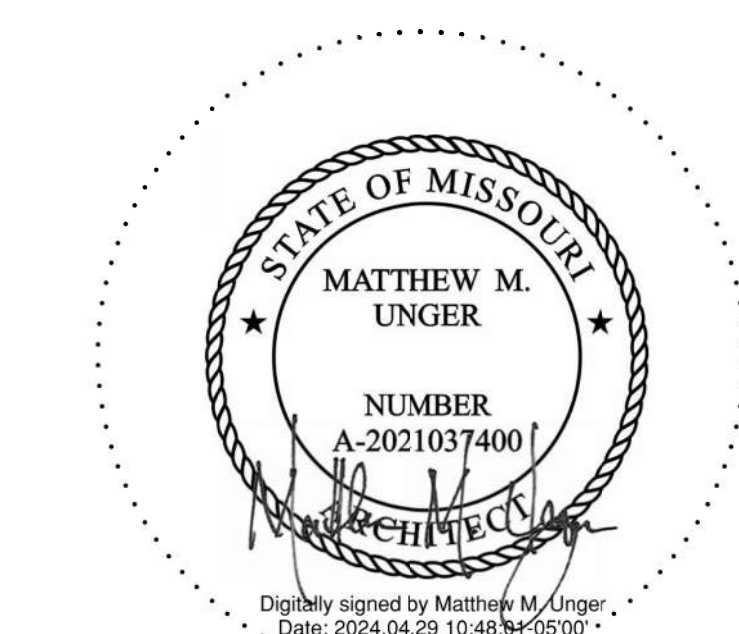


TENANT IMPROVEMENTS FOR:

H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04.26.24
Issued For: Permit Submittal
Drawn By: F. Crubaugh
Reviewed By: F. Crubaugh

[illegible]

Matthew M. Unger - Architect
Missouri License No. A-2021037400

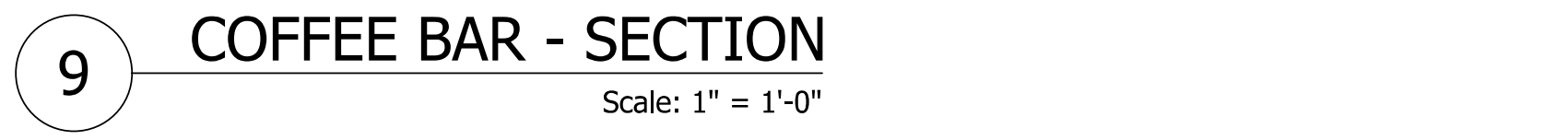
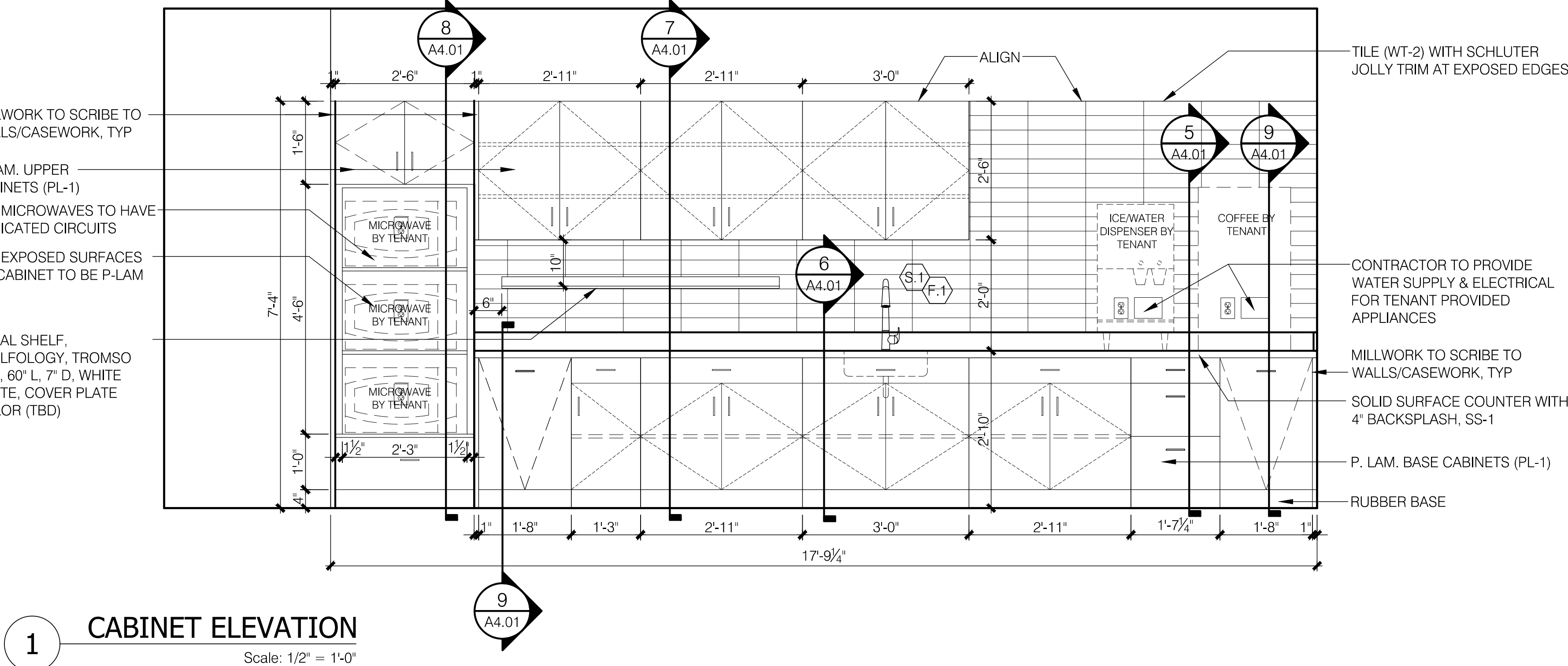
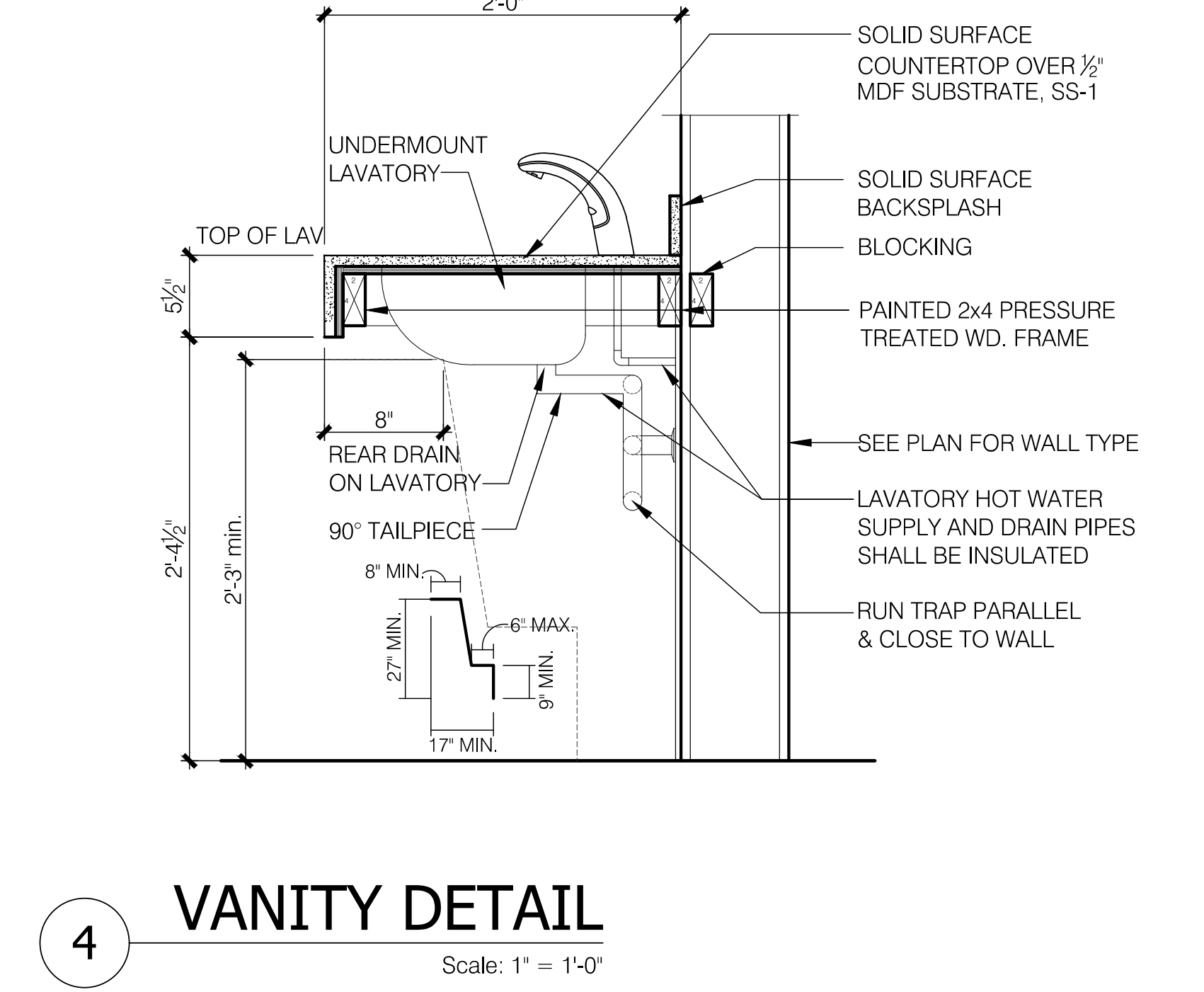
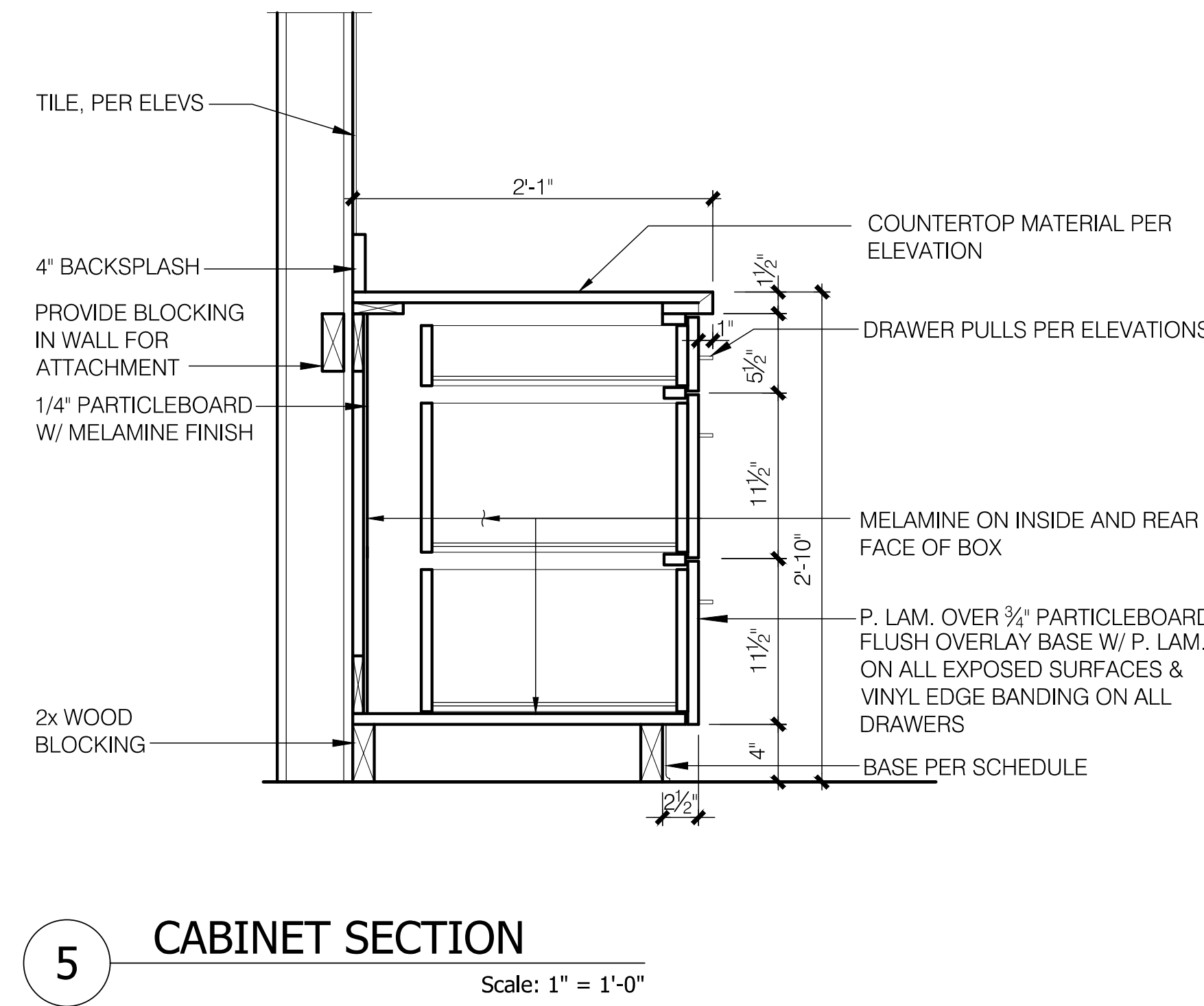
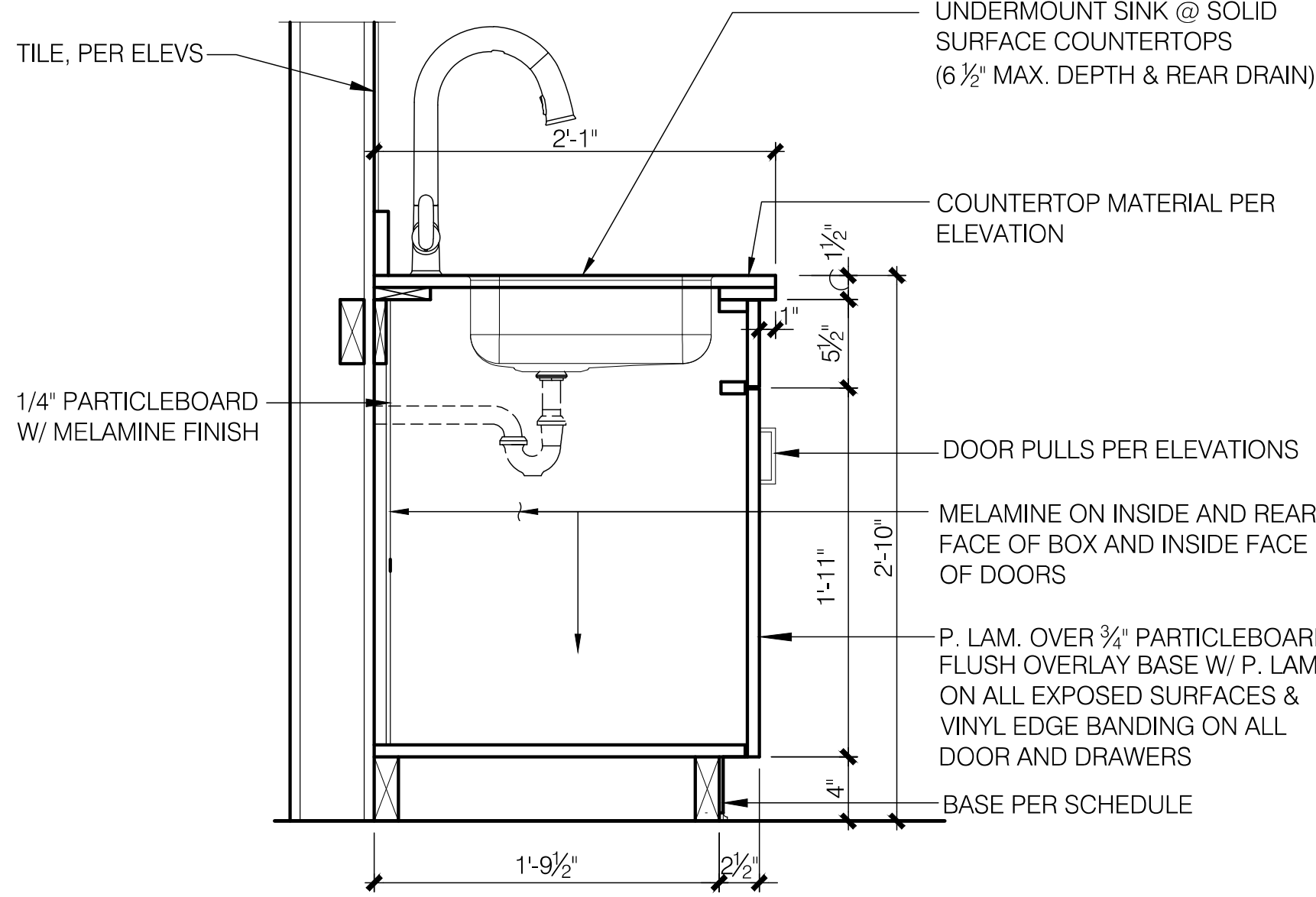
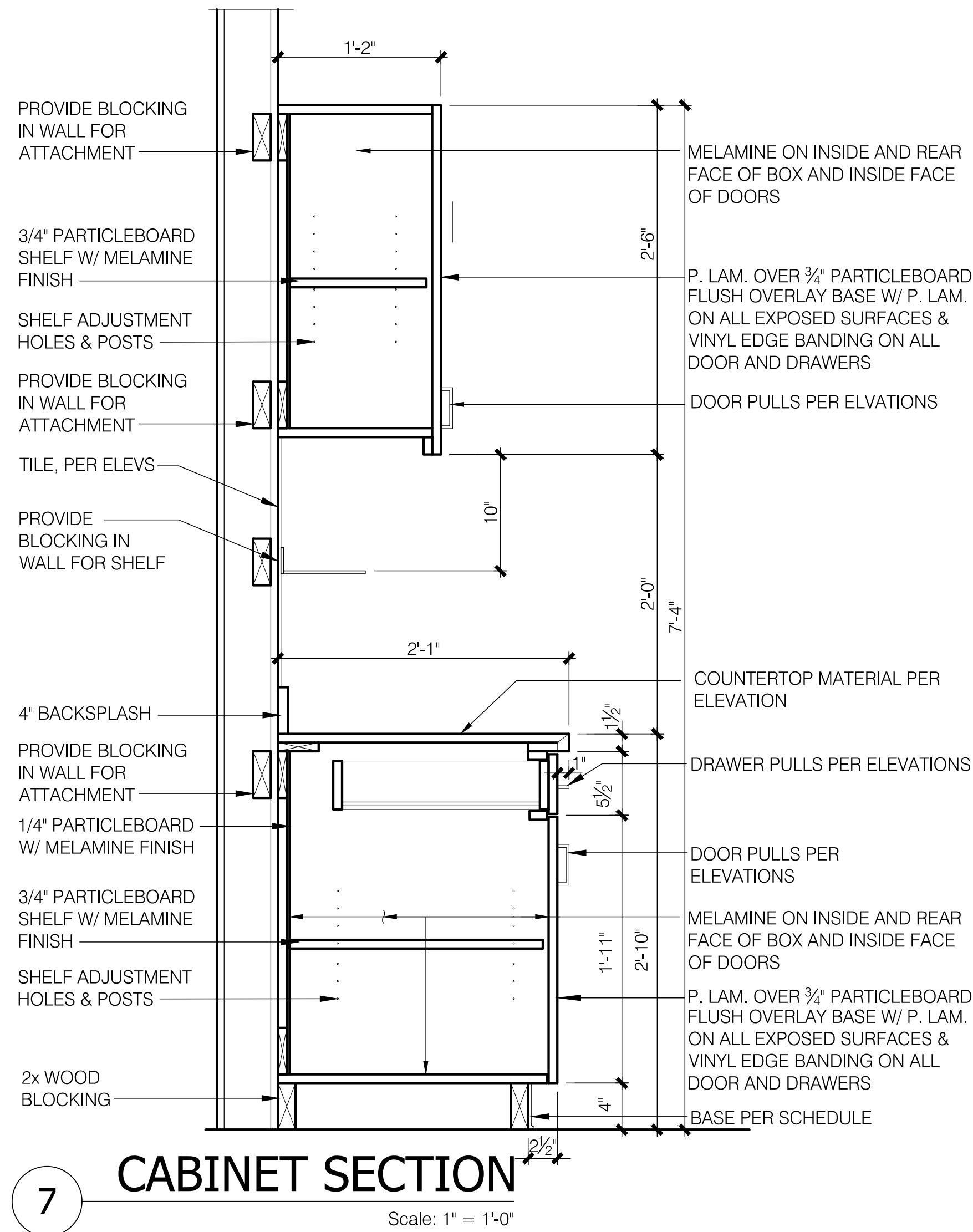
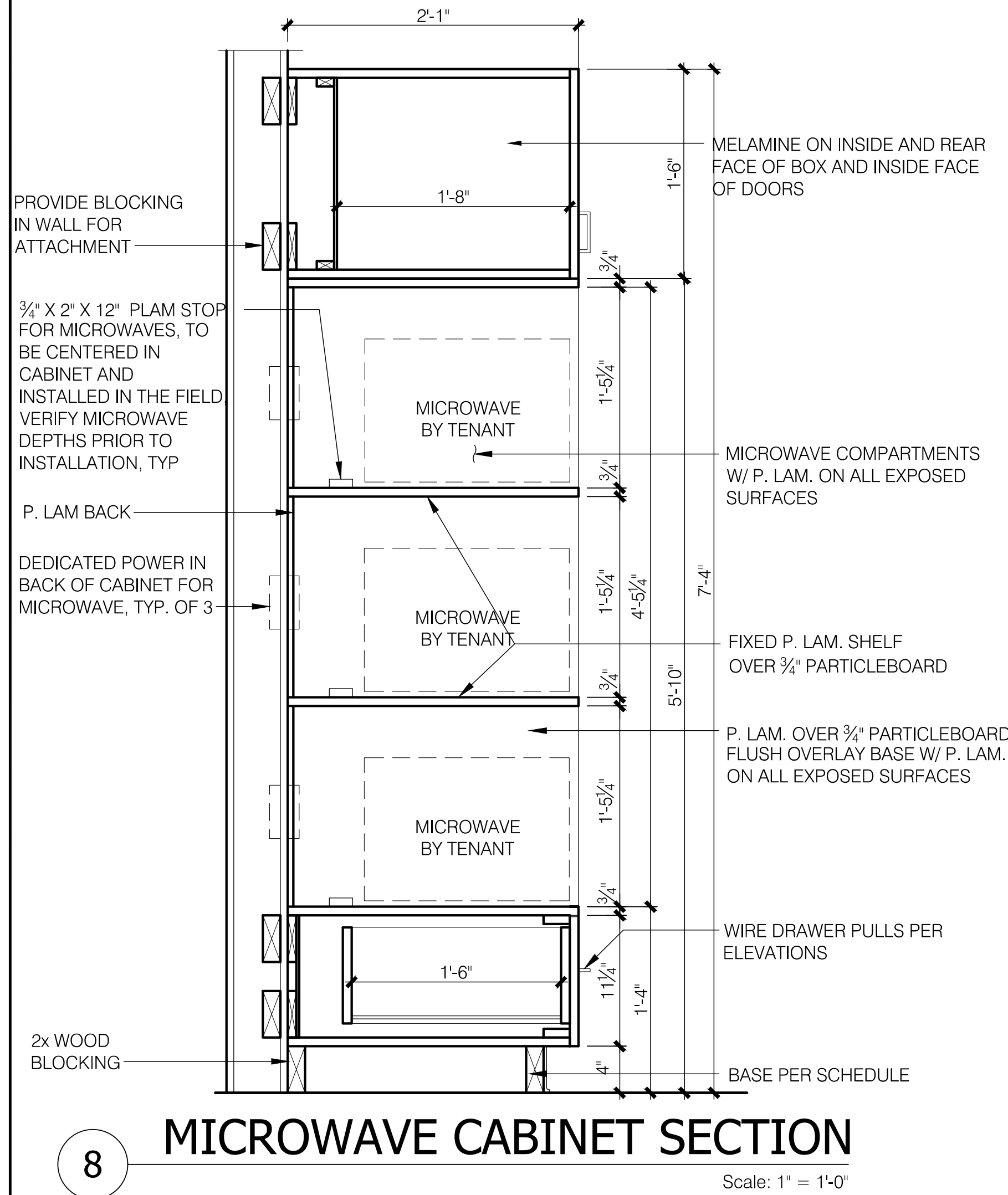
Appendix

Λ 2 0 1

A2.01

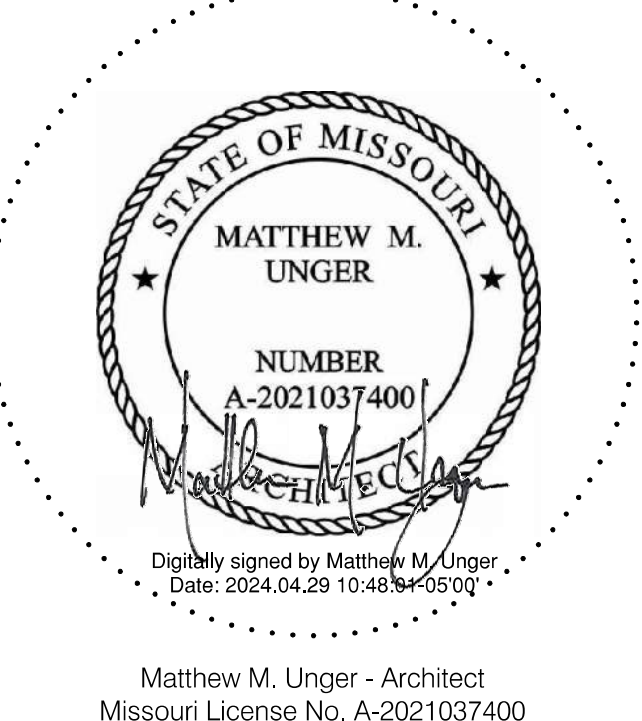
FLOOR PLANS

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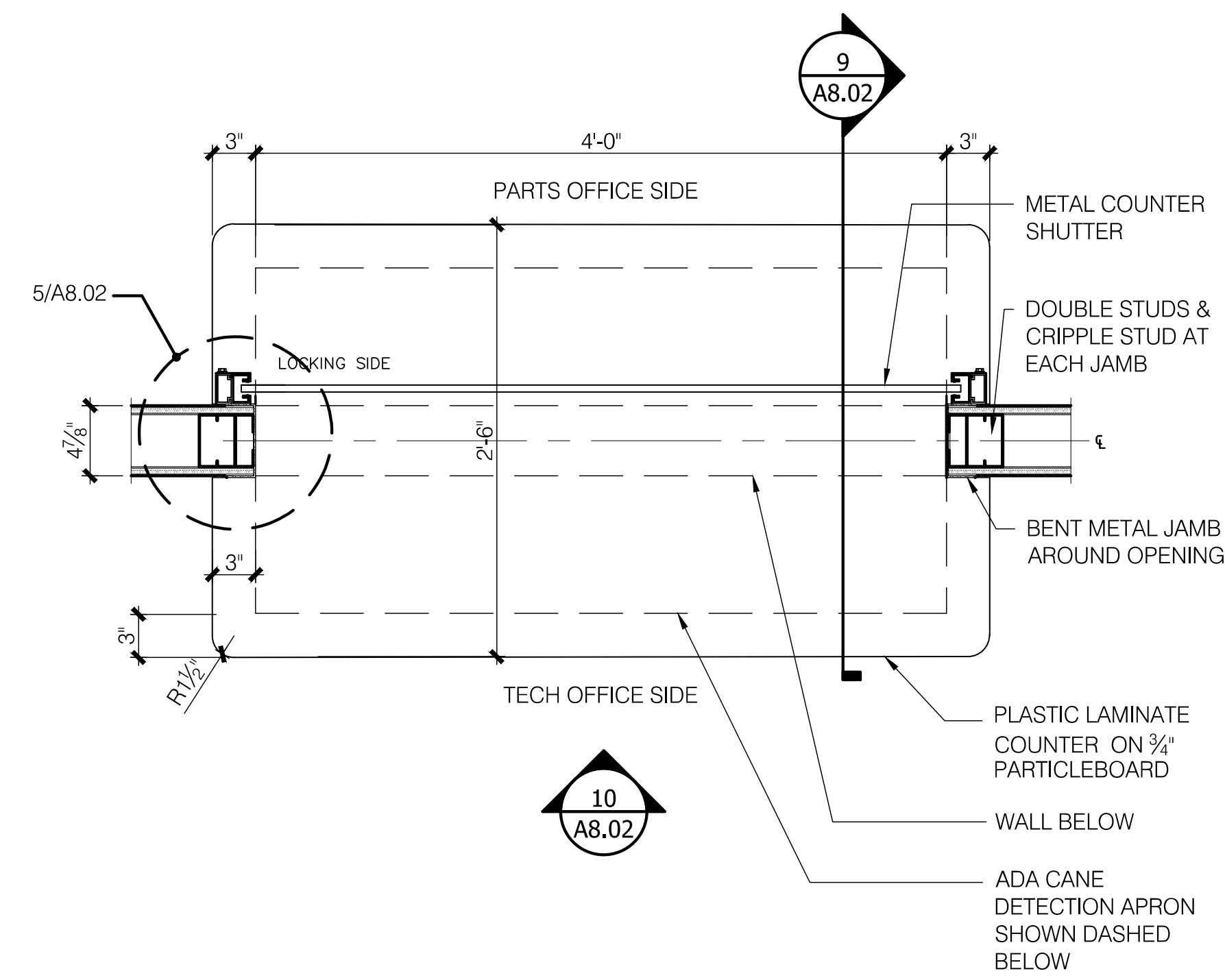


- GENERAL NOTES:**
- REFERENCE DRAWING A8.03 FOR FINISH LEGEND AND ROOM FINISH SCHEDULE
 - REFERENCE DRAWING A2.01 FOR TOILET ACCESSORIES AND MOUNTING HEIGHTS
 - REFERENCE PLUMBING DRAWINGS FOR PLUMBING FIXTURE SPECIFICATIONS
- TYPICAL CASEWORK NOTES**
- CABINET SHELVES SHALL BE HELD BACK 1/2" FROM BACK FACE OF DOOR, TYP
 - ALL SHELF POSTS SHALL BE SATIN CHROME
 - CABINETS CONSTRUCTION SHALL BE FLUSH OVERLAY W/ 1/2" REVEAL BETWEEN DOORS & DRAWERS
 - CABINETS SHALL HAVE CONCEALED EUROPEAN-STYLE HINGES AT CABINET DOORS, HEAVY-DUTY DIOMATIC AS MANUFACTURED BY HAFELE, OR EQUAL. DRAWER GLIDES SHALL BE HEAVY DUTY, ACCURIDE OR EQUAL
 - INTERIOR OF CABINETS SHALL BE WHITE MELAMINE
- PLUMBING SCHEDULE**
- UNDERMOUNT ADA SINKS
- *** ALL ADA COMPLIANT SINKS TO HAVE REAR DRAIN AND 6 1/2" MAX. DEPTH
- (S-1) SINGLE BOWL UNDERMOUNT ADA COMPLIANT STAINLESS STEEL SINK, ELKAY ELUH4D211555, 23.5" x 18.25" x 5.375"
- FAUCET SCHEDULE**
- (F-1) KRAUS OLETTO PULL DOWN FAUCET IN SPOT FREE STAINLESS FINISH, KPF-2620 1.75 GPM FLOW RATE

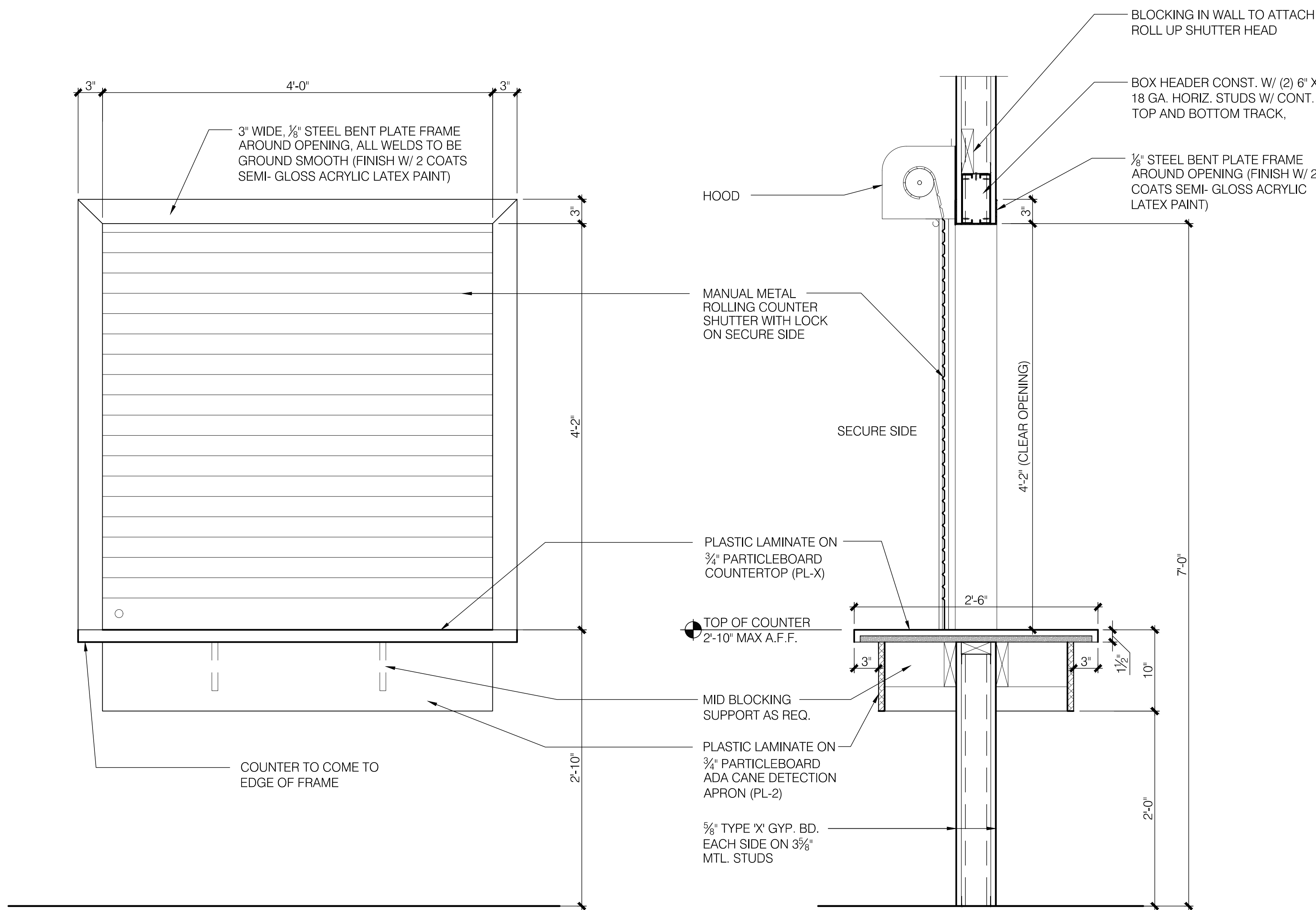
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| Project No. | 2024-032 | |
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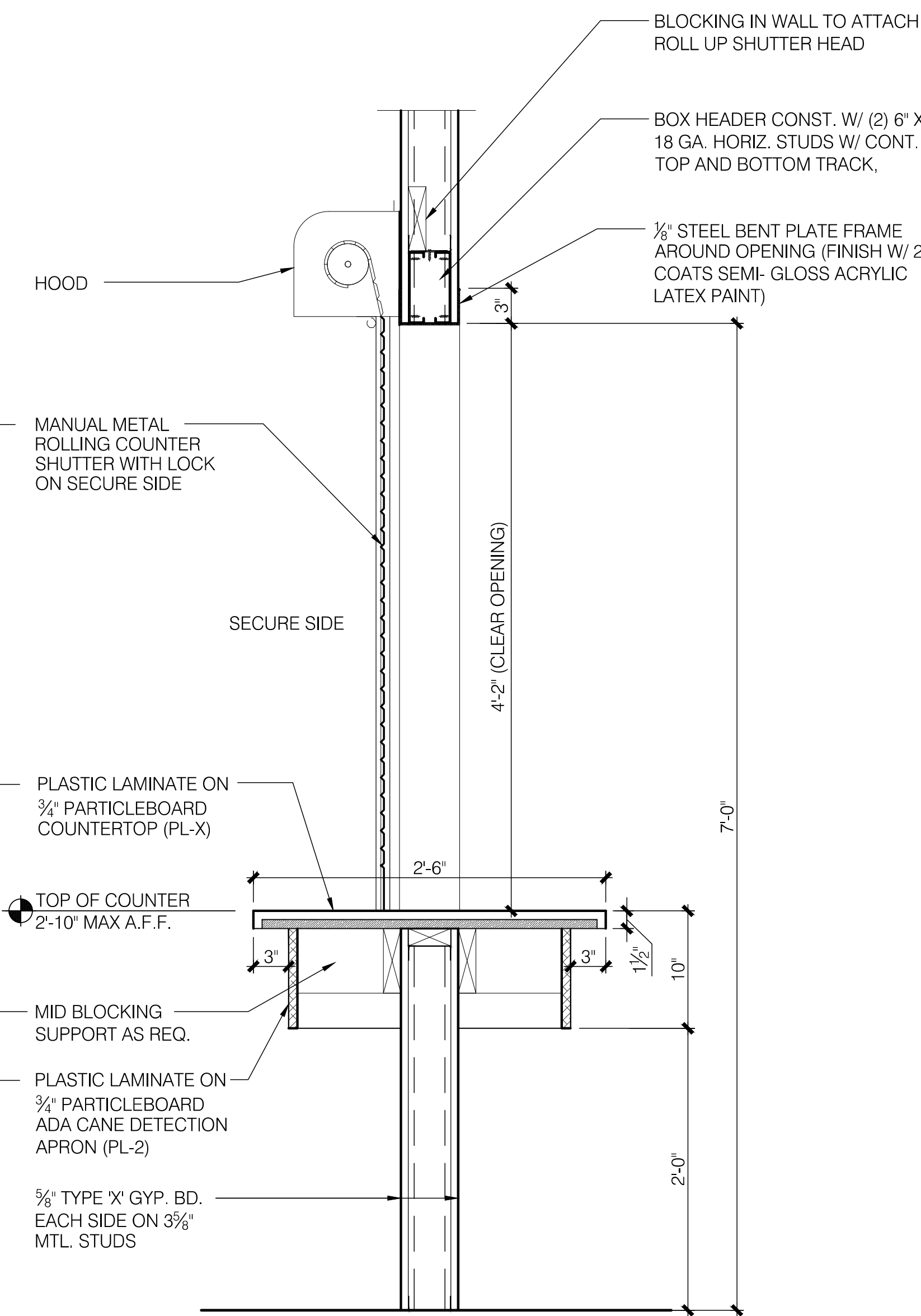
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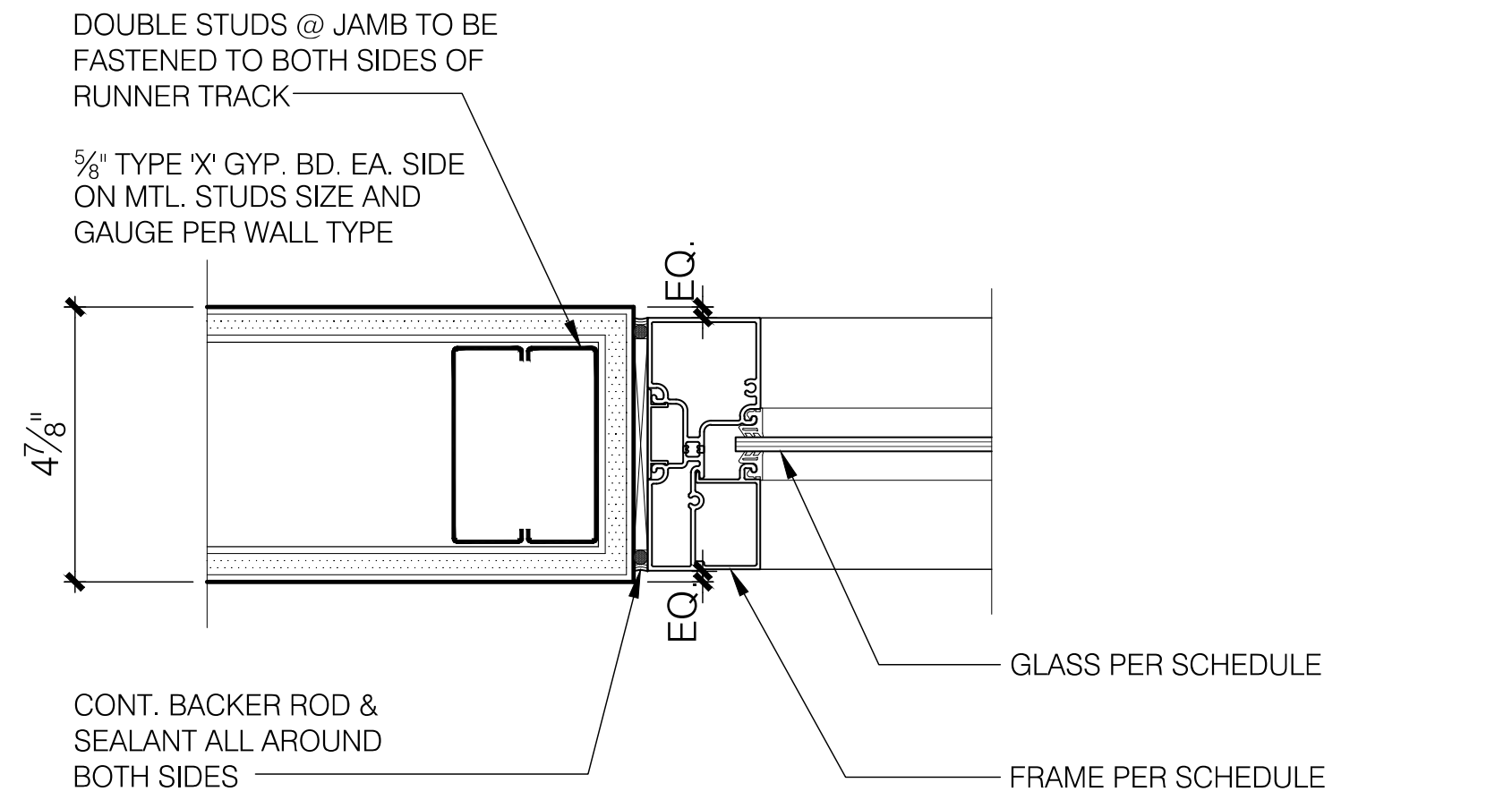
11 PASS-THRU WINDOW PLAN
Scale: 1" = 1'-0"



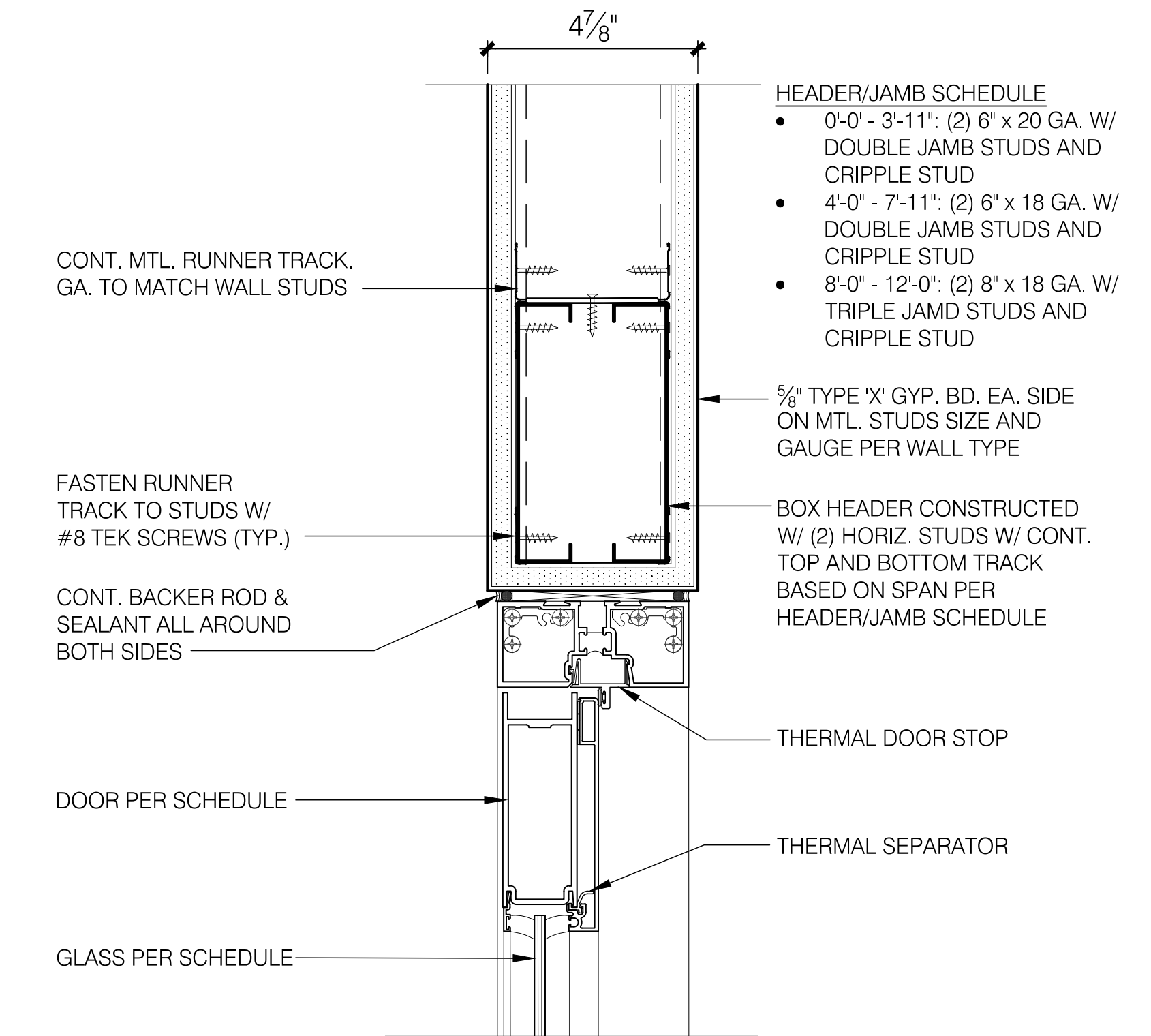
10 PASS-THRU WINDOW ELEVATION
Scale: 1" = 1'-0"



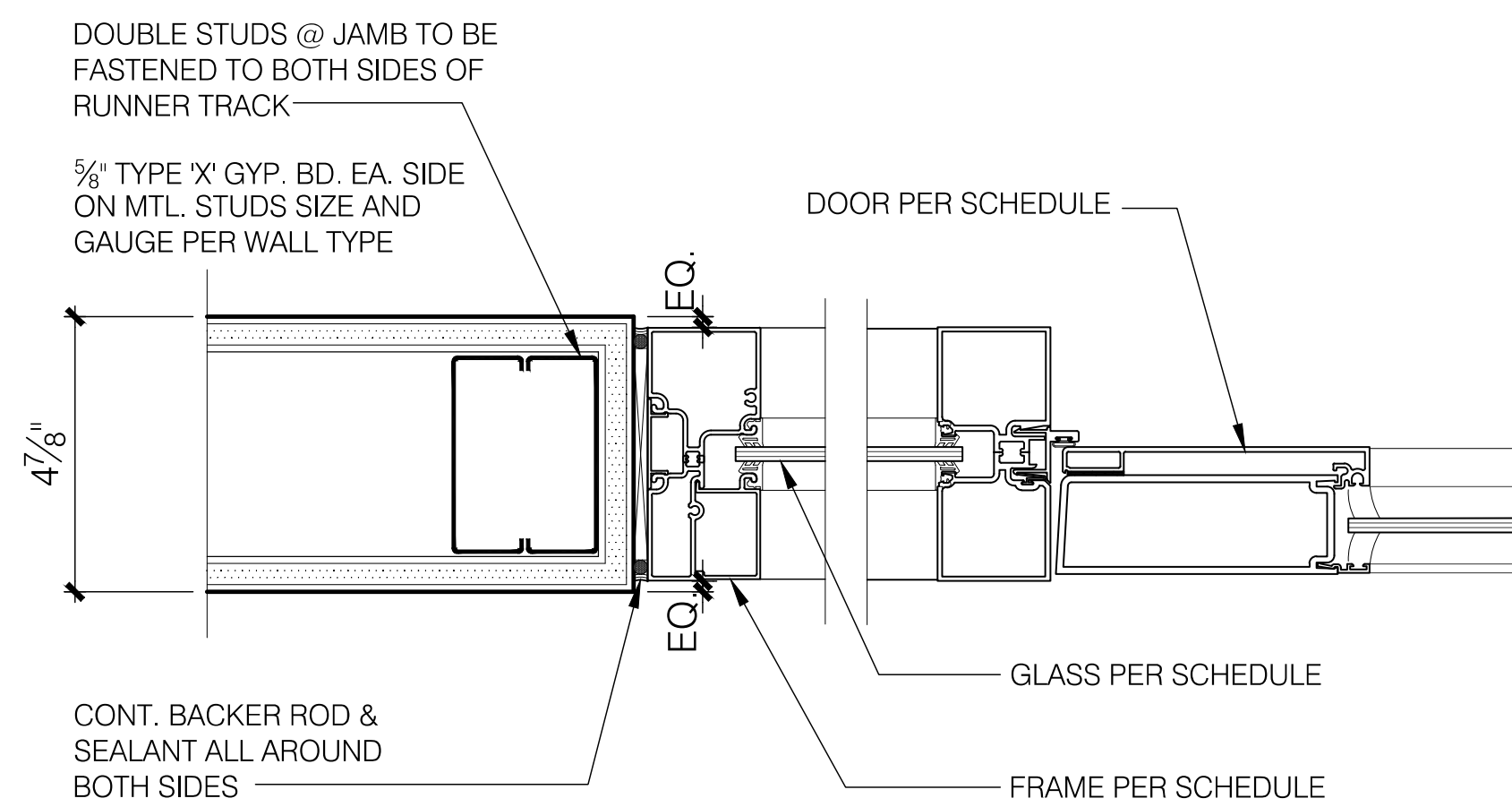
9 ROLLING SHUTTER WINDOW SECTION
Scale: 1" = 1'-0"



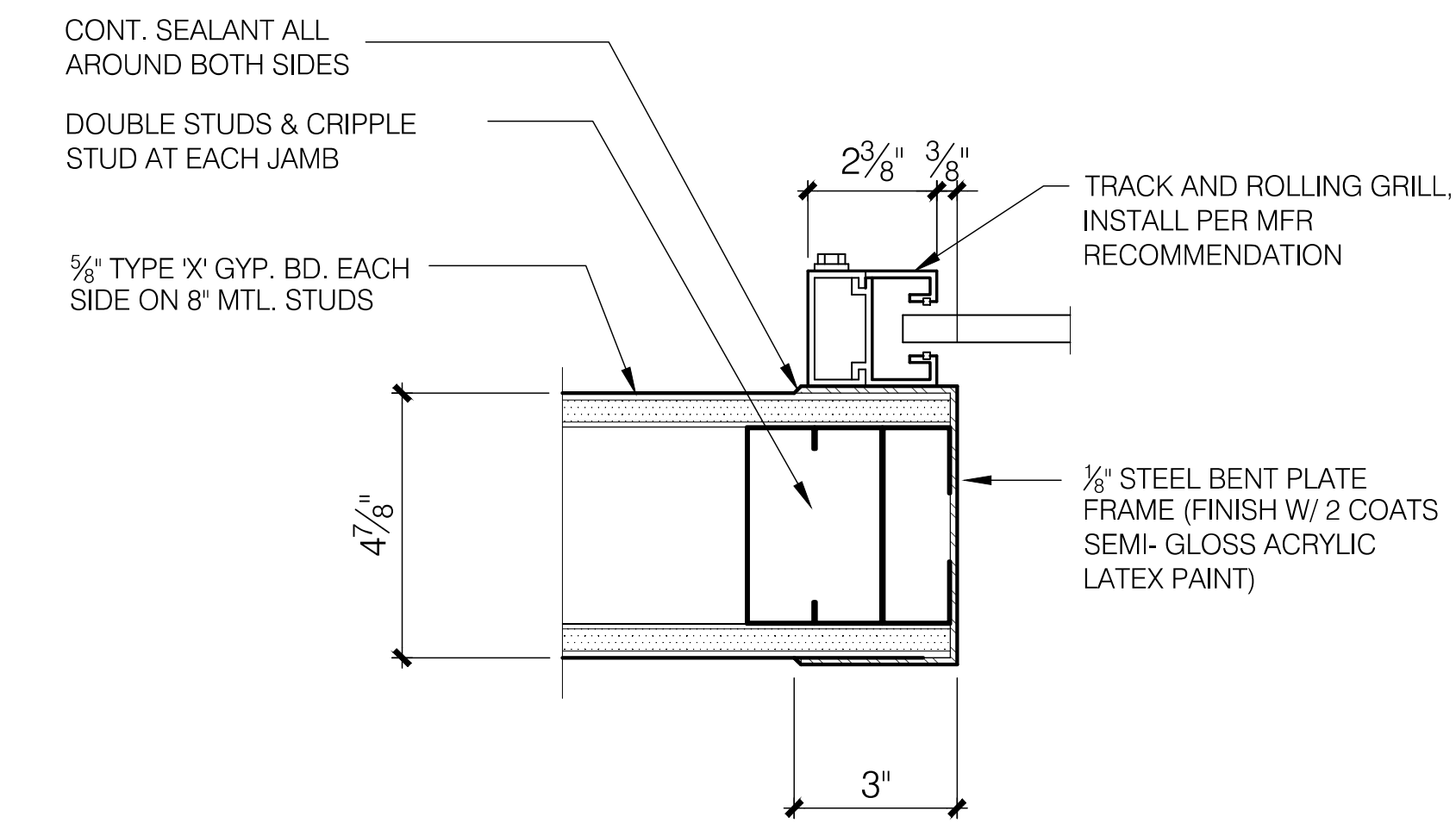
8 DOOR JAMB DETAIL
Scale: 3" = 1'-0"



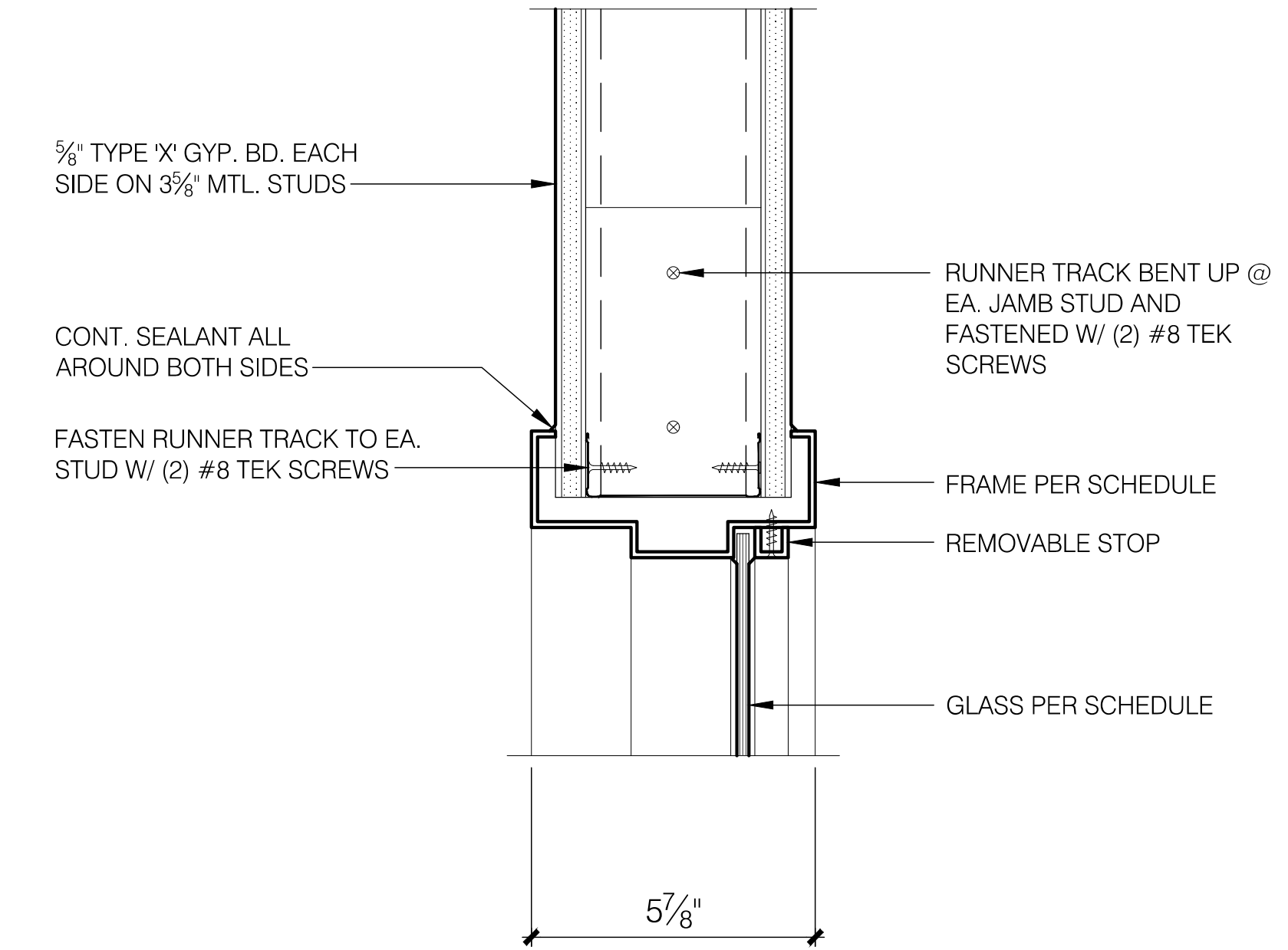
7 DOOR HEAD DETAIL
Scale: 3" = 1'-0"



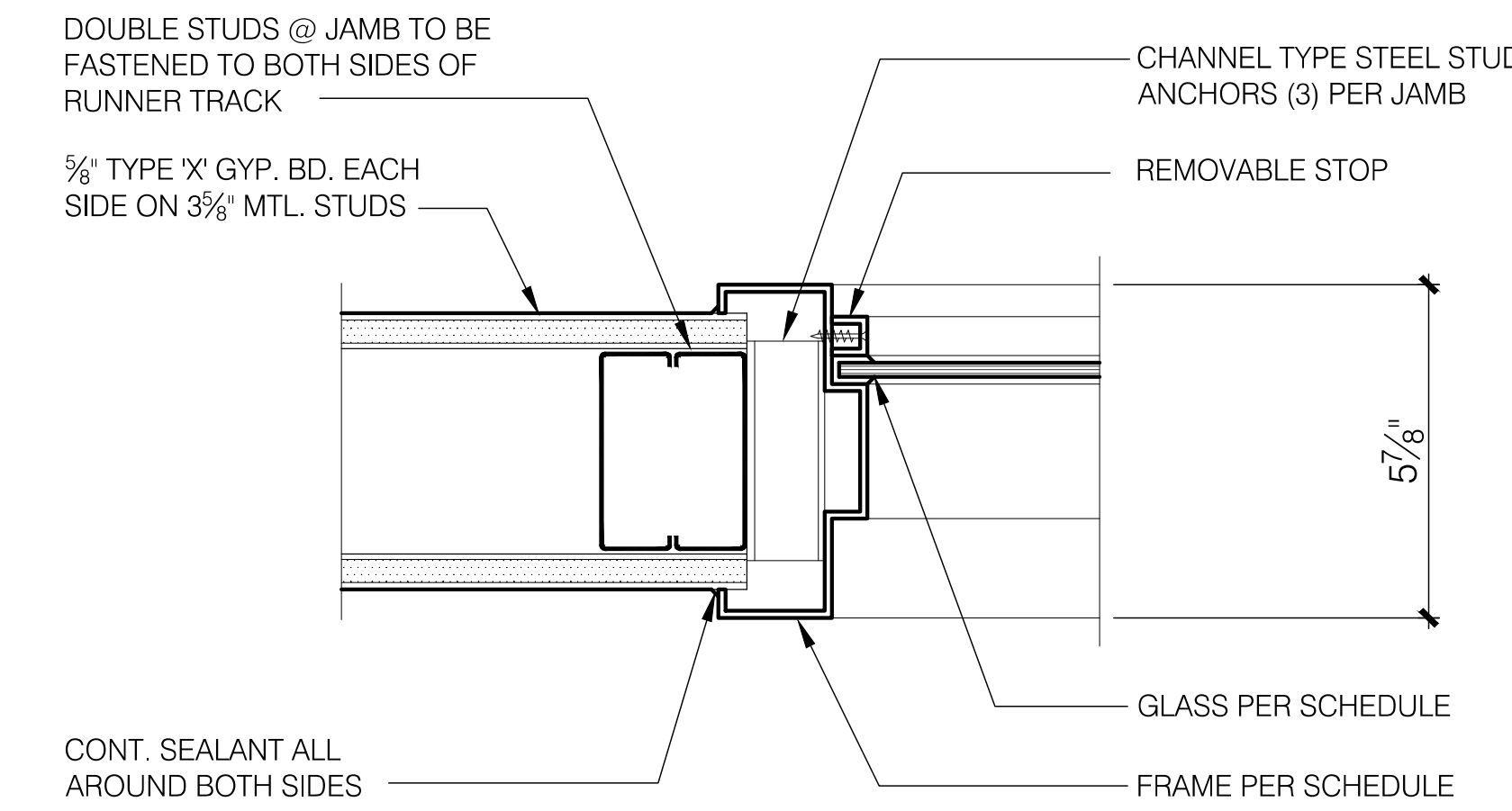
6 DOOR JAMB DETAIL
Scale: 3" = 1'-0"



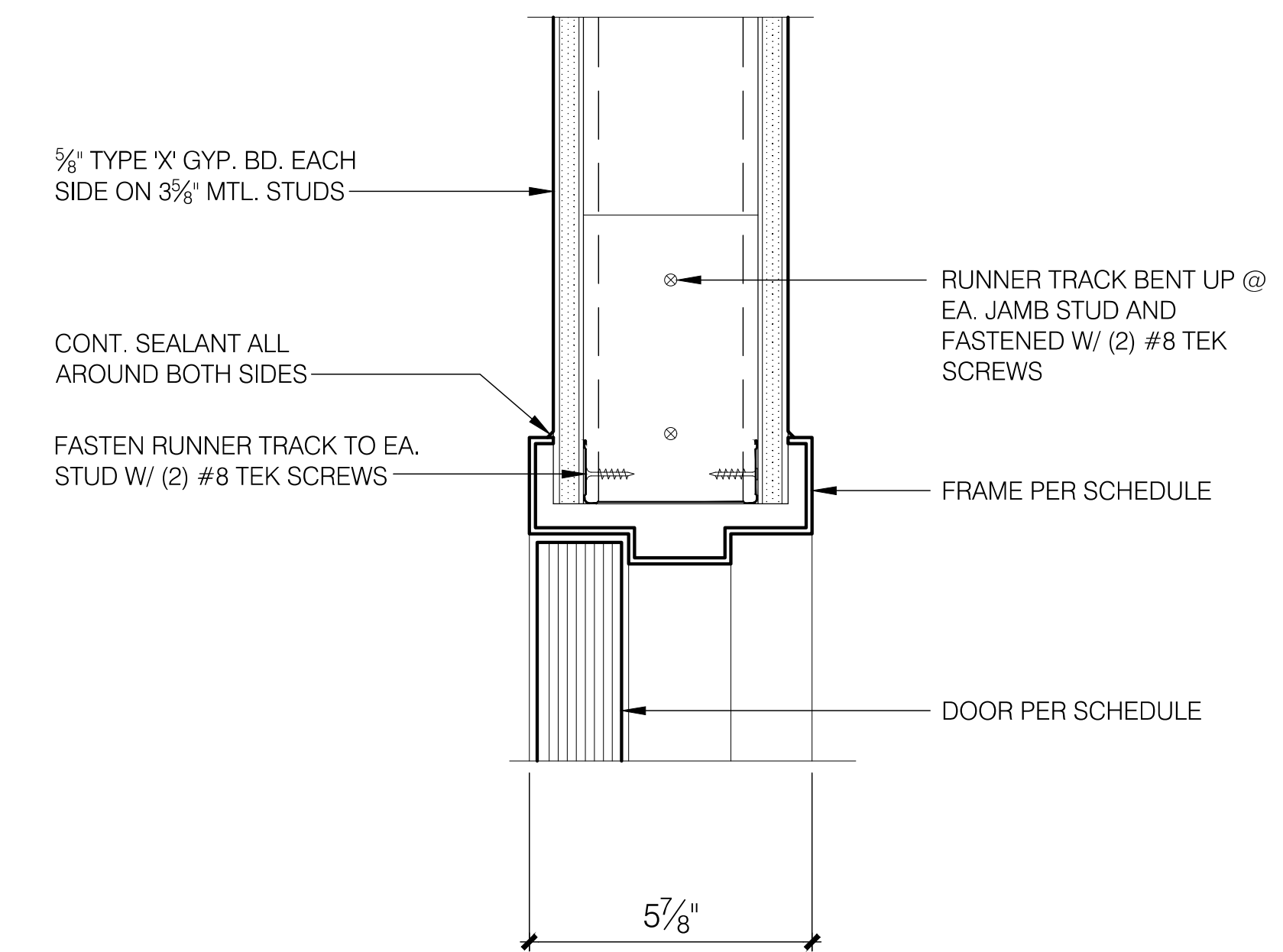
5 CASED OPENING JAMB DETAIL
Scale: 3" = 1'-0"



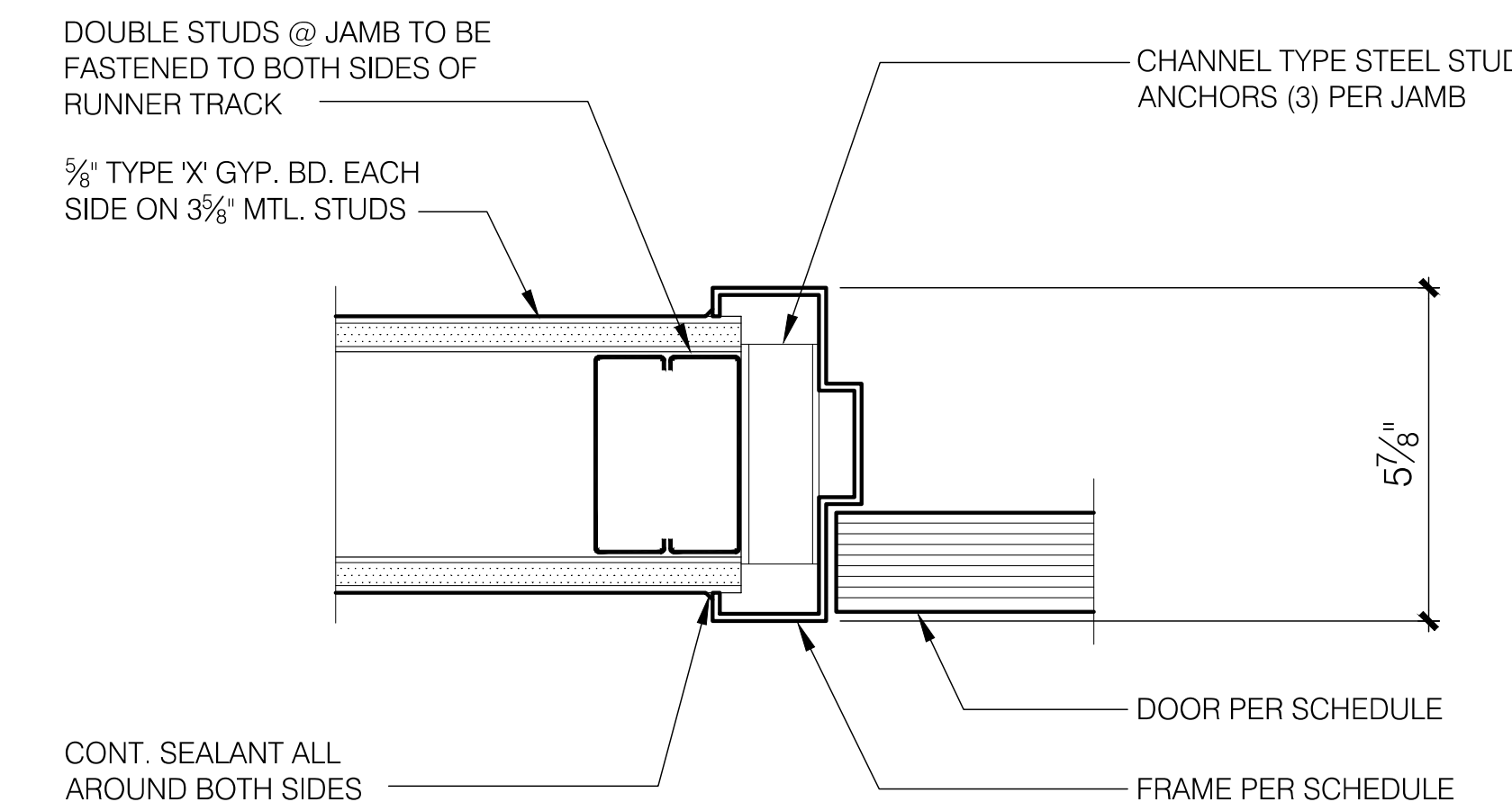
4 WINDOW HEAD DETAIL
Scale: 3" = 1'-0"



3 WINDOW JAMB DETAIL
Scale: 3" = 1'-0"



2 DOOR HEAD DETAIL
Scale: 3" = 1'-0"



1 DOOR JAMB DETAIL
Scale: 3" = 1'-0"

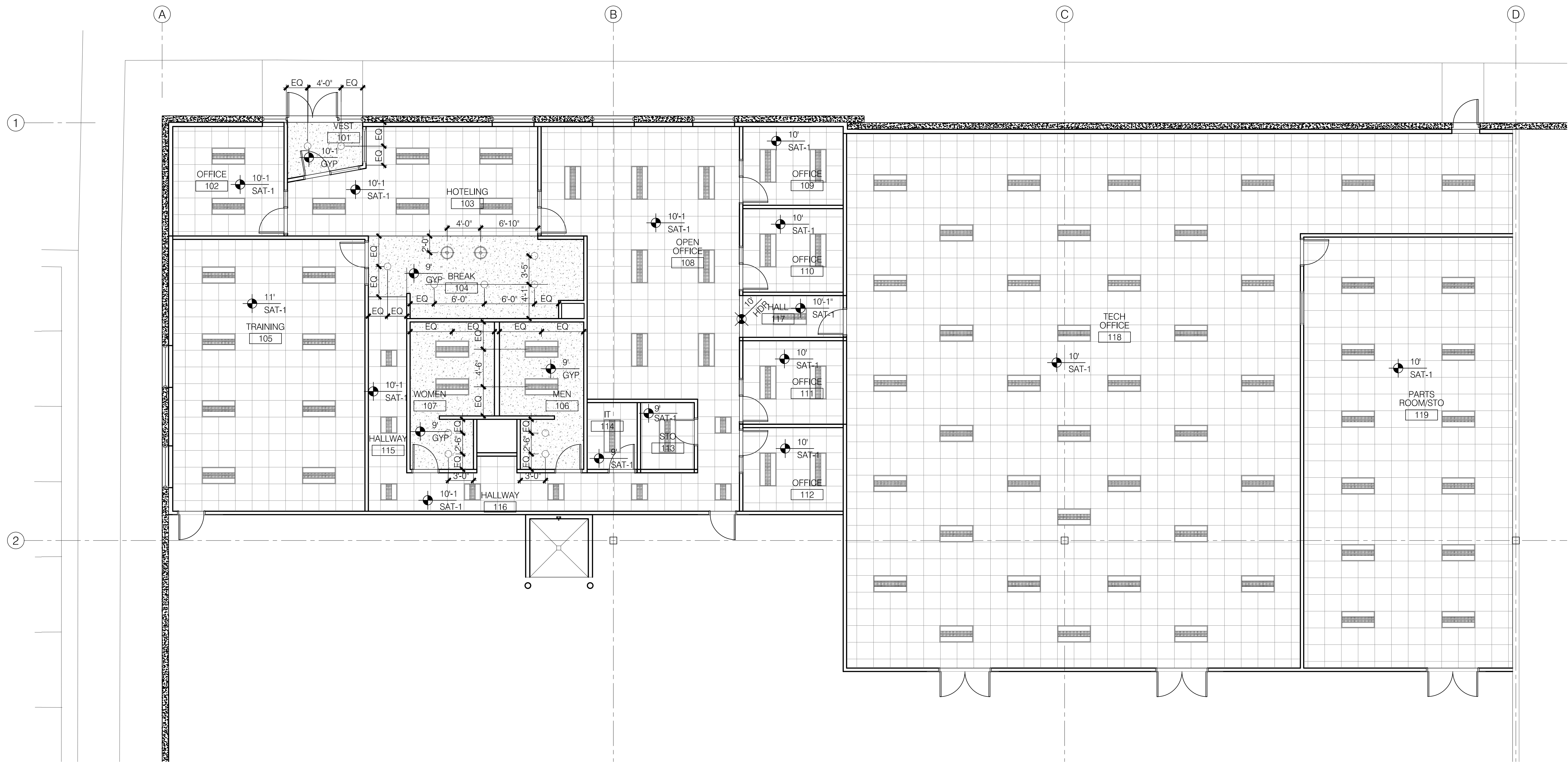
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| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

TENANT IMPROVEMENTS FOR:
**H&R BLOCK
DEPOT**

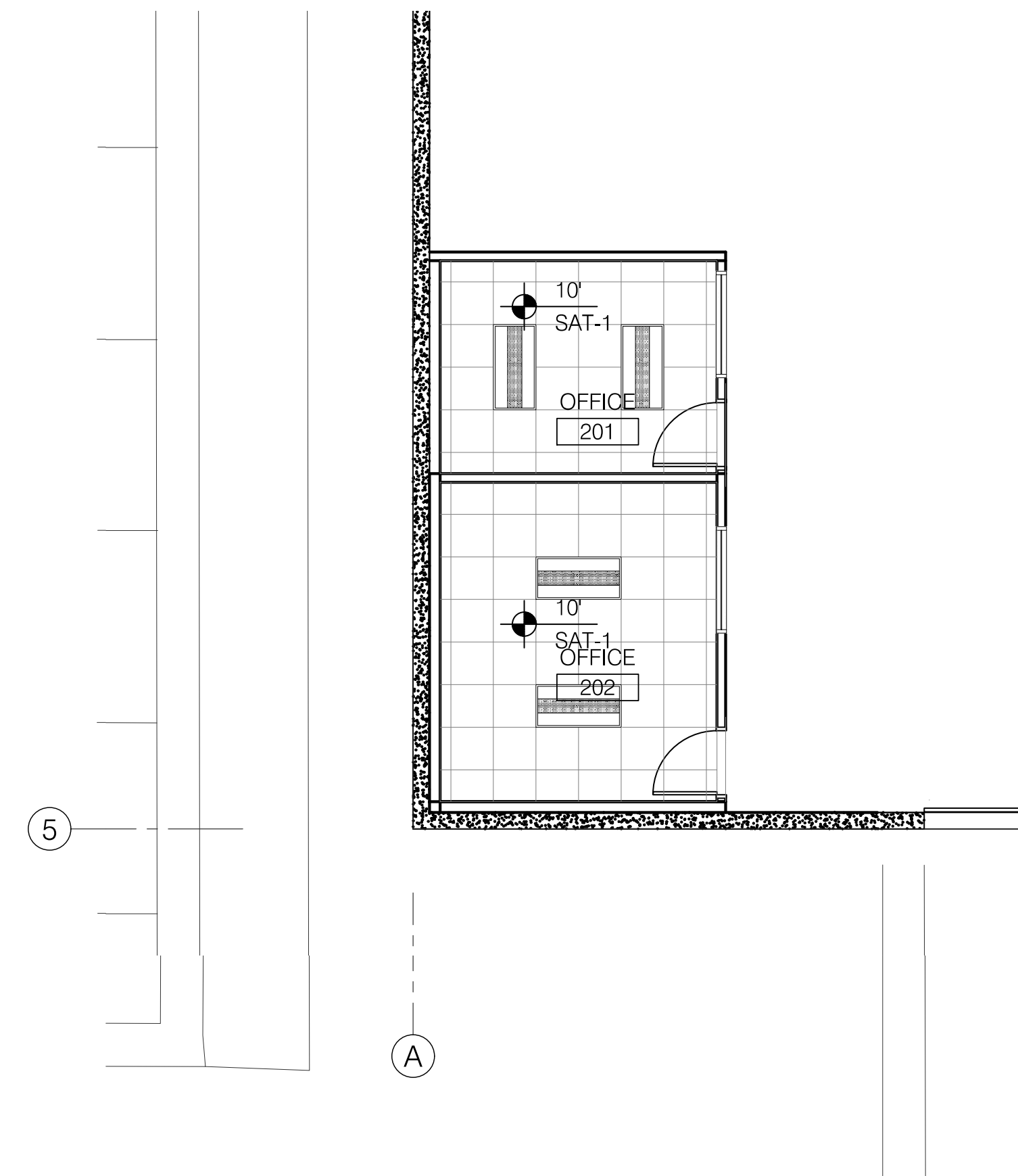
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Lee's Summit, MO 64086

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| Revisions: | |
| Date | Description |
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1 REFLECTED CEILING PLAN
Scale: 1/8" = 1'-0"
PLAN TRUE



2 REFLECTED CEILING PLAN
Scale: 1/8" = 1'-0"
PLAN TRUE

REFLECTED CEILING PLAN LEGEND

- ALL CEILING GRID SHALL BE SUPPORTED FROM STRUCTURAL MEMBERS. SUPPORT SHALL NOT BE FROM METAL FLOOR OR ROOF DECK.
- ALL MECHANICAL ELEMENTS SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS AND NO BUILDING ELEMENTS SHALL BE CONNECTED TO OR SUSPENDED FROM DUCTWORK.
- IF ANY INTERSTITIAL SPACES WILL BE UTILIZED FOR RETURN AIR AND RIGID WALL INSULATION IS DETAILED TO BE INSTALLED ON EXTERIOR WALLS ABOVE CEILINGS, ALL RETURN AIR MUST BE DUCTED. "PLENUM RETURN IS PROHIBITED"

- 2'-0"x 4'-0" SUSPENDED ACOUSTICAL CEILING TILE
RE: FINISH SCHEDULE FOR SPECIFICATIONS
- FLAT FINISH ACRYLIC LATEX PAINT ON GYP. BD.
2 FINISH COATS OVER PRIMER
- 2'-0"x 4'-0" LED LIGHT FIXTURE - CENTER BASKET TROFFER
(GYP. BD. RECESSED AT RESTROOMS)
RE: ELECTRICAL DWGS. FOR SPECIFICATIONS
- 2'-0"x 2'-0" LED LIGHT FIXTURE - CENTER BASKET TROFFER
(GYP. BD. RECESSED AT RESTROOMS)
RE: ELECTRICAL DWGS. FOR SPECIFICATIONS
- RECESSED CAN LIGHT
RE: ELECTRICAL DWGS. FOR SPECIFICATIONS
- DECORATIVE ACOUSTIC PENDANT
MFR. TBD
RE: ELECTRICAL DWGS. FOR SPECIFICATIONS



studioNorth
ARCHITECTURE

3315 N Oak Trafficway | Kansas City, MO 64116
816 | 888 | 7380
NP Studio North, LLC
Missouri Certificate of Authorization No. A-2017040540

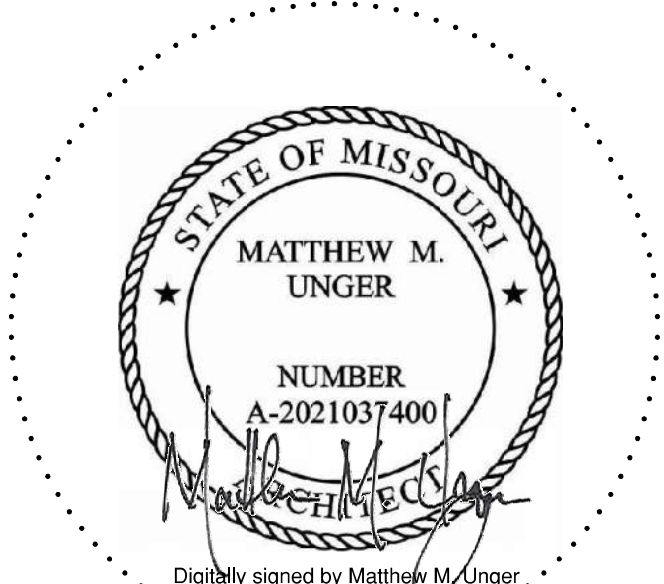
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| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

TENANT IMPROVEMENTS FOR:

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Matthew M. Linger - Architect
Missouri License No. A-2021037400

A9.01
REFLECTED CEILING PLAN



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PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION

TENANT IMPROVEMENTS FOR:

H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

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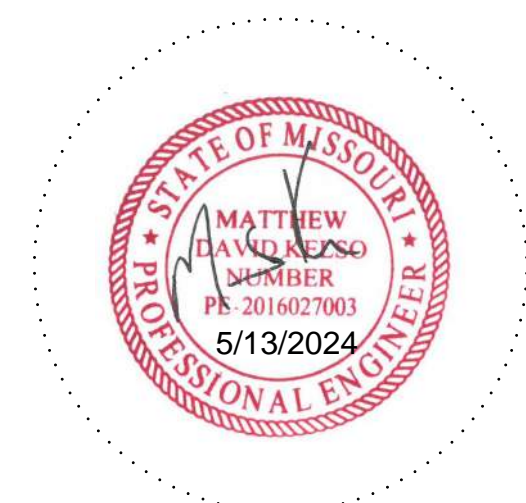
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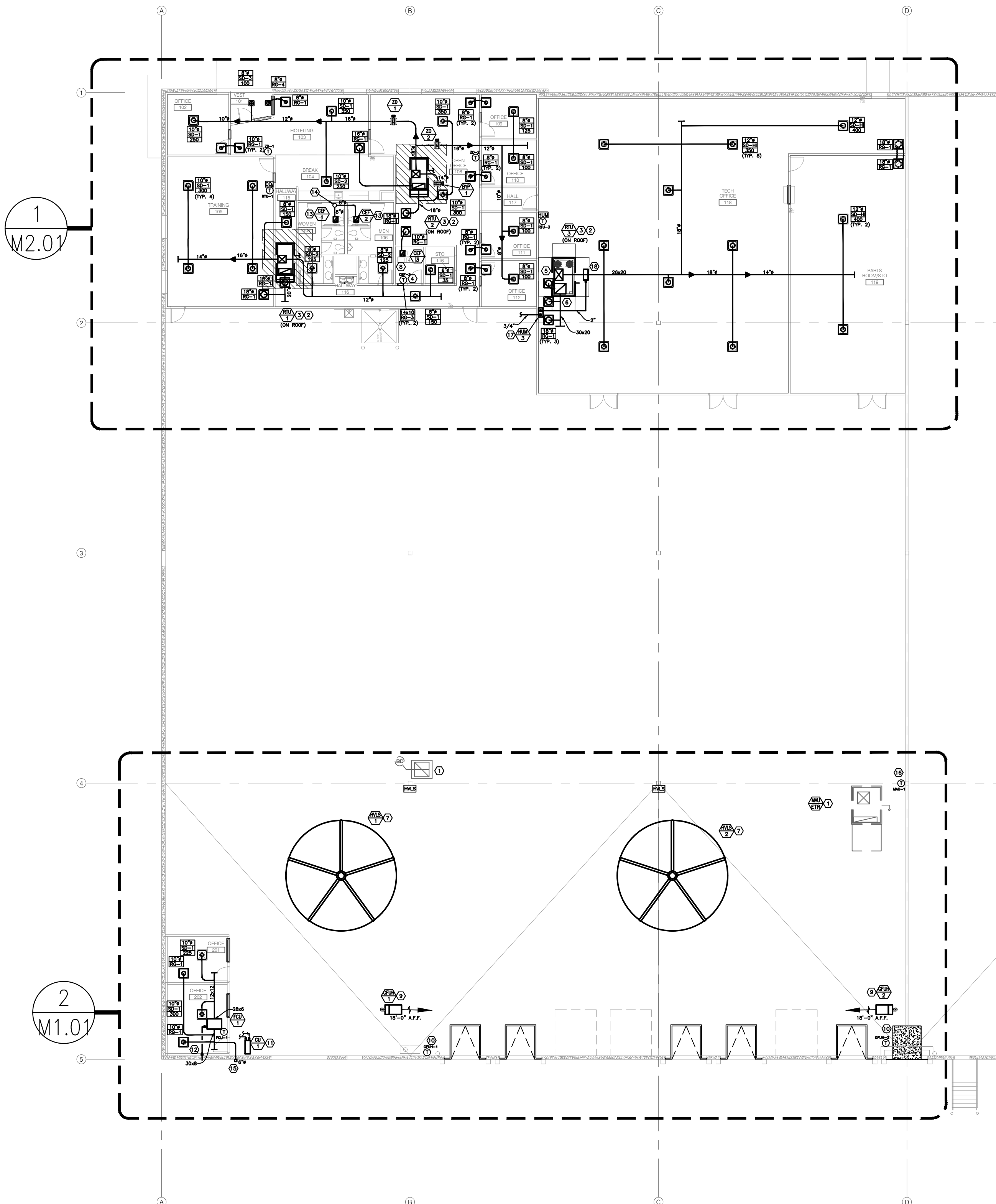
Reviewed By: GMM

Revisions:

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M1.01
MECHANICAL PLAN



1 OVERALL MECHANICAL PLAN
M1.01 SCALE: 1/16" = 1'-0"

MECHANICAL GENERAL NOTES:

- ALL MECHANICAL DUCTWORK SHALL BE GALVANIZED STEEL CONSTRUCTED ACCORDING TO SMACNA STANDARDS.
- ALL SUPPLY AIR AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED WITH 2" THICK, 3/4 LB DENSITY FIBERGLASS DUCT WRAP. ALL EXHAUST AIR DUCTWORK TO BE UN-INSULATED.
- HVAC CONTRACTOR WILL CHECK EACH SYSTEM FOR PROPER OPERATION.
- HVAC CONTRACTOR SHALL HAVE AN INDEPENDENT CONTRACTOR TO TEST & BALANCE HVAC SYSTEM TO THE PROPER AIRFLOWS AND STATIC PRESSURES. A COPY OF THE BALANCING REPORT WILL BE SUBMITTED TO THE OWNER UPON COMPLETION. AIR TO (+/-) 10% - WATER TO (+/-) 5%.
- FLEXIBLE RUN-OUTS TO BE U.L. LISTED AND HAVE A MAXIMUM LENGTH OF 8'-0". DUCT RUNS TO BE SAME SIZE AS DIFFUSER NECK SIZE SHOWN.
- AIR HANDLING UNITS SUPPLYING 2,000 CFM OR MORE SHALL HAVE A SMOKE DETECTOR INSTALLED IN THE RETURN AIR DUCTWORK. THE SMOKE DETECTOR SHALL BE INTERLOCKED TO SHUT DOWN ALL SUPPLY FANS UPON ALARM.
- MAINTAIN MINIMUM 10'-0" FROM ALL PLUMBING VENTS AND EXHAUST VENTS TO ALL OUTSIDE AIR INTAKES.
- DO NOT INSTALL PIPING OR DUCTWORK OVER ELECTRICAL PANELS.

MECHANICAL PLAN NOTES:

- EXISTING SHELL BUILDING EQUIPMENT TO REMAIN AS CURRENTLY INSTALLED.
- ROUTE CONDENSATE PIPING TO DISCHARGE ON ROOF. (TYP ALL RTU'S)
- COORDINATE LOCATION OF RTU WITH FIRE SUPPRESSION PIPING AND STRUCTURE. PROVIDE INTERNALLY LINED SUPPLY AIR RETURN AIR DUCT DROP THRU ROOF. TRANSITION SUPPLY AIR AND RETURN AIR DUCTWORK BELOW ROOF DECK TO DUCTWORK AS SHOWN/NOTED AND PROVIDE WITH EXTERNAL DUCT INSULATION PER GENERAL NOTES.
- LINE VOLTAGE THERMOSTAT FOR CEILING EXHAUST FAN CONTROL. THERMOSTAT TO BE INSTALLED BY ELECTRICIAN.
- TRANSITION SUPPLY AIR FROM CURB OPENING TO 26x20 BELOW ROOF.
- TRANSITION RETURN AIR FROM CURB OPENING TO 30x20 BELOW ROOF.
- HVLS FAN CONTROLLER TO BE INSTALLED ON ADJACENT COLUMN. ALL CONDUIT, CONTROLS AND WIRING BY OTHERS. COORDINATE EXACT LOCATION OF HVLS FANS WITH FIRE SUPPRESSION PIPING AND WAREHOUSE LIGHTING. HVLS FANS TO BE INSTALLED PER NFPA GUIDELINES AND BE INTERLOCKED WITH FIRE ALARM TO SHUT DOWN UPON SIGNAL. ASSOCIATED INTERLOCK WIRING BY FIRE ALARM CONTRACTOR.
- RTU ZONE CONTROLLER LOCATION. PROVIDE WITH REQUIRED 120V POWER.
- GAS-FIRED UNIT HEATER FLUE THRU ROOF. VERIFY SIZING WITH EQUIPMENT MANUFACTURER. MAINTAIN A MINIMUM OF 10'-0" FROM EDGE OF ROOF. 5" FLUE FOR LENNOX MODEL LF25-200 MBH. INSTALL AT 18'-0" A.F.F.
- PROVIDE WITH WALL MOUNTED, HEATING ONLY THERMOSTAT MOUNTED ON WALL AT 4'-0" A.F.F. COORDINATE FINAL LOCATION WITH TENANT.
- PROVIDE WALL BRACKET FOR INSTALLATION OF CONDENSING UNIT. PROVIDE WITH DRIP PAN.
- ROUTE CONDENSATE THRU EXTERIOR WALL AND SPLASH ON GRADE.
- CEILING MOUNTED EXHAUST AIR FAN TO BE INTERLOCKED WITH RESTROOM LIGHT SWITCH. (BY OTHERS)
- 10" EXHAUST AIR DUCTWORK UP THRU ROOF WITH WEATHERCAP. MAINTAIN A MINIMUM OF 10'-0" AWAY FROM OUTSIDE AIR INTAKES.
- PROVIDE 6" OUTSIDE AIR THRU WALL WITH WEATHERCAP. WALL CORING BY OTHERS.
- RELOCATE EXISTING MAU CONTROLLER AS REQUIRED.
- PROVIDE ELECTRIC STEAM GENERATING HUMIDIFIER. MOUNT ON WALL AT 2'-0" BELOW CEILING LEVEL TO TOP OF HUMIDIFIER. ROUTE STEAM PIPING TO DUCT MOUNTED STEAM MANIFOLD. PROVIDE DRAIN FROM HUMIDIFIER TO FLOOR DRAIN PROVIDED BY PLUMBER. PROVIDE 1/2" DOMESTIC WATER CONNECTION AND BACKFLOW AS REQUIRED. (BY OTHERS) PROVIDE 2" STEAM LINE FROM HUMIDIFIER TO DUCT MOUNTED DISPERSION TUBE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUBMITTAL.
- PROVIDE DUCT MOUNTED STEAM DISPERSION MANIFOLD. CONNECT TO STEAM AND PROVIDE CONDENSATE AS REQUIRED.

LEGEND

- SD-1 SUPPLY AIR DIFFUSER - AS SCHEDULED
- RG-1 RETURN AIR GRILLE - AS SCHEDULED
- RG-2 RETURN AIR GRILLE - AS SCHEDULED
- EX-1 EXHAUST AIR GRILLE - AS SCHEDULED
- EX-2 EXHAUST AIR GRILLE - AS SCHEDULED
- THERMOSTAT OR ZONE DAMPER WITH ZONE/UNIT DESIGNATION. MOUNT AT 48" A.F.F.
- RTU-1
- HVLS 1 HVLS 2 EPIC COLOSSUS INDUSTRIAL (OR EQUAL) 24'-0" HVLS FAN. 2 HP @ 460/3 PHASE. MINIMUM OF 6-BLADES. PROVIDE WITH HANGING KIT AND STAND-ALONE UNIT CONTROLLER. (TYP. 2)
- BYP 1 BYPASS DAMPER FOR DUCT STATIC PRESSURE CONTROL. PROVIDE WITH 120/24 V TRANSFORMER AND DUCT MOUNTED STATIC PRESSURE SENSOR. BYPASS DAMPER TO BE 14".
- ZD X THERMOSTATIC ZONE DAMPER. PROVIDE WITH 120/24 V TRANSFORMER, DUCT MOUNTED TEMPERATURE SENSOR AND WALL MOUNTED THERMOSTAT. DAMPER TO BE SIZED AS NOTED
- GFUR 1 GFUR 2 LENNOX (OR EQUAL) GAS FIRED UNIT HEATER LF25-200A-1 120V/1 PHASE, 7 AMPS, 15 AMP MOC9, 200 MBH, 200LES PROVIDE WITH HANGING KIT, HEATING ONLY THERMOSTAT AND 5" FLUE THRU ROOF.
- EQ3 CARBON DIOXIDE SENSOR - MOUNT IN RETURN OR WALL AS SHOWN
- ETR EXISTING TO REMAIN

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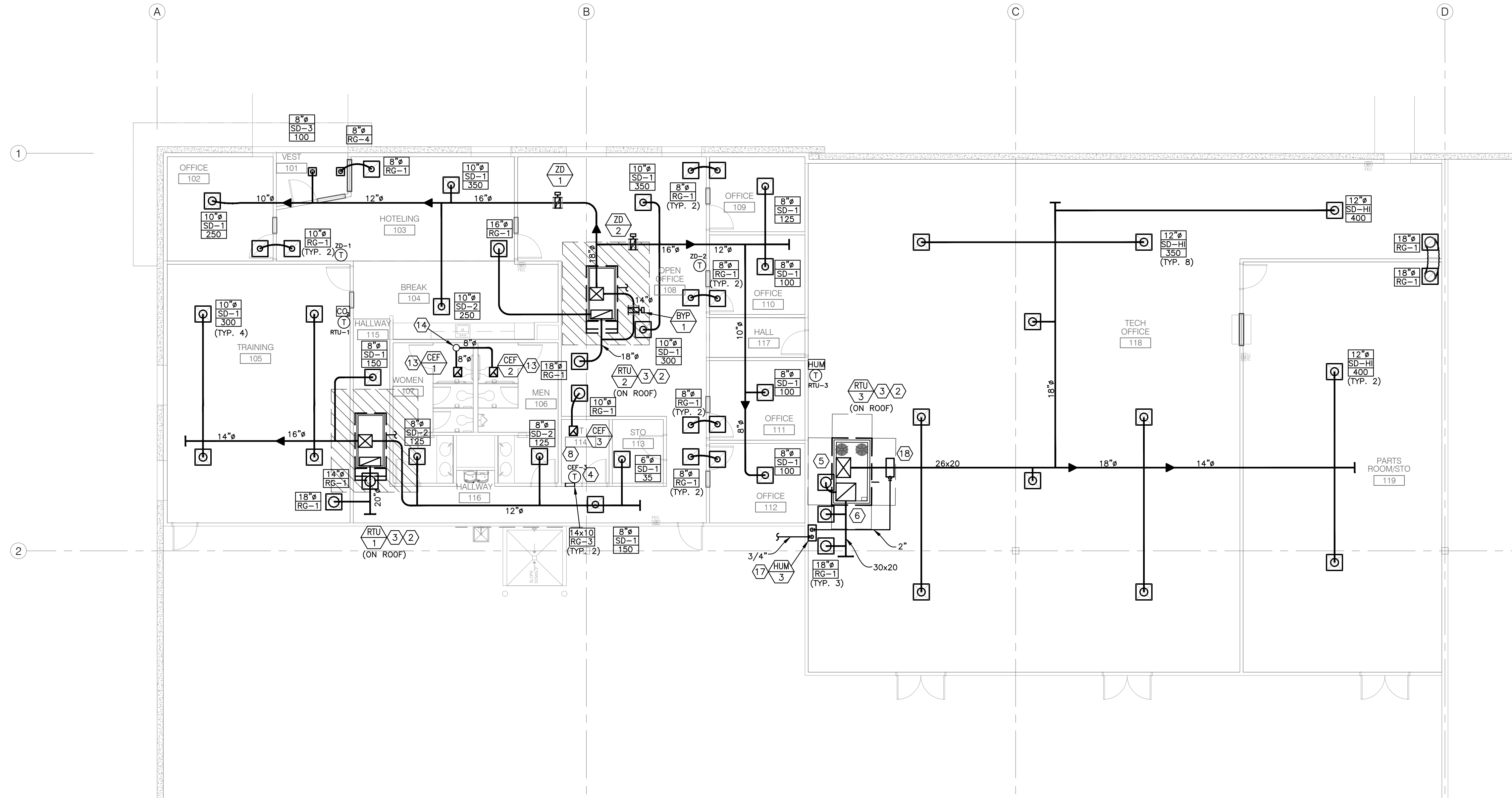
1220 NW MAIN ST. - LEE'S SUMMIT, MO

SCALE: AS NOTED DATE: 5/13/24 DRAWN BY: M.D.K.

APPROVED BY: G.M.M. DWG # M1

MECHANICAL PERMIT OF 3

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| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |



- MECHANICAL PLAN NOTES:**
- EXISTING SHELL BUILDING EQUIPMENT TO REMAIN AS CURRENTLY INSTALLED.
 - ROUTE CONDENSATE PIPING TO DISCHARGE ON ROOF. (TYP ALL RTU'S)
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 - RTU ZONE CONTROLLER LOCATION. PROVIDE WITH REQUIRED 120V POWER.
 - GAS-FIRED UNIT HEATER FLUE THRU ROOF. VERIFY SIZING WITH EQUIPMENT MANUFACTURER. MAINTAIN A MINIMUM OF 10'-0" FROM EDGE OF ROOF. 5" FLUE FOR LENNOX MODEL LF25-200 MBH. INSTALL AT 18'-0" A.F.F.
 - PROVIDE WITH WALL MOUNTED, HEATING ONLY THERMOSTAT MOUNTED ON WALL AT 4'-0" A.F.F. COORDINATE FINAL LOCATION WITH TENANT.
 - PROVIDE WALL BRACKET FOR INSTALLATION OF CONDENSING UNIT. PROVIDE WITH DRIP PAN.
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 - PROVIDE 6" OUTSIDE AIR THRU WALL WITH WEATHERCAP. WALL CORING BY OTHERS.
 - RELOCATE EXISTING MAU CONTROLLER AS REQUIRED.
 - PROVIDE ELECTRIC STEAM GENERATING HUMIDIFIER. MOUNT ON WALL AT 2'-0" BELOW CEILING LEVEL TO TOP OF HUMIDIFIER. ROUTE STEAM PIPING TO DUCT MOUNTED STEAM MANIFOLD. PROVIDE DRAIN FROM HUMIDIFIER TO FLOOR DRAIN PROVIDED BY PLUMBER. PROVIDE 1/2" DOMESTIC WATER CONNECTION AND BACKFLOW AS REQUIRED. (BY OTHERS) PROVIDE 2" STEAM LINE FROM HUMIDIFIER TO DUCT MOUNTED DISPERSION TUBE. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT SUBMITTAL.
 - PROVIDE DUCT MOUNTED STEAM DISPERSION MANIFOLD. CONNECT TO STEAM AND PROVIDE CONDENSATE AS REQUIRED.

1 DETAIL MECHANICAL PLAN

M2.01 SCALE : 1/8" = 1'-0"

TENANT IMPROVEMENTS FOR:

H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04.26.24
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Reviewed By: GMM

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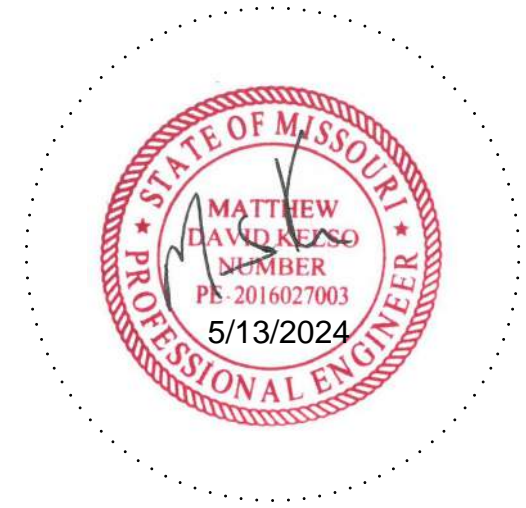
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1220 NW MAIN ST. - LEE'S SUMMIT, MO

SCALE: AS NOTED DATE: 5/13/24 DRAWN BY: M.D.K.

APPROVED BY: G.M.M. DWG # M2 OF 3

MECHANICAL PERMIT



M2.01
MECHANICAL PLAN

C:\USERS\MATTHEW\AR\METRO AIR PROJECTS - METRO AIR JOBS\UNSECURED PROJECTS\H&R BLOCK LSCC BLOG - ENGINEERING\MECHANICAL DESIGN\H&R BLOCK LSCC BLOG - 5/10/2024 2:13:07 PM - MattJ

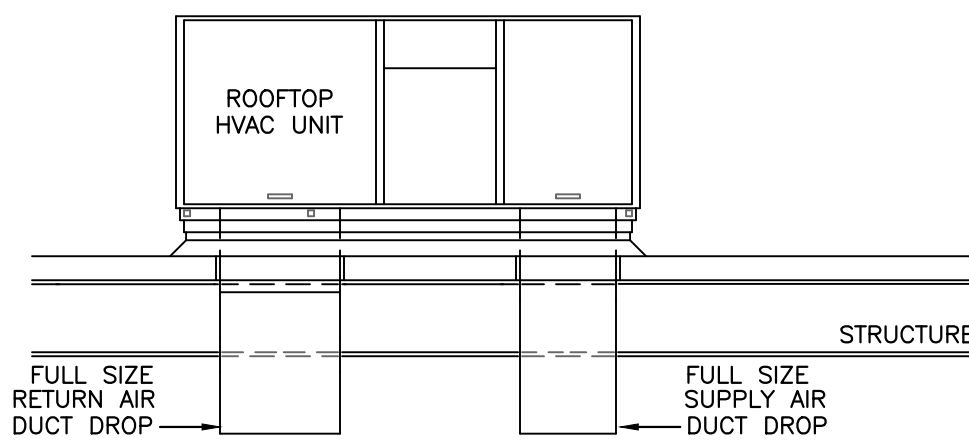
SECTION 1500 - MECHANICAL GENERAL PROVISIONS

- 1.1 DESCRIPTION:
- A. Division 15 shall be governed by all applicable provisions of the Contract Documents. The Mechanical Contractor shall furnish, install and connect all materials, equipment, apparatus, mechanical systems and incidentals required for complete and working installation. The Contractor shall supply all necessary labor, equipment, tools, insurance, taxes services; and The Contractor shall assume full responsibility for all obligations associated with completion of mechanical work as provided by the Contract Documents.
- 1.2 STANDARDS, REGULATIONS AND CODES:
- A. The work shall comply with the edition of the applicable standards, regulations and codes currently in force of all State and local authorities having jurisdiction. Where quantities, sizes, or other requirements indicated on the drawings or herein specified are in excess of the standard or code requirements, the specifications and/or drawings shall govern. In the absence of other applicable local codes, acceptable to the Architect/Engineer, the Uniform Plumbing and Mechanical Codes shall apply to this work.
- B. The Contractor shall comply with rules and regulations of public utilities and municipal departments affected by connections of services. The Contractor shall pay all fees associated with them.
- C. The Mechanical Contractor shall be licensed to perform mechanical work in the municipality in which the project is located.
- D. All products and types of construction shall meet or exceed the latest edition of applicable standards of manufacturer, testing, performance and installation.
- 1.3 LOCAL CONDITIONS:
- A. The Contractor shall carefully examine the local conditions and existing installations and shall thoroughly familiarize himself with all existing conditions which may affect his work. The Contractor shall locate all existing utilities and protect them during the execution of his work.
- B. The Contractor shall examine the Architectural, Mechanical and Electrical Drawings and Specifications to familiarize himself with the type of construction, materials, and equipment to be used for all work and how it will affect the installation of his contract.
- 1.4 CUTTING AND PATCHING:
- A. All necessary cutting, drilling and patching shall be provided by this Contractor. Structural members shall not be disturbed without prior approval of the Architect. All areas disturbed by work performed under this Contract shall be neatly repaired and refinished to the condition of adjoining surfaces in a manner suitable to the Architect.
- 1.5 OPERATION DURING CONSTRUCTION:
- A. Mechanical equipment shall not be used during construction unless instructed by the General Contractor. The mechanical contractor is responsible for the installation and operation, service and maintenance of all new equipment during construction and prior to acceptance by the Owner of the completed project at additional costs to the GC and/or owner.
- B. Warranty periods shall not commence until final acceptance by the Owner/Substantial Completion.
- 1.6 SAFETY REGULATIONS:
- A. All Mechanical work shall be performed in compliance with all applicable governing safety regulations, including OSHA regulations. Provide safety lights, guards and signs required.
- 1.7 HOUSEKEEPING:
- A. The Contractor shall be responsible for keeping stocks of material and equipment stored on the premises in a neat and orderly manner.
- B. The Contractor shall clean and maintain his portion of the work as specified in the General Conditions.
- C. The Contractor shall remove from the premises all waste material present as a result of his work.
- 1.8 GRAPHIC REPRESENTATION AND JOB CONDITIONS:
- A. The drawings shall serve as working drawings for the general layout of the various items of equipment; are diagrammatic unless specifically dimensioned; and do not necessarily indicate every required item.
- B. The Architectural drawings take precedence over the mechanical drawings in the representation of the general construction work.
- C. Arrange work in a neat, well organized manner. Coordinate work with other trades involved.
- 1.9 QUARANTEES:
- A. The Contractor shall guarantee all work performed and materials and equipment furnished under this contract, against defects in materials and workmanship for a period of one year from the Date of the Owner's Final Acceptance of the Work, or as noted in each section.
- 1.10 MOTORS AND CONTROLS:
- A. All motors furnished under this specification shall be recognized manufacturer, of adequate capacity for the loads involved. All motors shall conform to the standards of manufacturer and performance of the National Electrical Manufacturers Association as shown in their latest publications.
- 1.11 PIPING IN ELECTRICAL ROOMS:
- A. No piping except specifically noted otherwise will be permitted in electrical rooms. In rooms, where piping is indicated over electrical equipment, a suitable galvanized steel metal pan or gutter piped to the drainage system shall be provided.

END OF SECTION
SECTION 15100 - HEATING, VENTILATION AND AIR CONDITIONING

- 1.1 SCOPE:
- A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation of the heating, ventilating, and air conditioning systems and other items herein listed and as described in these specifications, as illustrated in the accompanying drawings or as directed by the Architect.
- 1.2 SHEET METAL:
- A. Provide ductwork shown with necessary dampers. Construction of new galvanized prime grade steel sheets per ASHRAE and SMACNA Standards. Provide round or rectangular duct as indicated. Fabricate for the pressure and SMACNA seal class required.
- B. Flexible duct shall be Wiremold WCK or acceptable equal maximum length shall be 8' - 0" or as noted/detailed.
- C. All duct sizes shown are actual size and include line, where required.
- 1.3 GRILLES, REGISTERS, INLETS AND OUTLETS:
- A. All supply grilles, registers and diffusers shall be as scheduled on the drawings and shall be ADC rated.
- 1.4 DUCTWORK ACCESSORIES:
- A. Provide single thickness turning vanes in all supply duct turns.
- B. Provide duct access doors for all internal mounted equipment.
- C. Provide 45° take-off fittings with volume damper for all round takeoffs to diffusers.
- D. Provide dampers where shown and required. Balance and control dampers shall be opposed blade except air mixing dampers shall be parallel blade.
- 1.5 AIR CONDITIONING UNITS:
- A. Air conditioning units shall be as scheduled. Units shall be standard catalogued products with the appropriate approval or certification by AGA, ARI and UL. Efficiencies shall conform to ASHRAE 90.1 standards.
- 1.6 FANS:
- A. Fans with accessories shall be as scheduled and shall be AMCA rated.
- 1.7 VIBRATION ISOLATION:
- A. Duct flexible connection shall be non-combustible, 16 ounce canvas. Piping flexible connection shall be Flexonics 401H or acceptable equal.
- 1.8 MISCELLANEOUS MECHANICAL EQUIPMENT:
- A. Provide constant, variable volume and/or fan powered boxes and accessories as scheduled. Acceptable manufacturers are E.H. Price or acceptable equal.
- 1.9 CLEANING:
- A. Clean system by operating at least three hours prior to final acceptance with temporary filters. Remove all filters and replace with clean.
- B. Use precleaned precharged refrigerant tube. Clean per manufacturers recommendations.
- 1.10 TESTING AND ADJUSTING:
- A. Contractor shall operate and test the air conditioning and ventilation systems and instruct the Owner in its operation. Perform a series of general capacity and operating tests. The tests shall demonstrate the specified capacities of various pieces of equipment.

END OF SECTION

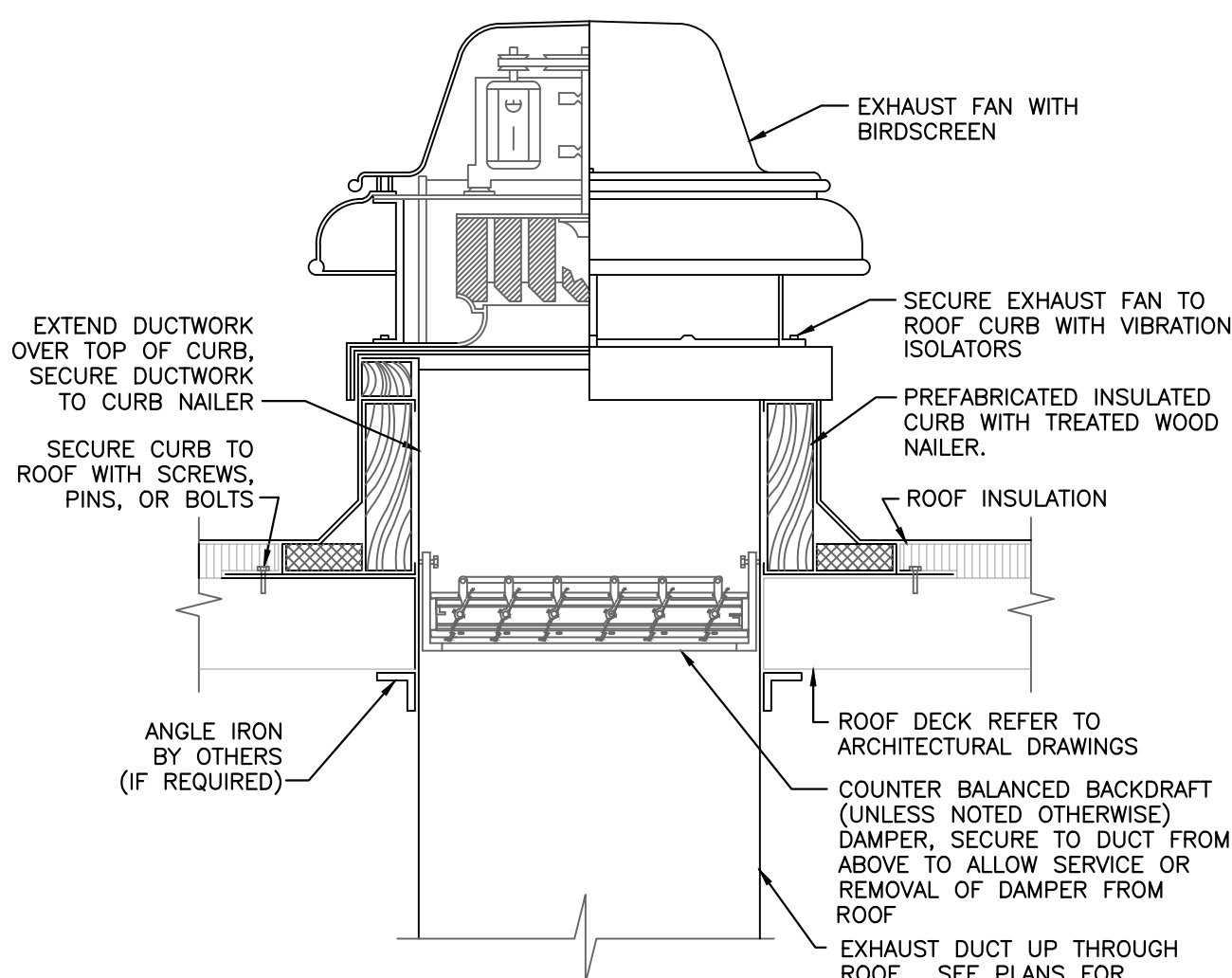


NOTES
1. PROVIDE OPENING THROUGH ROOF AND ROOF DECK INSULATION NO LARGER THAN REQUIRED TO ALLOW DUCTS TO PASS THROUGH. REFER TO PLANS FOR DUCT SIZES OR PROVIDE FULL SIZE DUCT DROPS IF NOT NOTED.

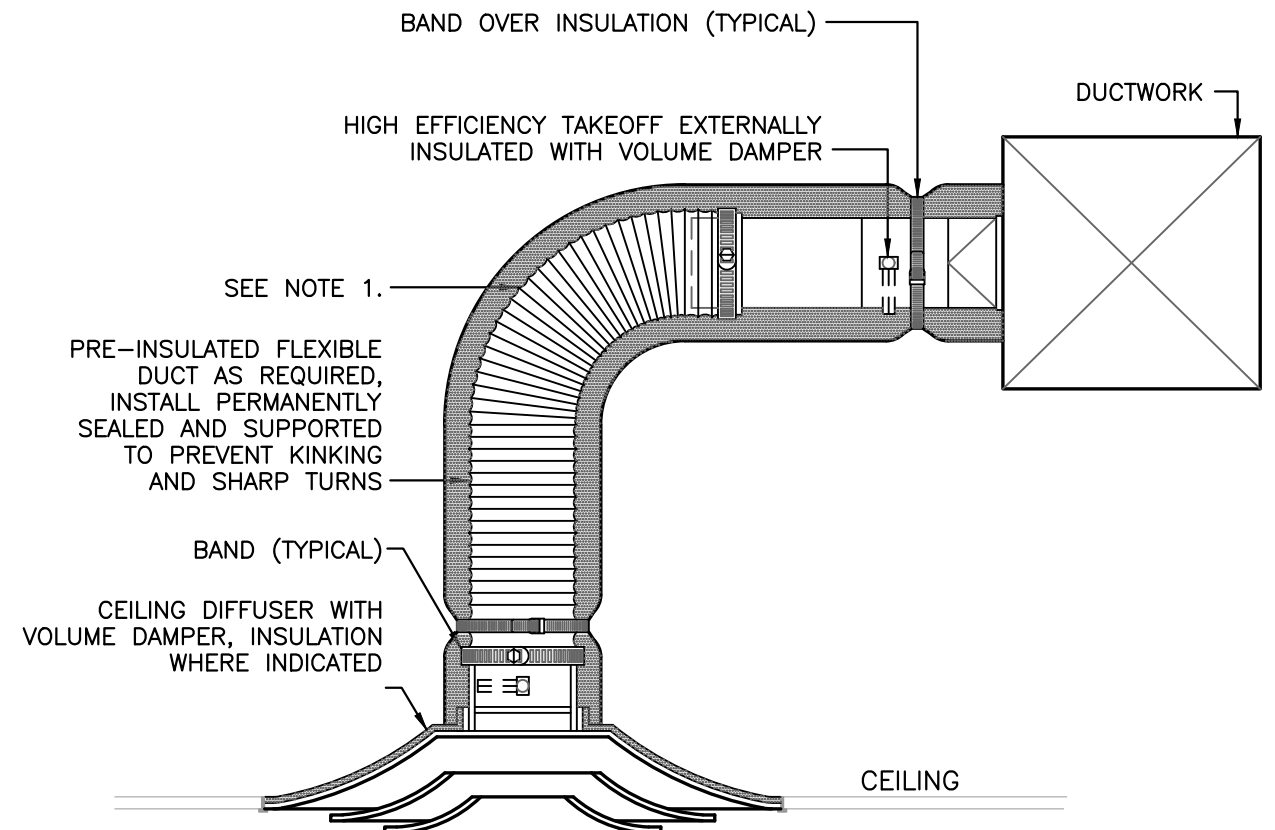
1 ROOFTOP UNIT DETAIL
NO SCALE

EXHAUST FAN (CEF-1 AND CEF-2)
1. CONTROL:
THE EXHAUST FAN SHALL INTERLOCKED WITH WALL MOUNTED LIGHT SWITCH BY OTHERS.

ROOFTOP UNIT - CONSTANT VOLUME WITH SINGLE SETPOINT CONTROL (ALL RTU/S)
1. DESCRIPTION:
EACH SINGLE-ZONE PACKAGED ROOFTOP UNIT (RTU) WILL BE PROVIDED AS IDENTIFIED ON THE EQUIPMENT SCHEDULES. WITH DIRECT EXPANSION COOLING COIL, GAS HEAT, SINGLE-SPEED SUPPLY FAN, 2" FILTERS, ECONOMIZER, BAROMETRIC RELIEF, ECONOMIZERS SHALL BE 0-100% FULLY MODULATING WITH ENTHALPY CONTROL DAMPERS.
2. CONTROL:
EACH UNIT SHALL BE FURNISHED WITH A THERMOSTAT TO BE INSTALLED IN THE SPACE. THE OCCUPANCY MODE SHALL BE DETERMINED THROUGH A USER-ADJUSTABLE PROGRAMMABLE SCHEDULE WITH OR WITHOUT USER OVERRIDE BUTTON ON THE THERMOSTAT.
3. SUPPLY AIR FAN:
THE FAN MODE SHALL BE SELECTABLE FOR AUTO OR ON. WHEN AUTO IS SELECTED DURING UN-OCCUPIED HOURS, THE FAN SHALL CYCLE ON AND OFF WITH HEATING OR COOLING. WHEN ON IS SELECTED DURING OCCUPIED HOURS, THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY.
4. MECHANICAL COOLING:
EACH RTU SHALL CYCLE COOLING COMPRESSOR STAGES IN RESPONSE TO COOLING DEMAND FROM THE THERMOSTAT. THE SUPPLY FAN WILL BE ENERGIZED AUTO MODE AND STAGE COOLING CAPACITY TO MAINTAIN SPACE TEMPERATURE SETPOINT BASED ON FACTORY CONTROL SEQUENCES. THE SPACE COOLING TEMPERATURE SETPOINT SHALL BE ADJUSTABLE THRU THE PROGRAMMABLE THERMOSTAT.
5. GAS HEATING:
THE RTU SHALL CYCLE GAS HEATING STAGES IN RESPONSE TO HEATING DEMAND FROM THE THERMOSTAT. ON A CALL FOR HEATING FROM THE ZONE SENSOR, THE SUPPLY FAN WILL BE ENERGIZED AND THE BURNER SHALL BE ENERGIZED TO MAINTAIN SPACE TEMPERATURE. THE SPACE HEATING TEMPERATURE SETPOINT SHALL BE ADJUSTABLE THRU THE PROGRAMMABLE THERMOSTAT.
6. ECONOMIZER:
THE FACTORY RTU CONTROLLER WILL INDEX THE UNIT INTO ECONOMIZER MODE IF THE OUTDOOR AIR DRY BULB/WET BULB IS BELOW THE SETPOINT WHEN ECONOMIZER MODE IS ENABLED. THE RETURN AND OUTSIDE AIR DAMPERS WILL MODULATE BETWEEN MINIMUM POSITION AND FULL OPEN AS NECESSARY TO MAINTAIN DISCHARGE AIR TEMPERATURE. THE RTU START-UP TECHNICIAN SHALL SET THE UNIT ECONOMIZER.
7. UNOCCUPIED MODE:
DURING UNOCCUPIED MODE, THE UNIT SHALL CONTROL TO THE UNOCCUPIED MODE SETBACK TEMPERATURE. IF THE UNOCCUPIED SETPOINT IS EXCEEDED, THE RTU SHALL HEAT OR COOL UNTIL THE ZONE TEMPERATURE IS WITHIN THE UNOCCUPIED SETPOINTS, PLUS OR MINUS AN OFFSET OF 6°F (ADJ).
8. BAROMETRIC RELIEF DAMPER:
THE BAROMETRIC RELIEF DAMPER CONSISTS OF A GRAVITY DAMPER THAT WILL OPEN TO RELIEVE EXCESS AIR AS BUILDING PRESSURE INCREASES.
9. OUTSIDE AIR DAMPER:
WHEN UNIT IS NOT IN ECONOMIZER MODE AND THE SUPPLY FAN IS IN OPERATION, THE OUTDOOR AIR DAMPER SHALL MODULATE TO THE MINIMUM PER THE UNIT SCHEDULE DURING THE OCCUPIED MODE. THE OUTDOOR AIR DAMPER SHALL BE CLOSED WHEN THE SUPPLY FAN IS OFF.
10. SMOKE DETECTION CONTROL:
UPON DETECTION OF SMOKE FROM THE RETURN DUCT SMOKE DETECTOR (BY OTHERS), THE FANS WILL CYCLE OFF AND OUTDOOR AIR DAMPERS SHALL CLOSE. ONCE THE DETECTORS ARE RESET, THE UNIT WILL RETURN TO NORMAL CONTROL. SMOKE DETECTOR INSTALLATION BY OTHERS, AS NECESSARY. IT IS THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR TO WIRE THE SMOKE DETECTOR TO THE EMERGENCY SHUT DOWN OF THE RTU CONTROLLER.
11. CO2:
WHERE WALL MOUNTED CO2 SENSOR IS SHOWN/NOTED, THE CO2 SENSOR SHALL MODULATE THE OUTSIDE AIR DAMPER BETWEEN THE SCHEDULED MINIMUM AND MAXIMUM VENTILATION LEVELS.

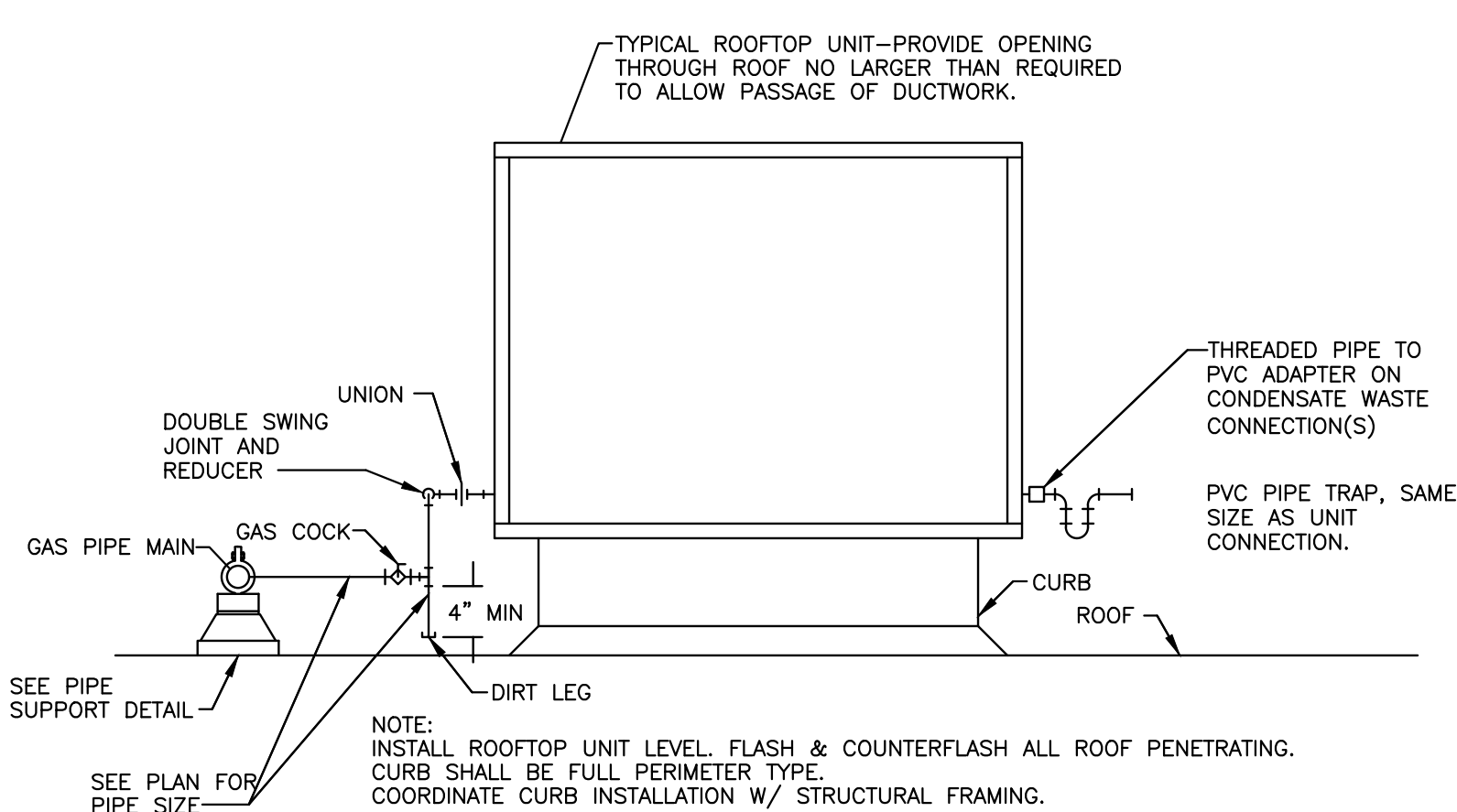


2 DOWNBLAST EXHAUST FAN DETAIL
NO SCALE



NOTES:
1. EXTEND HARD METAL DUCT SO THAT MAXIMUM FLEXIBLE DUCT LENGTH DOES NOT EXCEED 8'-0".
2. DUCTWORK BRANCH RUNOUTS TO BE SAME SIZE AS DIFFUSER NECK UNLESS NOTED OTHERWISE.

5 CEILING DIFFUSER DETAIL
NO SCALE



3 ROOFTOP UNIT CONNECTION DETAIL
NO SCALE

GRILLE, REGISTER & DIFFUSER SCHEDULE

| MARK | MANUFACTURER | MODEL | TYPE | SIZE | MOUNTING | FINISH | MATERIAL | NOTES |
|-------|--------------|-----------|---------------|---------------------|-----------|--------|----------|---------|
| SD-1 | PRICE | SPD | SQUARE PLAQUE | 24" x 24" | LAY-IN | WHITE | STEEL | G |
| SD-H | PRICE | SPD-H | SQUARE PLAQUE | 24" x 24" | LAY-IN | WHITE | STEEL | G |
| SD-2 | PRICE | SPD | SQUARE PLAQUE | 24" x 24" | SURFACE | WHITE | STEEL | G, B |
| SD-3 | PRICE | SPD | SQUARE PLAQUE | 12" x 12" | LAY-IN | WHITE | STEEL | G |
| SD-4 | PRICE | SPD | SQUARE PLAQUE | 12" x 12" | SURFACE | WHITE | STEEL | G, B |
| VAV-1 | PRICE | VARITHERM | VAV | 24" x 24" | LAY-IN | WHITE | STEEL | G |
| LSD-1 | PRICE | TBD | LINEAR SLOT | 4'-0" x (4) 1" SLOT | LAY-IN | WHITE | STEEL | H |
| SG-1 | PRICE | 520D | WALL MOUNT | AS NOTED | WALL/DUCT | WHITE | STEEL | A |
| SG-2 | PRICE | SDGE | SPIRAL MOUNT | AS NOTED | DUCT | MILL | STEEL | A, C |
| RG-1 | PRICE | PDDR | PERFORATED | 24" x 24" | LAY-IN | WHITE | STEEL | G |
| RG-2 | PRICE | PDDR | PERFORATED | 12" x 24" | LAY-IN | WHITE | STEEL | G |
| RG-3 | PRICE | 530RL | WALL MOUNT | AS NOTED | WALL/DUCT | WHITE | STEEL | B, G |
| RG-4 | PRICE | PDDR | PERFORATED | 12" x 12" | SURFACE | WHITE | STEEL | B, G |
| EX-1 | PRICE | APDDR | PERFORATED | 24" x 24" | LAY-IN | WHITE | ALUMINUM | A, B, G |
| EX-2 | PRICE | APDDR | PERFORATED | 24" x 24" | SURFACE | WHITE | ALUMINUM | G |
| EX-3 | PRICE | APDDR | PERFORATED | 12" x 24" | LAY-IN | WHITE | ALUMINUM | A, B, G |
| EX-4 | PRICE | APDDR | PERFORATED | 12" x 12" | SURFACE | WHITE | ALUMINUM | A, B, G |

NOTES:
A. PROVIDE WITH DAMPER OPERABLE FROM FACE OF DEVICE.
B. PROVIDE WITH SURFACE MOUNT FRAME KIT FOR MOUNTING IN HARD CEILING/WALL.
C. PROVIDE WITH OPPOSED BLADE DAMPER AND MILL FINISH.
D. PERFORATED SUPPLY AIR GRILLE TO BE INSTALLED WITHOUT DEFLECTORS.
E. PROVIDE WITH 2KW ELECTRIC HEAT, WALL MOUNTED WIRELESS THERMOSTAT.
F. PROVIDE WITH RETURN AIR LIGHT SHIELD.
G. PROVIDE WITH INSULATED BACKING.
H. PROVIDE WITH FACTORY INSULATED SUPPLY PLENUM.

STEAM HUMIDIFIER SCHEDULE

| MARK | MANUFACTURER | QUANTITY | MODEL | TYPE (GAS OR ELECTRIC) | LOCATION/ MOUNTING | CAPACITY (LBS/HR) | TOTAL AIRFLOW (CFM) | OUTSIDE AIR (CFM) | KW | ELECTRICAL MCA | MOCP | W/PH | WEIGHT (LBS) | NOTES |
|-------|--------------|----------|-----------------|------------------------|--------------------|-------------------|---------------------|-------------------|----|----------------|------|-------|--------------|-------|
| HUM-1 | NEPTRONIC | 1 | SKE4-N20M-480-3 | ELECTRIC | SPACE | 60 | 4,000 | 400 | 20 | 25 | — | 460/3 | 290 | A - E |

NOTES:
A. FIELD MOUNTED AIRFLOW PROVING SWITCH.
B. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
C. PROVIDE FIELD MOUNTED HIGH-LIMIT HUMIDISTAT AND WALL MOUNTED HUMIDISTAT.
D. WATER SUPPLY WITH SHUT-OFF VALVE AND BACKFLOW (IF REQUIRED) BY OTHERS.
E. PROVIDE WITH CONDENSATE DRAIN COOLER AS REQUIRED.

OUTSIDE AIR CALCULATIONS

| UNIT SERVED | OCCUPANCY CLASSIFICATION | AREA (SQ. FT.) | PEOPLE PER 1,000 | FIXED SEATING | QUANTITY OF PEOPLE | REQUIRED OUTSIDE AIR | REQUIRED OUTSIDE AIR | TOTAL REQUIRED | NOTES |
|-------------|--------------------------|----------------|------------------|---------------|--------------------|----------------------|----------------------|----------------|-------|
| RTU-1 | OFFICE | 105 | 5 | — | 1 | 5 | 0.06 | 9 | A |
| | CORRIDOR | 350 | — | — | — | — | 0.06 | 21 | A |
| | RESTROOMS | 340 | — | — | — | — | 0.06 | 20 | A |
| | TRAINING/CLASSROOM | 750 | 28 | 24 | 21 | 5 | 0.06 | 165 | A |
| | REQUIRED VENTILATION | | | | | | | 215 CFM | C |
| RTU-2 | OFFICE | 1,415 | 5 | — | 7 | 5 | 0.06 | 120 | A |
| | LOBBY | 340 | 10 | — | 3 | 5 | 0.06 | 37 | A |
| | CORRIDOR/VEST | 50 | — | — | — | — | 0.06 | 3 | A |
| | BREAK ROOM | 240 | 25 | — | 6 | 5 | 0.06 | 44 | A |
| | REQUIRED VENTILATION | | | | | | | 206 CFM | C |
| RTU-3 | OFFICE | 5,100 | 5 | 10 | 26 | 5 | 0.06 | 356 | A |
| | REQUIRED VENTILATION | | | | | | | 356 CFM | C |
| FCU-1 | OFFICE | 325 | 5 | — | 2 | 5 | 0.06 | 26 | A |
| | REQUIRED VENTILATION | | | | | | | 28 CFM | C |

NOTES:
A. VENTILATION RATES ARE TAKEN FROM ASHRAE 62.1-2019 - VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY.
B. VENTILATION IS BASED ON TOTAL QUANTITY OF PEOPLE TAKEN FROM NUMBER OF ACTUAL SEATING SHOWN ON ARCHITECTURAL FLOOR PLAN.
C. REFER TO EQUIPMENT SCHEDULES FOR ACTUAL VENTILATION AIRFLOWS.
D. OCCUPANCY REDUCED FROM 5 PEOPLE PER 1,000 SF TO ACTUAL OCCUPANTS PER TENANT.

EXHAUST FAN SCHEDULE

| MARK | MANUFACTURER | QUANTITY | MODEL | LOCATION/ MOUNTING | SERVICE | FAN | | | ELECTRICAL (V/PH) | WEIGHT (LBS) | NOTES |
|-------|--------------|----------|---------|--------------------|------------------|-----|----------|------|-------------------|--------------|------------|
| | | | | | | CFM | ESP (IN) | RPM | | | |
| CEF-1 | GREENHECK | 1 | SP-A250 | CEILING | RESTROOM EXHAUST | 225 | 0.375 | 1315 | 1000 | 120/1 | 24 A, B, E |
| CEF-2 | GREENHECK | 1 | SP-A250 | CEILING | RESTROOM EXHAUST | 225 | 0.375 | 1315 | 1000 | 120/1 | 24 A, B, E |
| CEF-3 | GREENHECK | 1 | SP-A250 | CEILING | IT ROOM | 200 | 0.375 | 1315 | 1000 | 120/1 | 24 A, D, D |

NOTES:

A. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
B. INTERLOCK EXHAUST FAN WITH RESTROOM LIGHT SWITCH.
C. FAN TO OPERATE CONTINUOUSLY.
D. FURNISH WITH WALL MOUNTED LINE VOLTAGE THERMOSTAT. THERMOSTAT TO BE INSTALLED BY ELECTRICAL CONTRACTOR AND INTERLOCKED WITH ASSOCIATED LOUVER.
E. PROVIDE WITH UNIT MOUNTED SPEED CONTROLLER, HANGING BRACKET, BACKDRAFT DAMPER, ROUND DUCT CONNECTION AND WHITE GRILLE.

DUCTLESS SPLIT SYSTEM HEAT PUMP EQUIPMENT SCHEDULE

| MARK | MANUFACTURER | MODEL | TYPE | SUPPLY FAN | | COOLING COIL | | HEATING COIL | | ELECTRICAL MCA | MOCP | V/PH | VENTILATION (CFM) | WEIGHT (LBS) | NOTES |
|-------|--------------|--------------|-----------------|------------|----------|--------------|----------|--------------|----------|----------------|------|-------|-------------------|--------------|-------|
| | | | | CFM | ESP (IN) | TH (MBH) | SH (MBH) | TH (MBH) | SH (MBH) | | | | | | |
| FCU-1 | LENNOX | MMD8018S4-2P | DUCTED FAN-COIL | 529 | — | 18 | 12 | 20 | 50°F | 1 | — | — | 30 | 60 | F, G |
| CU-1 | LENNOX | MPD018S4S-1P | CONDENSING UNIT | — | — | — | — | — | — | 18 | 25 | 208/1 | — | 125 | A - E |

NOTES:

A. PROVIDE WITH WIRED TEMPERATURE CONTROLLER.
B. FAN-COIL TO BE POWERED FROM CONDENSING UNIT POWER CIRCUIT. REFER TO INSTALLATION INSTRUCTIONS.
C. SUPPORT CONDENSING FROM TILT WALL WITH CONDENSER HANGING BRACKET.
D. PROVIDE WITH 25'-0", 1/4" LIQUID AND 1/2" SUCTION PRE-INSULATED LINE/SET AS REQUIRED.
E. ELECTRICAL CONTRACTOR TO PROVIDE WIRING BETWEEN CU AND FCU.
F. ROUTE CONDENSATE TO DISCHARGE AT GRADE AS REQUIRED.
G. HEATING CAPACITY BASED ON TEMPERATURES SHOWN.

PACKAGED ROOFTOP UNIT (DX COOLING/GAS HEAT)

| MARK | MANUFACTURER | MODEL | NOMINAL TONNAGE | QUANTITY | SERVICE | UNIT TYPE | SUPPLY FAN | | COOLING COIL | | GAS HEATING | | MINIMUM VENTILATION (CFM) | DESIGN/MAX VENTILATION (CFM) | ELECTRICAL | | WEIGHT (LBS) | ARI MINIMUM EER | ARI IEER | NOTES |
|-------|--------------|-----------|-----------------|----------|-------------|-----------|------------|------|--------------|----|-------------|-------------|---------------------------|------------------------------|-------------|--------------|--------------|-----------------|----------|-----------------------------------|
| | | | | | | | TYPE | CFM | ESP (IN) | HP | FAN STAGES | SAT (DB/WB) | TH (MBH) | SH (MBH) | INPUT (MBH) | OUTPUT (MBH) | | | | |
| RTU-1 | LENNOX | XGB060S4B | 5 | 1 | MAIN OFFICE | CV | 2,000 | 0.75 | 1.0 | 1 | 58/57 | 60 | 47 | 1 | 108 | 86 | 2 | 215 | 215 | 13 20 460/3 1,050 11.0 — A - H |
| RTU-2 | LENNOX | XGB060S4B | 5 | 1 | MAIN OFFICE | CV | 2,000 | 0.75 | 1.0 | 1 | 58/57 | 60 | 47 | 1 | 108 | 86 | 2 | 215 | 215 | 13 20 460/3 1,050 11.0 — A - H |
| RTU-3 | LENNOX | SGH120H4M | 10 | 1 | TECH ROOM | CV | 4,000 | 0.75 | 3.0 | 2 | 59/58 | 120 | 93 | 2 | 180 | 144 | 2 | 365 | 365 | 24 30 460/3 2,000 11.0 — A - H, J |

NOTES:

A. EQUIPMENT SIZED FOR 100 DEGREE F AMBIENT TEMPERATURE.
B. PROVIDE WITH 2" - 30% EFFICIENT PLEATED THROWAWAY AIR FILTERS.
C. PROVIDE WITH MANUFACTURERS STANDARD 14" INSULATED ROOF CURB.
D. PROVIDE WITH PLEATED FILTERS AND HAIL GUARDS.
E. PROVIDE WITH FACTORY MOUNTED ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF DAMPER.
F. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT.
G. RETURN AIR SMOKE DETECTOR FURNISHED AND INSTALLED BY OTHERS.
H. DISCONNECT SWITCH AND GFCI OUTLET TO BE FURNISHED BY ELECTRICIAN.
J. PROVIDE WITH FACTORY MOUNTED HOT-GAS REHEAT COIL FOR DEHUMIDIFICATION.



3315 N Oak Trafficway | Kansas City, MO 64116
816 | 888 | 7380
NP Studio North, LLC
Missouri Certificate of Authorization No. A-2017040540

PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION

TENANT IMPROVEMENTS FOR:

H&R BLOCK DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04/26/24
Issued For: Permit Submittal
Drawn By: MDK
Reviewed By: GMM

Revisions:
No. Date Description

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H&R BLOCK TI

1220 NW MAIN ST. - LEE'S SUMMIT, MO

SCALE: AS NOTED DATE: 5/13/24 DRAWN BY: M.D.K.

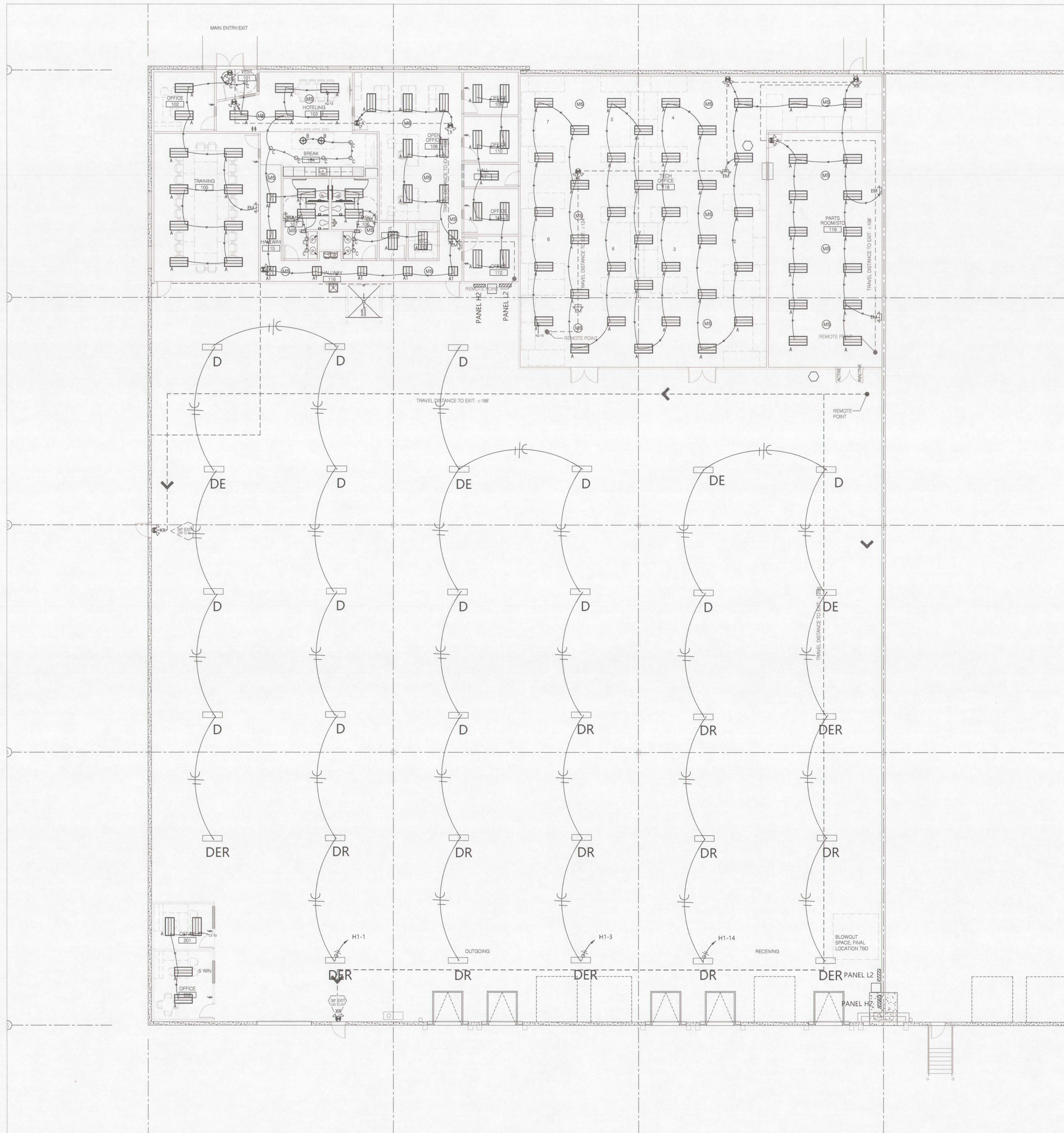
APPROVED BY: G.M.M. DWG # M3

MECHANICAL PERMIT OF 3



M3.01
MECHANICAL SCHEDULES

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1 OVERALL FLOOR PLAN
Scale: 1/8" = 1'-0"



3315 N Oak Trafficway | Kansas City, MO 64116
816.138.1720
NP Studio North, LLC
Missouri Certificate of Authorization No. A-201.7040640

PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION

TENANT IMPROVEMENTS FOR:
H&R BLOCK DEPOT

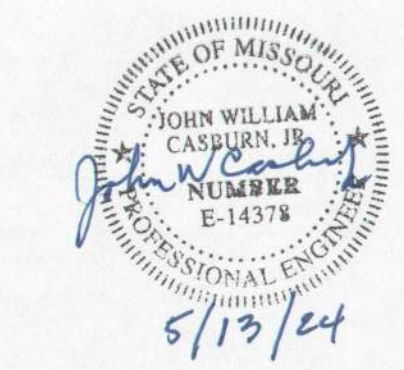
1220 NW Main St
Lee's Summit, MO 64086

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|--------------|------------------|-------------|
| Project No. | 2024-032 | |
| Date: | 04.26.24 | |
| Issued For: | Permit Submittal | |
| Drawn By: | F. Crubaugh | |
| Reviewed By: | | |
| Revisions: | | |
| No. | Date | Description |
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HERITAGE ELECTRIC, L.L.C.
841 N. MARTWAY
Olathe, Kansas
phone (913) 747 0528
fax (913) 747 0539



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E1.00
LIGHTING



3315 N Oak Trafficway | Kansas City, MO 64116
816 | 888 | 7380
NP Studio North, LLC
Missouri Certificate of Authorization No. A-201 704054

| | |
|-----------------|-----------------------------------|
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |



H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04.26.24
Issued For: Permit Submittal
Drawn By: F. Crumbaugh
Reviewed By:

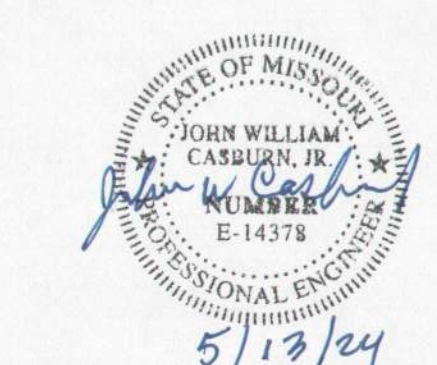
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HERITAGE ELECTRIC, L.L.C.
841 N. MARTWAY
Olathe, Kansas
phone (913) 747 0528
fax (913) 747 0539



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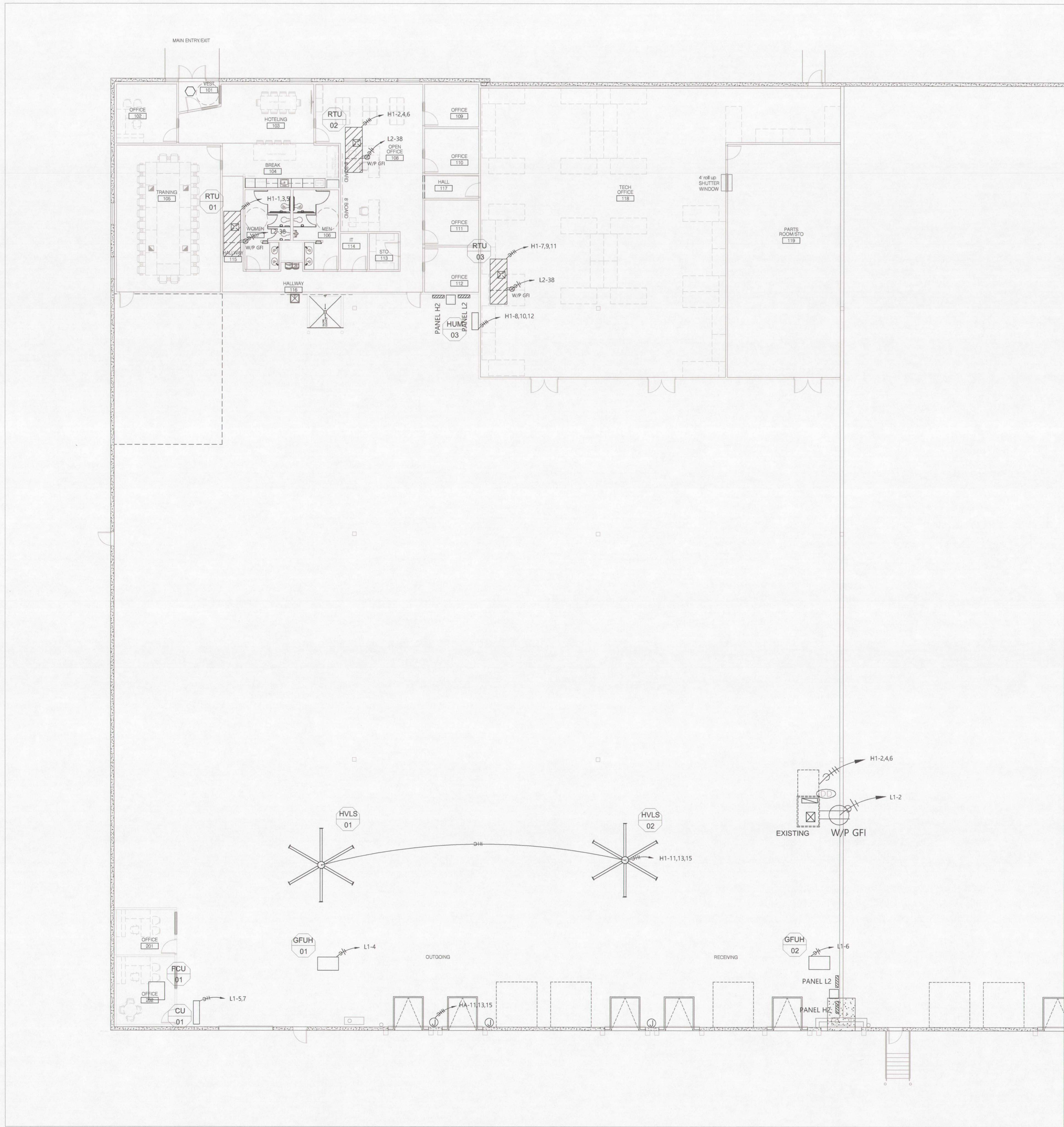
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E2.10

ENLARGED POWER

H:\COMPANY SHARED\HERITAGE\AUTOCAD DRAWINGS\H&R BLOCK\H&R BLOCK DEPOT ELECTRICAL.DWG 3/9/2024 10:51:46 AM - jharmon



1 OVERALL FLOOR PLAN
Scale: 1/8" = 1'-0"
PLAN TRUE



studioNorth
ARCHITECTURE

3315 N Oak Trafficway | Kansas City, MO 64116
816.168.1700
NP Studio North, LLC
Missouri Certificate of Authorization No. A-2017040540

PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION

TENANT IMPROVEMENTS FOR:

H&R BLOCK DEPOT

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032

Date: 04.26.24

Issued For: Permit Submittal

Drawn By: F. Crubaugh

Reviewed By:

Revisions:

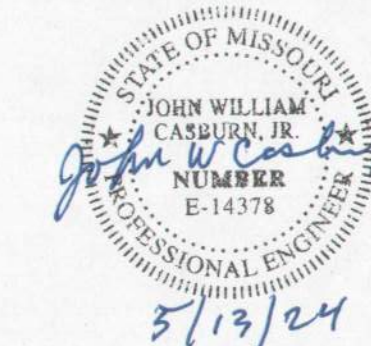
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841 N. MARTWAY
Olathe, Kansas
phone (913) 747 0528
fax (913) 747 0539



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E3.00

HVAC POWER



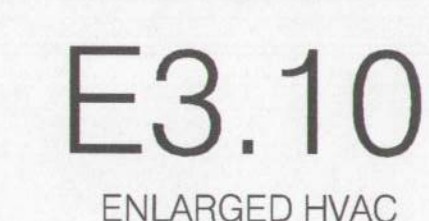
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|-----------------|-----------------------------------|
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |

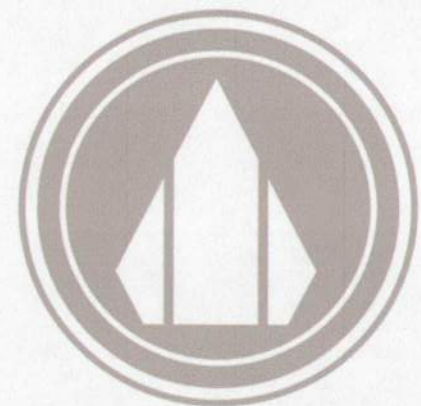


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DEPOT

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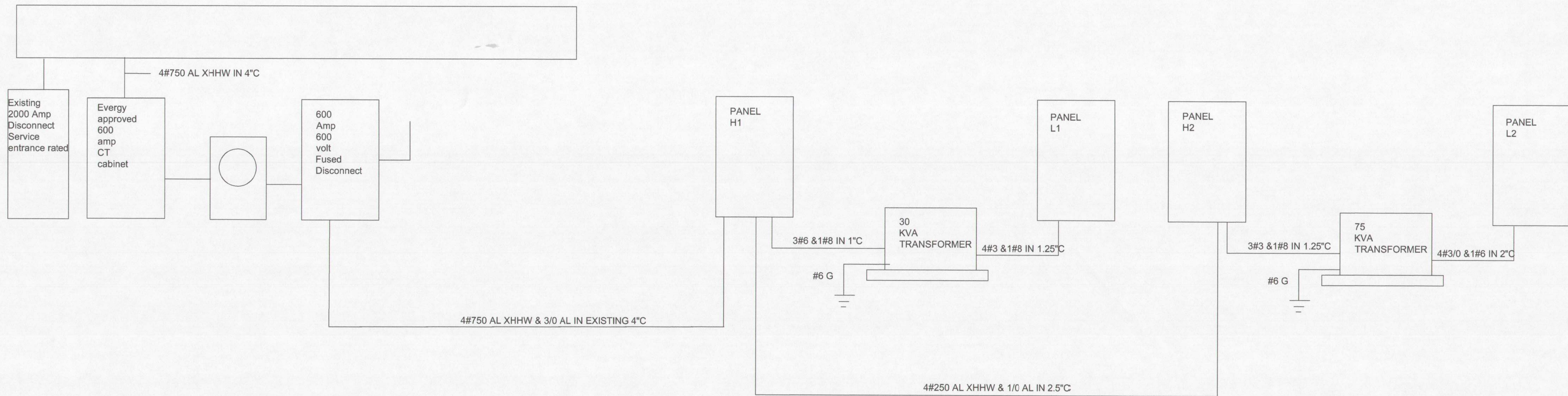
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FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION



1 RISER DIAGRAM Scale: N.T.S.

Scope:
Provide electrical for new TI
All Electrical work shall be as per NEC 2017.
All work shall be done by qualified electricians.
All branch wiring shall be copper.
Devices shall be 20a commercial grade and color shall be by architect.

- SPECIFICATIONS
- CONDUIT ABOVE GRADE SHALL BE EMT UNLESS OTHERWISE NOTED
 - CONDUIT BELOW GRADE SHALL BE RIGID PVC UNLESS OTHERWISE NOTED
 - CONNECTIONS SHALL BE MADE USING SET SCREW CONNECTORS
 - MC CABLE IS ACCEPTABLE FOR FINAL CONNECTIONS TO LIGHT FIXTURES PROVIDE WITH 10' WHIP ON ALL HIGHBAYS
 - BRANCH WIRING SHALL BE #12 THHN COPPER UNLESS OTHERWISE NOTED
 - WIRING SHALL BE AS PER CURRENT NEC 2005
 - WIRING DEVICES SHALL BE OF COMMERCIAL GRADE RATED AT 20 AMP
 - INSTALLATION SHALL ADHERE TO ADA STANDARDS
 - ALUMINUM XHHW-#2 CABLE MAY BE USED FOR FEEDERS LARGER THEN #2 OTHERWISE COPPER
 - REFER TO KCP8L STANDARDS MANUAL FOR 480 SERVICES
 - ALL LIGHTING/EQUIPMENT IN WARE-HOUSE SHALL BE MOUNTED TO PROVIDE A MIN OF 36" CLEAR HEIGHT

BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZING CHART*

| OVERCURRENT PROTECTION DEVICE RATING (AMPS) | REQUIRED CONDUCTOR SIZE | EQUIPMENT GROUNDING CONDUCTOR SIZE | SINGLE PHASE 2 WIRE + GND CONDUIT SIZE | SINGLE PHASE 3 WIRE + GND CONDUIT SIZE | THREE PHASE 3 WIRE + GND CONDUIT SIZE | THREE PHASE 4 WIRE + GND CONDUIT SIZE |
|---|-------------------------|------------------------------------|--|--|---------------------------------------|---------------------------------------|
| 15 | 12 AWG | 12 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 20 | 12 AWG | 12 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 25 | 10 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 30 | 10 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 35 | 8 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 40 | 8 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 3/4" |
| 45 | 8 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 1" |
| 50 | 8 AWG | 10 AWG | 3/4" | 3/4" | 3/4" | 1" |
| 60 | 6 AWG | 10 AWG | 1" | 1" | 1" | 1-1/4" |
| 70 | 4 AWG | 8 AWG | 1" | 1" | 1" | 1-1/4" |
| 80 | 4 AWG | 8 AWG | 1" | 1-1/4" | 1-1/4" | 1-1/4" |
| 90 | 3 AWG | 8 AWG | 1" | 1-1/4" | 1-1/4" | 1-1/4" |
| 100 | 3 AWG | 8 AWG | 1-1/4" | 1-1/2" | 1-1/2" | 1-1/2" |

NOTES:
UNLESS OTHERWISE NOTED ON THE DRAWINGS
UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL BRANCH CIRCUITS AND FEEDERS TO BE PROVIDED WITH A NEUTRAL WIRE.
ALL SIZING BASED ON 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY OR CABLE CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE NEC IF 4 OR MORE CONDUCTORS ARE PLACED IN A RACEWAY OR CABLE.
ELECTRICAL FIELD PERSONAL RESPONSIBLE FOR VOLTAGE DROP CALCULATIONS.

ELECTRICAL GENERAL NOTES

- WORK INCLUDED: FURNISH ALL LABOR, MATERIAL, SERVICES AND SKILLED SUPERVISION NECESSARY FOR THE CONSTRUCTION, ERECTION, INSTALLATION CONNECTIONS, TESTING AND ADJUSTMENTS OF ALL CIRCUITS AND ELECTRICAL EQUIPMENT SPECIFIED HEREIN, OR NOTED ON THE DRAWINGS, AND ITS DELIVERY TO THE OWNER COMPLETE IN ALL RESPECTS READY FOR USE.
- CONTRACT DRAWINGS THE CONTRACT DRAWINGS ARE SHOWN IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK, INDICATING THE GENERAL ARRANGEMENT OF EQUIPMENT, CONDUIT AND OUTLETS. VERIFY SPACES FOR THE INSTALLATION OF THE MATERIALS BASED ON ACTUAL DIMENSIONS OF EQUIPMENT FURNISHED. IF A QUESTION EXISTS AS TO THE EXACT INTENDED LOCATION OF OUTLETS OR EQUIPMENT, OBTAIN INSTRUCTIONS FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH WORK.
- MINIMUM SIZE OF CONDUIT SHALL BE 1/2" UNLESS NOTED OTHERWISE.
- ALL WIRING FOR LIGHTING, RECEPTACLE AND POWER CIRCUITS WHERE NOT SHOWN ON DRAWINGS SHALL BE WITH #12 CONDUCTORS, NUMBER AS REQUIRED IN CONDUIT SIZED PER N.E.C. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR ALL BRANCH CIRCUITS AND FEEDERS, HOMERUNS TO PANEL SHALL BE IN INDIVIDUAL CONDUITS, UNLESS NOTED OTHERWISE, WITH CIRCUITS AS SHOWN.
- THE USE OF TYPE 'MC' AND TYPE 'AC' CABLE IS PERMITTED IN ALL AREAS PER NEC AND LOCAL CODE REQUIREMENTS.
- THE USE OF ALUMINUM CONDUCTORS WITH AMPACITY EQUIVALENT TO COPPER IS PERMITTED IN ALL AREAS PER NEC REQUIREMENTS.
- ALL JUNCTION BOXES, PULL BOXES, AND PANELBOARDS SHALL BE RIGIDLY ATTACHED TO STRUCTURE.
- COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- ALL CONDUIT, BOXES, ETC. SHALL BE CONCEALED OR MOUNTED FLUSH WITH CEILING OR WALL CONSTRUCTION, CONDUITS SHALL BE MOUNTED AS HIGH AS POSSIBLE. NO SURFACE MOUNTED CONDUIT, BOXES, ETC. WILL BE PERMITTED WITHOUT PERMISSION OF THE ENGINEER PRIOR TO INSTALLATION. ALL CONDUIT PENETRATIONS SHALL BE FIRE-CAULKED AS REQUIRED.

| SYMBOLS & LEGEND | |
|--|---|
| | CONDUIT ABOVE GRADE |
| | CONDUIT BELOW GRADE |
| | SINGLE POLE SWITCH, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | TWO POLE SWITCH, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | THREE-WAY SWITCH, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | CEILING MOUNTED MOTION SENSOR, UNLESS OTHERWISE NOTED |
| | CORNER SWITCH, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | WALL MOUNTED MOTION SENSOR, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | EMERGENCY LIGHTING, MOUNTED AT 7'4" A.F.F. UNLESS OTHERWISE NOTED |
| | DUPLEX RECEPTACLE, MOUNTED AT 18" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | QUADRUPLEX RECEPTACLES, MOUNTED AT 18" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | DUPLEX RECEPTACLE, MOUNTED AT CEILING |
| | GFCI RECEPTACLE, MOUNTED AT 18" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | GFCI FOUR-WAY RECEPTACLE, MOUNTED AT 18" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | FLUSH MOUNTED RECEPTACLE |
| | COMMUNICATION DATA / VOICE OUTLET, MOUNTED AT 18" O.C. A.F.F. WITH 36" CONDUIT TO ABOVE CEILING |
| | PUSH BUTTON, MOUNTED AT 48" O.C. A.F.F. UNLESS OTHERWISE NOTED |
| | JUNCTION BOX |
| | DISCONNECT SWITCH |
| | STARTER |
| | COMBINATION DISCONNECT AND STARTER |
| | TERMINAL BOX |
| | MOTOR |
| | PANELBOARD |
| | GROUND FAULT INTERRUPTING |
| | WEATHERPROOF |
| | ISOLATED GROUND |
| | AC ABOVE COUNTER |
| | WEATHERPROOF GROUND FAULT INTERRUPTING |
| ALL SYMBOLS NOT NECESSARILY REFERENCED ON PLAN | |

LIGHT FIXTURE SCHEDULE

| TYPE | MANUFACTURER | CATALOG NO. | LAMPS | MOUNTING | VOLTS | REMARKS |
|------|----------------------|--|-------|----------|-------|-------------------------------------|
| A | LITHONIA LIGHTING | STAKS-2X4-AL06-SWW7 | LED | CEILING | UNV | OR EQUAL |
| A1 | LITHONIA LIGHTING | STAKS-2X2-AL03-SWW7 | LED | CEILING | UNV | OR EQUAL |
| B | LIGHTART | 22" ACOUSTIC EMPIRE SHADE, OUTSIDE SHADE DUNE, INSIDE SHADE ZINC. WHITE CANOPY CORD AND FRAME 4000K DIMMABLE 800 LUMEN 54 DEGREE FLOOD | LED | CEILING | UNV | |
| C | LITHONIA LIGHTING | LDN6-AL02-SWW1-LOS-AR-LSS-MVO LT | LED | CEILING | UNV | OR EQUAL |
| D | HE WILLIAMS | GH-2-L300-840-FA-DIM-UNV | LED | CEILING | 277 | PROVIDE WITH INTEGRAL MOTION SENSOR |
| DR | EXISTING TO RELOCATE | | | | | |
| DE | HE WILLIAMS | GH-2-L300-840-FA-DIM-UNV | LED | CEILING | 277 | SAME AS TYPE D ONLY WITH EM BALLAST |
| DER | EXISTING TO RELOCATE | | | | | |
| EM | COMPASS | CUS2Q | LED | WALL | UNV | OR EQUAL |
| X1 | Compass | CCR | LED | WALL | UNV | OR EQUAL |
| EX | COMPASS | CCR | LED | WALL | UNV | EXISTING |
| ERH | COMPASS | CUWZ-PC | LED | WALL | UNV | EXISTING |

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Olathe, Kansas
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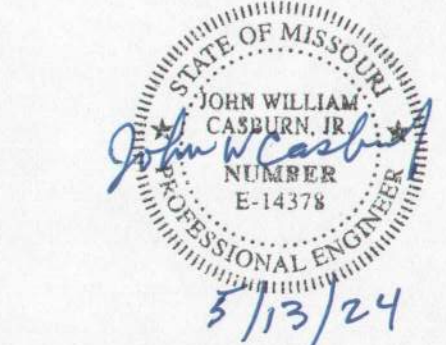
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TENANT IMPROVEMENTS FOR:

H&R BLOCK DEPOT

1220 NW Main St
Lee's Summit, MO 64086

| | | |
|--------------|------------------|-------------|
| Project No. | 2024-032 | |
| Date: | 04.26.24 | |
| Issued For: | Permit Submittal | |
| Drawn By: | F. Crumbaugh | |
| Reviewed By: | | |
| Revisions: | | |
| No. | Date | Description |
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E4.00
RISER

| PANEL: H2 | | | | | 200A | | MLO | | 277V | | 480 V, 3PH, 4W.*GRND. | | NEW PANEL | | | | |
|-----------|-----------------|--|------|------|------------|-------|------------|-------|-------|-------------|-----------------------|-----|-----------|--|--|--|--|
| CCT | SERVES | | VA | OCF | WIRE | PHASE | WIRE | OCF | VA | SERVES | | CCT | | | | | |
| 1 | RTU 1 | | 3601 | 20/3 | 3#12,1#12S | A | 3#12,1#12S | 20/3 | 3601 | RTU 2 | | 2 | | | | | |
| 3 | | | 3601 | | | B | | | 3601 | | | 4 | | | | | |
| 5 | | | 3601 | | | C | | | 3601 | | | 6 | | | | | |
| 9 | RTU 3 | | 6648 | 25/3 | 3#10,1#12S | A | 3#10,1#12S | 30/3 | 6625 | HUM-1 | | 8 | | | | | |
| 9 | | | 6648 | | | B | | | 6625 | | | 10 | | | | | |
| 11 | | | 6648 | | | C | | | 6625 | | | 12 | | | | | |
| 13 | OFFICE LIGHTING | | 2670 | 20/1 | 2#12,1#12S | A | | | | | | 14 | | | | | |
| 15 | OFFICE LIGHTING | | 2665 | 20/1 | 2#12,1#12S | B | | | | | | 16 | | | | | |
| 17 | | | | | | C | | | | | | 18 | | | | | |
| 19 | | | | | | A | | | | | | 20 | | | | | |
| 21 | | | | | | B | | | | | | 22 | | | | | |
| 23 | | | | | | C | | | | | | 24 | | | | | |
| 25 | | | | | | A | | | | | | 26 | | | | | |
| 27 | | | | | | B | | | | | | 28 | | | | | |
| 29 | | | | | | C | | | | | | 30 | | | | | |
| 31 | | | | | | A | | | | | | 32 | | | | | |
| 33 | | | | | | B | | | | | | 34 | | | | | |
| 35 | | | | | | C | | | | | | 36 | | | | | |
| 37 | | | | | | A | 3#3,1#6S | 100/3 | 18220 | TRANSFORMER | | 38 | | | | | |
| 39 | | | | | | B | | - | 18420 | TRANSFORMER | | 40 | | | | | |
| 41 | | | | | | C | | - | 18620 | TRANSFORMER | | 42 | | | | | |

| NOTES: | | LOAD SUMMARY | | CONN | NEC | DEM | LOAD BALANCE PER PHASE | | |
|--------|--------------------------|---------------|--------|------|---------|-----|------------------------|-------|---------|
| 1 | NEIMA 1 ENCLOSURE | 1LIGHTING | 5365 | 1.25 | 6706.25 | | PHASE A | | 41665 |
| 2 | PROVIDE BOLT ON BREAKERS | 2RECEPTACLES | 55480 | NEC | 32730 | | PHASE B | | 41880 |
| 3 | | SWITCHEN | 0 | 0.65 | 0 | | PHASE C | | 36955 |
| | | 4HVAC | 82325 | 1 | 82325 | | LOWEST PHASE PLUS 10% | | |
| | | 5NON-CONT | 0 | 1 | 0 | | 36955 | + 10% | 43554.5 |
| | | LARGEST MOTOR | 0 | 0.25 | 0 | | 0 PHASES ARE BALANCED | | |
| | | TOTAL VA | 121150 | | | | 191781.25 | | |
| | | TOTAL AMPS | 148.1 | | | | 122.4 | | |

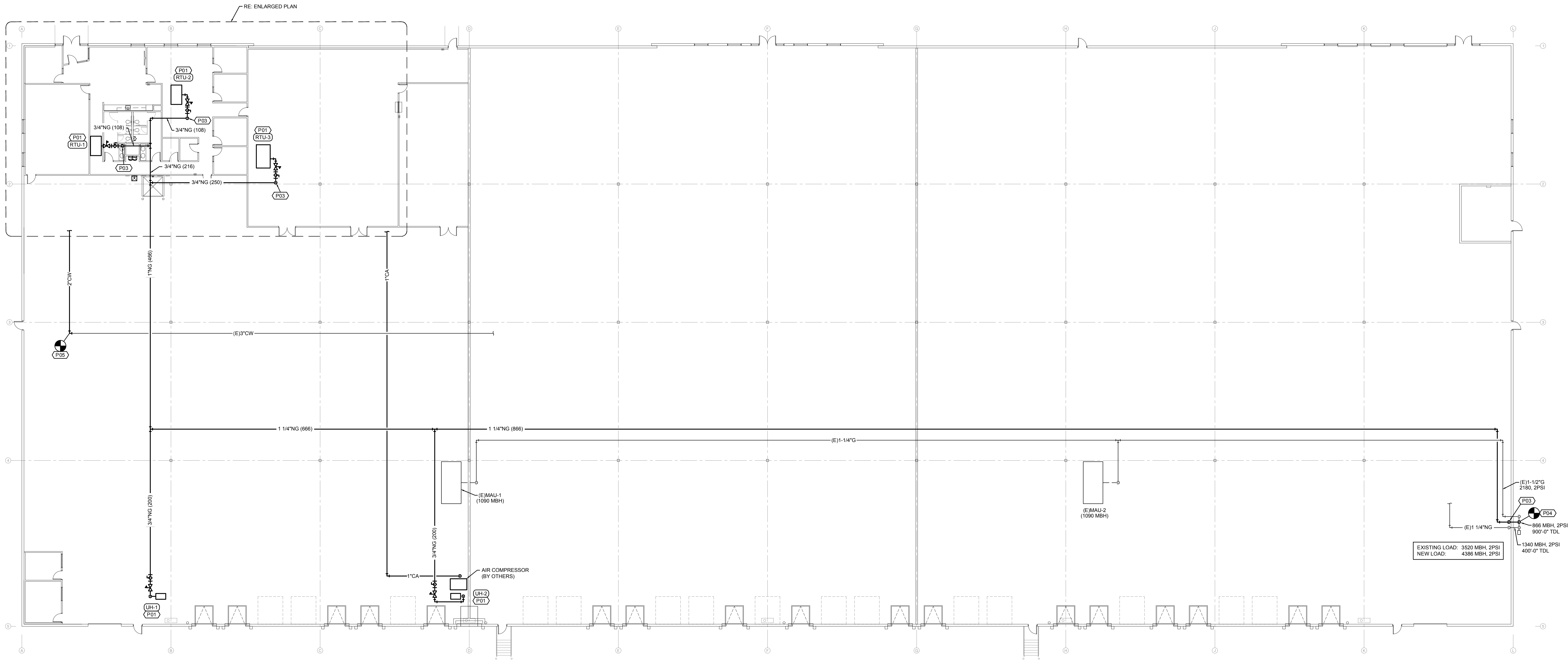
| PANEL: L2 | | | 200 | MB | 120/ | 208 V, 3PH, 4W.+GRND. | | | NEW PANEL | | |
|-----------|-------------------------|------|-----|------------|-------|-----------------------|-----|------|--------------------|-----|--|
| CCT | SERVES | VA | OCF | WIRE | PHASE | WIRE | OCF | VA | SERVES | CCT | |
| 1 | OFFICE RECP | 800 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 800 | HOTELING | 2 | |
| 3 | TRAINING ROOM RECP | 1200 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 1600 | COPE MACHINE | 4 | |
| 5 | TRAINING ROOM FLOOR BOX | 800 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1600 | ICE/WATER | 6 | |
| 7 | BREAK ROOM GFI | 800 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 1500 | MICROWAVE | 8 | |
| 9 | REFRIGERATOR | 1200 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 1500 | MICROWAVE | 10 | |
| 11 | REFRIGERATOR | 1200 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1500 | MICROWAVE | 12 | |
| 13 | DRINKING FOUNTAIN | 800 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 800 | OPEN OFFICE RECEPS | 14 | |
| 15 | IT ROOM QUAD | 800 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 800 | OPEN OFFICE RECEPS | 16 | |
| 17 | HALLWAY RECP | 1000 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1200 | OFFICE RECEPS | 18 | |
| 19 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 1400 | OFFICE RECEPS | 20 | |
| 21 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 22 | |
| 23 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 24 | |
| 25 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 26 | |
| 27 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 28 | |
| 29 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 30 | |
| 31 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | A | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 32 | |
| 33 | TECH OFFICE | 1920 | 201 | 2#12-1#12G | B | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 34 | |
| 35 | PART'S OFFICE | 1920 | 201 | 2#12-1#12G | C | 2#12-1#12G | 201 | 1920 | TECH OFFICE | 36 | |
| 37 | PART'S OFFICE | 1920 | 201 | 2#12-1#12G | A | - | 201 | | SPARE | 38 | |
| 39 | SPARE | 201 | --- | | B | --- | 201 | | SPARE | 40 | |
| 41 | SPARE | 201 | --- | | C | --- | 201 | | SPARE | 42 | |
| 43 | SPARE | 201 | | | A | | 201 | | SPARE | 44 | |
| 45 | SPARE | 201 | | | B | | 201 | | SPARE | 46 | |
| 47 | SPARE | 201 | | | C | | 201 | | SPARE | 48 | |
| 49 | SPACE | | | | A | | | | SPACE | 50 | |
| 51 | SPACE | | | | B | | | | SPACE | 52 | |
| 53 | SPACE | | | | C | | | | SPACE | 54 | |
| 55 | SPACE | | | | A | | | | SPACE | 56 | |
| 57 | SPACE | | | | B | | | | SPACE | 58 | |
| 59 | SPACE | | | | C | | | | SPACE | 60 | |
| 61 | SPACE | | | | A | | | | SPACE | 62 | |

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E5.00

PANEL SCHEDULE



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

FLOOR PLAN NOTES

- CONNECT TO MECHANICAL EQUIPMENT WITH GAS COCK, DIRT LEG, AND UNION. PROVIDE PRESSURE REGULATOR WITHIN 10'-0" OF UNIT CONNECTION. INLET: 2PSI, OUTLET: 7" WC.
- ROUTE GAS PIPING UP TIGHT TO INTERIOR AND SUSPENDED ACROSS CEILING SPACE AS INDICATED.
- ROUTE GAS PIPING UP THROUGH ROOF, RE: DETAIL.
- CONNECT TO EXISTING GAS PIPING AS CLOSE TO METER AS POSSIBLE.
- CONNECT TO EXISTING COLD WATER STUBOUT. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.



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ARCHITECTURE

3315 N Oak Trafficway | Kansas City, MO 64116
816 | 888 | 7380
NP Studio North, LLC
Missouri Certificate of Authorization No. A-2017040540

| | |
|-----------------|-----------------------------------|
| PLUMBING | DESIGN-BUILD BY GEN CONTRACTOR |
| MECHANICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| ELECTRICAL | DESIGN-BUILD BY GEN CONTRACTOR |
| FIRE PROTECTION | DESIGN-BUILD BY GEN CONTRACTOR |
| CONTRACTOR | FORGE CONSTRUCTION |



Lankford + Fendler
+ associates

1730 Walnut Street Kansas City, Missouri 64108
1012 Endland Avenue, St. Joseph, Missouri 64501
Phone: 816.221.1411 | Fax: 816.221.1429
LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC.
CORPORATE ID: 2024 Permit No. 24-7428-00
CMA No. 2000001168

TENANT IMPROVEMENTS FOR:

**H&R BLOCK
DEPOT**

1220 NW Main St
Lee's Summit, MO 64086

Project No. 2024-032
Date: 04.26.24
Issued For: Permit Submittal
Drawn By: F. Crubaugh
Reviewed By:

| No. | Date | Description |
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FLOOR PLAN- PLUMBING



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816 | 888 | 7380
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PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION



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CORPORATE ID 2024 Permit No. 24-7628-00
CMA No. 2000601168

TENANT IMPROVEMENTS FOR:

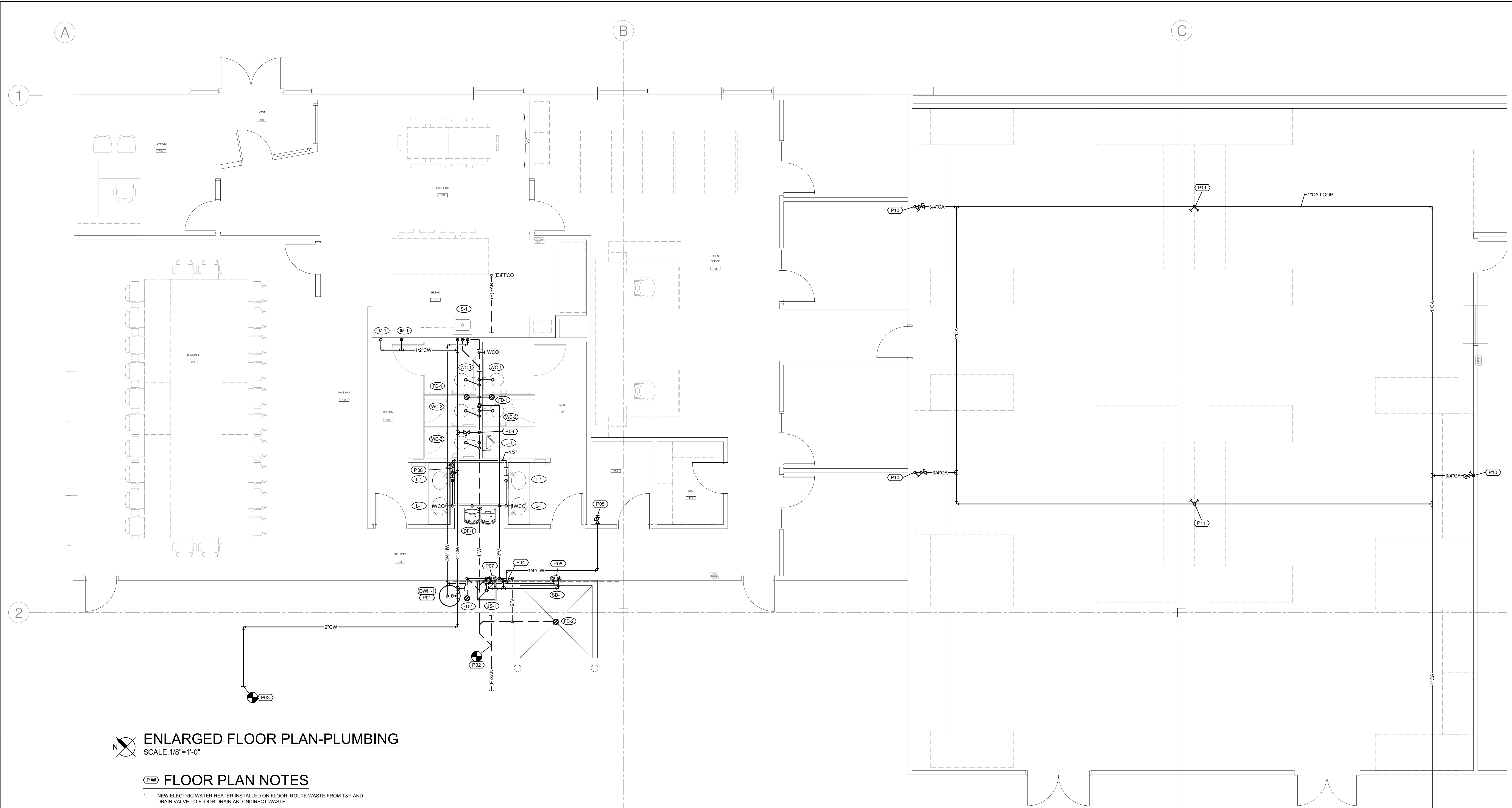
H&R BLOCK
DEPOT

1220 NW Main St
Lee's Summit, MO 64086

| | | |
|--------------|------------------|-------------|
| Project No. | 2024-032 | |
| Date: | 04.26.24 | |
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| Revisions: | | |
| No. | Date | Description |
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P1.1

ENLARGED FLOOR PLAN-
PLUMBING

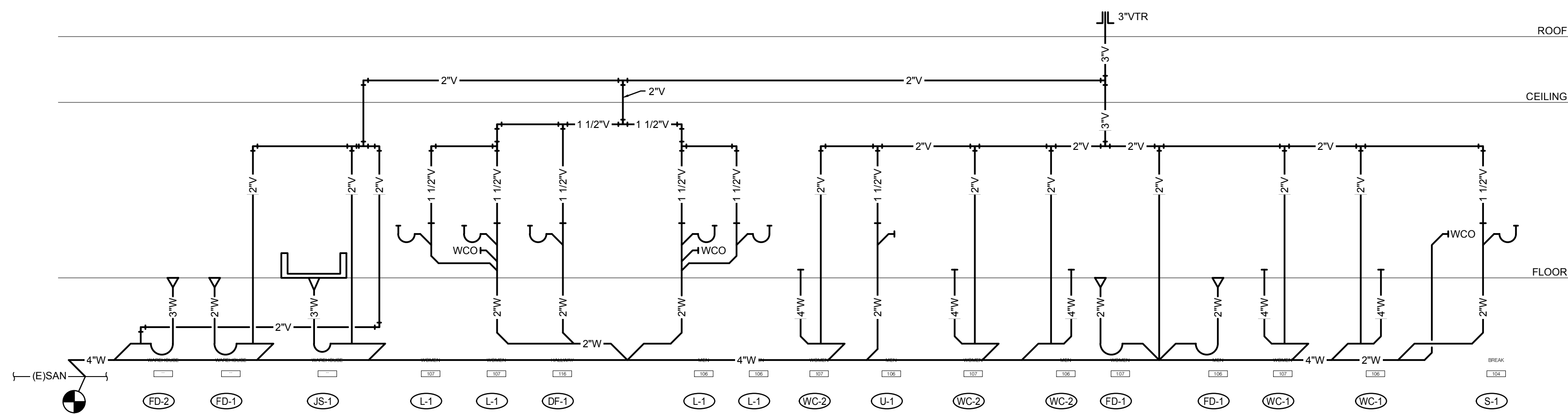


ENLARGED FLOOR PLAN-PLUMBING

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

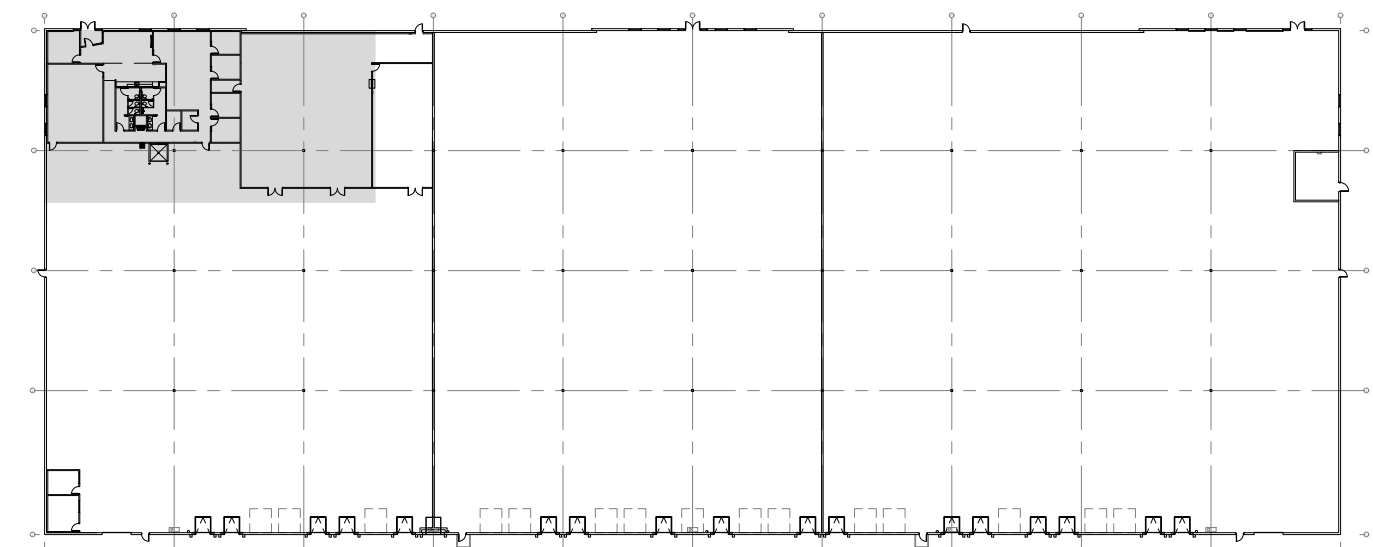
FLOOR PLAN NOTES

1. NEW ELECTRIC WATER HEATER INSTALLED ON FLOOR. ROUTE WASTE FROM T&P AND DRAIN VALVE TO FLOOR DRAIN AND INDIRECT WASTE.
2. CONNECT TO EXISTING WASTE PIPING BELOW SLAB. FIELD VERIFY EXACT SIZE, LOCATION AND ELEVATION OF EXISTING PIPING PRIOR TO CONNECTION.
3. CONNECT TO EXISTING COLD WATER STUBOUT, APPROX. 50'. FIELD VERIFY EXACT SIZE AND LOCATION OF STUBOUT PRIOR TO CONNECTION.
4. ROUTE 3/4" COLD WATER DOWN TO DOUBLE CHECK BPP IN ACCESSIBLE LOCATION NEAR MOP SINK. ROUTE PIPING FROM OUTLET UP TO ABOVE CEILING AND AS INDICATED.
5. PROVIDE 3/4" COLD WATER STUBOUT FOR FUTURE CONNECTION TO HUMIDIFIER.
6. 1/2" HOT AND COLD WATER DOWN TO SCRUBBER DUMP FAUCET.
7. 1/2" HOT AND COLD WATER DOWN TO MOP SINK.
8. 3/4" HOT AND COLD WATER DOWN AND IN WALL. ROUTE THRU WALL AND CONNECT 1/2" HOT AND COLD WATER TO EACH LAVATORY. AND 1/2" COLD WATER TO DRINKING FOUNTAIN.
9. 2" COLD WATER DOWN AND IN WALL. ROUTE FULL SIZE AND CONNECT 1" COLD WATER TO EACH WATER CLOSET AND 3/4" TO URINAL.
10. 3/4" COMPRESSED AIR PIPING DOWN TO WORK STATION WITH SHUTOFF VALVE IN ACCESSIBLE LOCATION.
11. 3/4" COMPRESSED AIR PIPING DOWN. PROVIDE 3/4" OUTLET AT EACH WORK STATION WITH DEDICATED SHUTOFF VALVES IN ACCESSIBLE LOCATION.



WASTE/VENT RISER DIAGRAM

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



KEYPLAN

NO SCALE

- 220 100
PLUMBING SPECIFICATIONS
- 1.0. SCOPE:
- A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation and to provide complete working systems of the Plumbing Systems, including hot and cold water, waste and vent, storm drainage, fixtures, equipment and other items described in these specifications, as illustrated in the accompanying drawings or as directed by the Architect/Engineer.
- B. Extend piping systems as indicated on contract documents or to point of connection as follows:
1. Points of connection within the existing building.
- 2.0. PIPING, FITTINGS AND VALVES:
- A. Provide hot and cold water supply to each and every fixture, piece of equipment and to systems where makeup water is required.
- B. Provide service valves for each item of equipment, at branch piping, fixture groups, individual fixtures and elsewhere as indicated or required. Provide balance valves, strainers, check valves and other valves as indicated or required by the application.
- C. Provide a union or flanged connection between each item of equipment and its service valve. Copper to ferrous pipe connections shall have isolation coupling, flange or union.
- D. Domestic water, interior, above ground -
1. Pipe, copper tube 2-1/2" and Smaller - Type "L" hard temper copper, wrought or cast copper fittings. Lead free 80S or Eagle Hard Solder or "C2" solder joints, or roll grooved mechanical joints or pressure seal joint fittings with EPDM O-ring seats.
2. Provide valves where indicated on the drawings, where required by code, or required for service.
- a. 1/4 turn Service -
- 1) 1/2" thru 2" - Nibco 585-66-LF bronze lead free, 600 PSIG, full port, stainless steel ball and stem.
- 2) Provide isolation valves where indicated on drawing, including at branches, terminations, each piece of equipment and elsewhere as required by code.
- b. Check, Strainers and Miscellaneous -
- 1) Check - 1/2" thru 2" - Nibco 413-Y-LF bronze lead free, 200 PSIG, PTFE seats, Y-pattern check valve.
- 2) Check - 1/2" thru 2" - Nibco 480-Y-LF lead free, 200 PSIG, PTFE seats, spring loaded, resilient disc, spring loaded inline non-slam check valve, in pump discharge.
3. Securely anchor and support piping, valves and fittings, with adequate provisions for expansion and contraction. Grade lines, free of traps, to low point at cut-off and drain valve.
4. Hot and cold supply lines to have manufactured pre-charged piston type water hammer arresters sized and installed in accordance with PD-WH 201. Install at each solenoid actuated quick closing valve location including but not limited to dishwashers, clothes washers, ice makers, electronic faucets and similar items. Sioux Chief, JR Smith or equal. Provide access panel where required.
- E. Natural Gas --
1. Pipe above ground:
- a. 2" and smaller - Schedule 40 black steel piping with threaded fittings.
- b. 4" and smaller - Schedule 40 black steel pipe with pressure seal steel fittings. Viega Megapress XL, Apollo PowerPress or equal.
2. Valves & Connectors:
- a. Shutoff Service -
- 1) 1/2" thru 1" - Nibco CB-1A, brass body, chrome plated brass ball, PTFE seats, screwed ends, 5 PSIG per CGA, lever handle.
- 2) 1/2" thru 2" - Nordstrom 142, iron lubricated tapered plug valve, 200 PSIG, threaded ends.
- b. Regulator, 3/4" thru 1-1/2" - Fisher type S, spring loaded diaphragm, 1.5" WC to 2.5 PSIG discharged pressure, threaded, vented to atmosphere.
- c. Flex Connectors, Metraflex GASCT 300 series stainless steel braided hose with carbon steel threaded ends.
3. Natural gas piping in return air plenum, where permitted shall be either installed in vented fabricated enclosure, sleeved and vented, or welded or one piece.
4. Paint exterior natural gas piping with corrosion inhibiting paint, color to be selected.
- F. Sanitary sewer, vent, interior --
1. Pipe - Standard weight cast iron hubless with no-hub shielded mechanical joints; solid wall schedule 40 PVC, ABS with solvent cement joints; vents may be galvanized malleable iron.
2. Plastic piping shall not be allowed to return air plenums.
3. Floor or equipment drains shall be provided at all locations where equipment is indirect waste. Floor drains shall be provided outside all ADA showers for roll-in applications or where there is no threshold.
4. All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise, except that piping sizes up thru 2-1/2" shall be sloped at 1/4" per foot. Piping sizes up thru 4" to be sloped at 1/4" per foot where possible and where required by local codes.
5. Vents shall be sloped upward in direction of flow.
- G. Sanitary sewer, vent, below grade --
1. Pipe - Standard weight cast iron hubless with no-hub heavy duty mechanical joint fittings; solid wall schedule 40 PVC, ABS with solvent cement joints.
2. All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise, except that piping sizes up thru 2-1/2" shall be sloped at 1/4" per foot. Piping sizes up thru 4" to be sloped at 1/4" per foot where possible and where required by local codes.
3. Vents below grade shall be 2" minimum size and shall be sloped up in direction of flow.
- H. Compressed Air -
1. Pipe - Copper tube -Type "L" hard temper, wrought or cast copper fittings. Lead free 95S or Eagle Hard Solder or "CB" solder.
2. Valves, service - 1/2" - 2" Nibco S-585-T0, 1/4 turn, 600 PSIG, full port, stainless steel ball and stem.
3. Outlets - Terminate with male pipe with air valve rated for compressed air, chrome angle stop, compression fitting, equipment connection in accordance with equipment vendor requirements.
4. All pipe material, joints and outlets to be in accordance with dental vendor drawings and details.
- 5.0. CLEANOUTS, TEST TEES, TRAPS AND TRAP SEALS:
- A. Provide cleanout at the base of each stack or riser, at ends of runs greater than 100', each 135' aggregate change of direction in horizontal piping, where indicated on the drawings or as required by code. Cleanouts shall be the same size as pipe up to 4" diameter, 4" clearouts for larger pipe unless otherwise noted.
- A. All traps shall be deep seal type with liquid seal not less than specified by code.
- B. Where trap primers are not specified provide all floor and hub drains with trap seal with EPDM or silicone diaphragm, conforming to requirements of ASSE 1072 or 1017-2, Provent Proseal Series SG22 or TG22, Sioux Chief series 835, Rectorseal SS series or acceptable equal.
- 4.0. SLEEVES AND SEALS, FLASHINGS, ROOF PIPE SUPPORTS AND UV PROTECTION:
- A. Flash all pipes and vents extending through roof. Flashing details shall be in accordance with roof manufacturer's requirements.
- B. Continuous roof piping penetrations shall be made weather tight, conform to roof manufacturer warranty.
- C. Roof pipe supports shall be prefabricated with UV resistant rubber base, unistrut channel and pipe clamp, length and height for consistent pipe elevation to suit application. Mi-Fab C6 series or acceptable equal.
- D. Plastic piping without UV inhibitors which is exposed to UV radiation from sunlight shall be protected by coating with a UV resistant paint.
- 5.0. CROSS-CONNECTIONS AND INTERCONNECTIONS:
- A. No plumbing device or piping shall be installed which will provide cross-connection or interconnection between a distributing supply or waste so as to make possible the backflow or back-siphonage of polluted water into the potable water supply system. Where the possibility of back-siphonage exists, water supply to the fixture shall be introduced through a suitable backflow preventer device suitable for the hazard protected. Installed backflow preventers must be approved through the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.
1. They may be an air gap, anti-siphon valve, atmospheric vacuum breaker, pressure vacuum breaker, double check, reduced pressure backflow preventer or as otherwise required by the authority having jurisdiction.
- 6.0. PLUMBING EQUIPMENT:
- A. Water heaters, pumps, expansion tanks and other equipment shall be as scheduled or by acceptable equal by one of the following:
- Water Heaters and Accessories:
Water Heaters: A.O. Smith, State, Rheem, Bradford White
Expansion Tanks: Watts, Amtrol, Armstrong, Ebi, Taco, Wessels.
- B. Water Heater Installation
1. Pipe water heater drains and/or pan drains to indirect waste per code and as noted or detailed. Water heater P&T relief valves shall be piped independently, indirectly wasted 6" above receptor per code and as noted or detailed.
2. Install vacuum relief valve on each bottom fed storage water heater, installed above the top of the water heater on cold water inlet piping.
3. Mount water heaters on concrete floor pads, suspended from structure on steel rods, on steel floor stands or wall bracket steel frames as indicated on drawings.
4. Suspended heaters up to 50 gallons may be mounted utilizing prefabricated steel support platform, HoldRite SWHP series or acceptable equal.
5. Where water heaters are mounted overhead, on wood floor or other location requiring containment, mount water heaters in drain pan with 1" minimum drain. HoldRite C2 series, acceptable equal or field fabricated equivalent.
6. Water piping connections to water heaters shall be metallic, no plastic piping is permitted within 18" of a water heater connection. Stainless steel flexible connectors with union ends may be used, HoldRite or acceptable equal. Provide 18" minimum flexible corrugated copper or braided stainless steel connector hoses with compression ends for water heaters with 3/4" water connections.

- 7.0. INSULATION:
- A. Pipe insulation shall conform to the International Energy Conservation Code.
- B. Insulate all cold water, hot water piping, Owens Corning or acceptable equal.
1. Cold water piping insulation: 1" fiber glass sectional pipe covering with universal vapor barrier jacket.
2. Hot Water piping insulation: 1" (pipe sizes up thru 1-1/4") 1-1/2" (pipe sizes 1-1/2" and above) fiber glass sectional pipe covering with universal all service jacket.
- C. At Contractor's option, Armacell AP Armaflex unicellular insulation or acceptable equal with 25/50 flame and smoke rating with equal thermal performance may be substituted for fiberglass products.
- D. Seal all joints on cold water insulation to maintain vapor barrier.
- E. Insulation shall run continuously thru hangers and supports without interruption.
- F. Refer to plumbing fixture schedule for protective insulation of fixture drains and water piping for compliance with ADA requirements for People with Disabilities.
1. Pipe coverings may be omitted where protection from injury (such as shrouds or casework) is provided by other trades.
2. Provide comparable protection for accessory items such as disposers where items are exposed to contact beneath ADA designated fixtures.
- 8.0. PIPE SUPPORTS AND ROUTING:
- A. Hangers and Supports
1. Piping shall be supported in accordance with industry standards including support methods, sizes and spacing. All supports and installation shall conform to MSS SP88 and 89 and Fed Spec WW-H-171E and A-A-1152A.
2. Pipe Slopes: Install hangers and supports to provide indicated or required pipe slopes to provide for drainage and venting.
3. Each piping system shall be independently supported with no piping bearing on another and installed such that no weight of piping is borne by the equipment.
4. Space hangers and supports within maximum piping span length indicated in MSS SP-58. Install building attachments at required locations for proper piping support.
5. Hangers shall be designed to allow for expansion and contraction of pipe lines and shall be of adequate size to permit covering when required. Provide protective slabs and blocking where supporting insulated piping to prevent crushing insulation.
- B. Routing
1. Piping shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust pipe routing and drop locations with necessary pipe offsets or changes in elevation to accommodate beams and other obstructions.
- 9.0. EQUIPMENT AND PIPE LABELS:
- A. Equipment labels shall be provided for all plumbing equipment and shall be self-adhesive engraved plastic, blue with white lettering, sized, minimum 1-1/2" high, and located for viewing from ground or floor level. Label shall indicate drawing designation or unique equipment number.
- B. Pipe labels for domestic water, waste, and vent piping shall be preprinted, color-coded, with 1-1/2" lettering indicating service, and showing flow direction. Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and locations as follows:
1. Near each valve and control device.
2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
3. Near major equipment items and other points of origination and termination.
4. Spaced at maximum intervals of 50 feet along each run. Reduced intervals to 25 feet in areas of congested piping and equipment.
5. On piping above removable acoustical ceilings, omit immediately spaced labels.
- 10.0. MISCELLANEOUS
- A. Equipment labels shall discharge full size thru an air gap to a floor, equipment drain, sanitary floor sink or hub drain. The floor or equipment drain grate shall be fitted with a funnel, the sanitary floor sink shall have a partial grate or the grate shall be omitted. Drains shall be located so they are accessible and not a tripping hazard.
- B. Provide escutcheons at all penetrations of exposed walls and ceilings. Escutcheons shall be chrome plated brass in occupied areas, prime paint finish for unoccupied areas unless otherwise noted. Escutcheons for exhaust or moist areas shall be brass.
- 11.0. PROTECTION OF WORK
- A. Protection
1. Protect and cover piping and fixture waste and water openings to prevent entry of dirt and debris.
2. Cover and protect fixtures and plumbing equipment to prevent damage.
- 12.0. TEST, ADJUSTMENTS AND CLEANING:
- A. Soil, waste and vent piping testing:
1. Initial Piping Water Test: Fill with water to the top of the highest point of the system extending through roof. Systems may be tested in whole or part. The system shall remain leak free under test for a minimum period of Fifteen (15) minutes.
- a. Gravity Drain Test: Either 10" water column or at a pressure not less than 10% above that the piping will be subjected to during normal operation
- b. Where applicable, isolate new portions of the system(s) piping with test tee and Oatey Clean Seal inflatable plug prior to testing.
2. Final Piping Test: The completed system(s) shall be visually inspected to determine compliance with all codes and standards. Where required by the building official, the completed system shall be smoke tested with all traps water filled and system pressured to 1" WC for a minimum period of fifteen (15) minutes.
- B. Water, gas, and compressed air line testing:
1. Water piping shall be purged and tested with compressed air or water at 50 PSIG above the operating pressure but not to exceed the pressure rating of piping system materials for a period of 2 hours with no measurable pressure drop.
2. Natural gas lines shall be inspected and blown out with dry compressed air or nitrogen to purge of debris and tested at 1-1/2 times the operating pressure or a minimum of 25 PSIG pressure with no measurable pressure drop. All test procedures including duration of test shall be in accordance with NFPA 54 and the International Fuel Gas Code.
3. Compressed air lines shall be blown out with dry compressed air or nitrogen to purge of debris and tested at 1-1/2 times the operating pressure or a minimum of 150 PSIG air pressure for a period of 2 hours with no measurable pressure drop.
4. Where applicable, isolate new portions of pressure piping from existing piping with valves prior to testing.
- C. After successful testing, sterilize water system with an approved solution in accordance with local health officials.
- Contractor to submit all test data and other documentation for record.
- 13.0. FIXTURE BRANCH PIPING:
- A. Fixture branch and connection sizes shall be as shown in the plumbing fixture schedule on the drawings and not less than required by code.
- B. Minimum waste or vent size below slab on grade shall be 2".
- 14.0. PLUMBING FIXTURES:
- A. Refer to plumbing fixture schedule for plumbing fixtures and accessories. Include all fittings and accessories as required for a complete working system.
- B. Where required for ADA compliance, provide lavatory and sink offset drain and tailpiece assembly.
- C. At contractor option, flexible stainless steel braided hose, 125 PSIG rated, with non-toxic liner and compression fittings may be used in lieu of chrome plated brass riser tube. Where ADA compliance is required, provide flexible insulation wrap on braided water supplies in lieu of specified molded vinyl wrap.

END OF SECTION

PLUMBING FIXTURE SCHEDULE

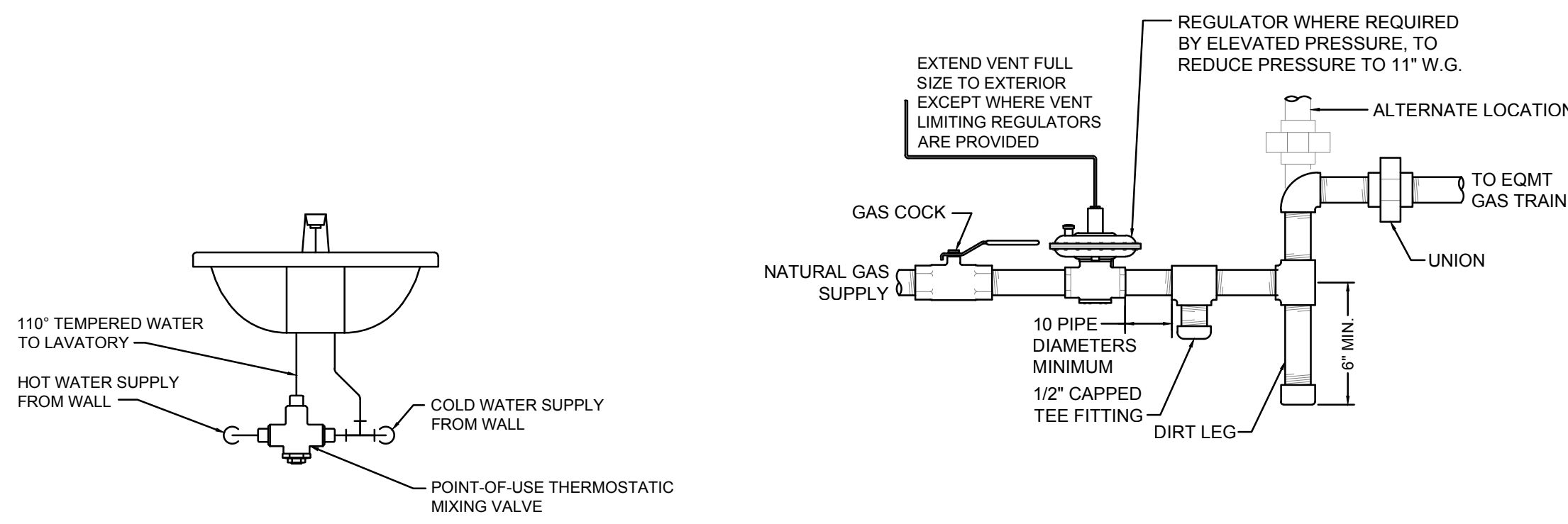
| MARK NO. | FIXTURE TYPE | MANUFACTURER | MODEL NO. | DESCRIPTION | MINIMUM CONNECTION SIZE | | | |
|----------|-------------------------|-------------------|----------------------|--|-------------------------|------|--------|--------|
| | | | | | CW | HW | WASTE | VENT |
| WC-1 | WATER CLOSET (ADA) | AMERICAN STANDARD | 3043.001 "MADERA" | FLOOR MOUNTED FLUSH VALVE, WHITE VITREOUS CHINA, HIGH EFFICIENCY, DIRECT FED SPHONJET ACTION, FULLY GLAZED 2" TRAP WAY, ELONGATED BOWL, WITH 1-1/2" TOP SPUD, 16-1/2" RM HEIGHT. SLOAN "G2 OPTIMA PLUS" 8111-1.6-OR (1.6 GPF) BATTERY OPERATED ELECTRONIC DAP-HAQM FLUSH VALVE WITH MANUAL RELEASE, VACUUM BREAKER AND ANGLE STOP. ACCESSORIES: BEIMS 1055SSC WHITE OPEN FRONT SEAT LESS COVER WITH SELF SUSTAINING CHECK HINGES, BOLTS AND CAPS. NOTE: MOUNT FLUSH VALVE TO WIDE SIDE OF FIXTURE. | 1" | - | 4" | 2" |
| WC-2 | WATER CLOSET | AMERICAN STANDARD | 2234.001 "MADERA" | FLOOR MOUNTED FLUSH VALVE, WHITE VITREOUS CHINA, HIGH EFFICIENCY, DIRECT FED SPHONJET ACTION, FULLY GLAZED 2" TRAP WAY, ELONGATED BOWL, WITH 1-1/2" TOP SPUD, 15" RM HEIGHT. SLOAN "G2 OPTIMA PLUS" 8111-1.6-OR (1.6 GPF) BATTERY OPERATED ELECTRONIC DAP-HAQM FLUSH VALVE WITH MANUAL RELEASE, VACUUM BREAKER AND ANGLE STOP. ACCESSORIES: BEIMS 1055SSC WHITE OPEN FRONT SEAT LESS COVER WITH SELF SUSTAINING CHECK HINGES, BOLTS AND CAPS. | 1" | - | 4" | 2" |
| U-1 | URINAL (ADA) | AMERICAN STANDARD | 6590.001 "WASHBROOM" | WHITE VITREOUS CHINA, WALL-HUNG, HIGH EFFICIENCY WASHOUT FLUSH ACTION, INTEGRAL FLUSHING RM, 3/4" TOP SPUD, 2" OUTLET. SLOAN "OPTIMA PLUS" G2 8186-1.0 (1.0 GPF) BATTERY OPERATED ELECTRONIC FLUSH VALVE WITH MANUAL RELEASE, VACUUM BREAKER AND ANGLE STOP. ACCESSORIES: J. R. SMITH URINAL SUPPORT. NOTE: MOUNT FIXTURE RM 31" ABOVE FINISHED FLOOR. | 3/4" | - | 2" | 1-1/2" |
| L-1 | LAVATORY (ADA) | DKONTZ | OV1813RRLWH | 18" x 13" RECTANGULAR VITREOUS CHINA, WITH FRONT OVERFLOW AND UNDER COUNTER MOUNT. ZURN Z6915-XL BATTERY POWERED, DECK MOUNTED, FAUCET WITH 4" CENTERS, SENSOR OPERATION, AND 0.5 GPM OUTLET. ACCESSORIES: PROVIDE WATTS LF0480 THERMOSTATIC MIXING VALVE, GRD DRAIN WITH TAILPIECE, SEMI-CAST BRASS P-TRAP WITH CLEANOUT, CHROME-PLATED RISERS WITH ANGLE STOPS AND CONCEALED ARM/LAVATORY SUPPORT. PROVIDE WITH FULLY MOLDED FLEXIBLE VINYL INSULATION KIT COVER TRAP, SUPPLIES AND STOPS. TRUEBRO E-Z LAV GUARD. NOTE: MOUNT FIXTURE RM 31" ABOVE FINISHED FLOOR. | 1/2" | 1/2" | 1-1/2" | 1-1/2" |
| S-1 | SINK (ADA) | DAYTON | DCRL2816 | SINGLE COMPARTMENT UNDERMOUNT SINK, 16 GA, TYPE 304 STAINLESS STEEL, 6-1/2" DEEP BOWL. AMERICAN STANDARD 7077300 "COLONY" PRO SINGLE HOLE, DECK MOUNTED FAUCET WITH CERAMIC CARTRIDGE, SINGLE LEVER HANDLE AND FULL DOWN SPRAY. ACCESSORIES: STRAINER WITH 1-1/2" TAILPIECE, 1-1/2" 17 GA. SEMI-CAST BRASS P-TRAP WITH CLEANOUT, CHROME-PLATED RISERS WITH ANGLE STOPS. GARBAGE DISPOSAL: MOKEN GXF33C PRO SERIES 1/3 HP WITH POWER CORD. | 1/2" | 1/2" | 2" | 1-1/2" |
| JS-1 | JANITOR SINK | ZURN | Z1996-24 | SIZE 24" X 24" X 10", COMPOSITE SERVICE SINK WITH COMPOSITE DRAIN, STAINLESS STEEL, STRAINER, 3" DRAIN CONNECTION. ZURN Z634M WITH QUARTER TURN CERAMIC OPERATING CARTRIDGES, VACUUM BREAKER SPOUT WITH RAIL HOOK AND WALL BRACE, 3/4" MALE HOSE THREAD OUTLET, 369 LEVER HANDLES, FLANGED ADJUSTABLE SUPPLY ARM AND INTEGRAL SUPPLY STOPS AND CHECK VALVES. ACCESSORIES: STRAINER WITH 1-1/2" TAILPIECE, 1-1/2" 17 GA. SEMI-CAST BRASS P-TRAP WITH CLEANOUT, CHROME-PLATED RISERS WITH ANGLE STOPS. | 1/2" | 1/2" | 3" | 2" |
| SD-1 | SCRUBBER DUMP | ZURN | Z943M1 | WALL MOUNTED FAUCET WITH QUARTER TURN CERAMIC OPERATING CARTRIDGES, VACUUM BREAKER SPOUT, RAIL HOOK AND WALL BRACE, 3/4" MALE HOSE THREAD OUTLET, 369 LEVER HANDLES, FLANGED ADJUSTABLE SUPPLY ARM AND INTEGRAL SUPPLY STOPS AND CHECK VALVES. | 1/2" | 1/2" | - | - |
| DF-1 | DRINKING FOUNTAIN (ADA) | ELKAY | EZSTUBLC | ADA BARRIER-FREE BLEND-COOLER, 3.0 G.P.H., 50" F.WATER WITH 30" F.AIR TEMPERATURE, PUSH-BAR ACTIVATION, STAINLESS STEEL COOLER TOP, HEAVY GAUGE VINYL CLAD STEEL CABINET WITH GREY FINISH, 120V/1PH/60HZ. ACCESSORIES: 17 GA. SEMI-CAST BRASS P-TRAP WITH CLEANOUT, CHROME-PLATED SUPPLY AND STOP, J.R. SMITH FLOOR MOUNTED TYPE SUPPORT WITH "PRO-SET" URGHS. NOTE: MOUNT WITH SPOUT 35" ABOVE FINISH FLOOR. | 1/2" | - | 1-1/2" | 1-1/2" |
| IM-1 | ICE MAKER WALL BOX | SIoux CHIEF | 696-G1000 SERIES | RECESSED ICE MAKER WALL BOX WITH QUARTER TURN VALVE AND 1/2" INLET, ABS COVER. | 1/2" | - | - | - |
| FD-1 | FLOOR DRAIN | ZURN | FD-2210 | GENERAL PURPOSE, PVC BODY WITH ADJUSTABLE STRAINER HEAD, ROUND NIKEL BRONZE STRAINER, AND SEPAIGE OPENINGS. OUTLET SIZE PER PLANS. NOTE: PROVIDE WITH RECTORSEAL TRAP SEAL IN OUTLET OF FLOOR DRAIN. MATCH OUTLET SIZE. | - | - | 2" | 1-1/2" |
| FD-2 | EQUIPMENT DRAIN | WATTS | FD-344-Y | EPOXY COATED CAST IRON BODY WITH ANCHOR FLANGE, WEEPHOLES, AND ROUND DUCTILE IRON STRAINER. NOTE: PROVIDE WITH RECTORSEAL TRAP SEAL IN OUTLET OF FLOOR DRAIN. MATCH OUTLET SIZE. | - | - | 3" | 1-1/2" |

WATER HEATER SCHEDULE (ELECTRIC)

| MARK NO. | MANUFACTURER | MODEL NO. | TANK LINING | TANK CAPACITY (GAL) | INPUT (KW) | THERMAL EXPANSION TANK MODEL NO. | ELECTRICAL | NOTES |
|----------|--------------|-----------|-------------|---------------------|------------|----------------------------------|---------------------------------------|-------|
| DWH-1 | RHEEM | ELD40 | GLASS | 40 | 6 | RT-15 | VOLT 208 PHASE 1 HZ 60 | 1.2.3 |

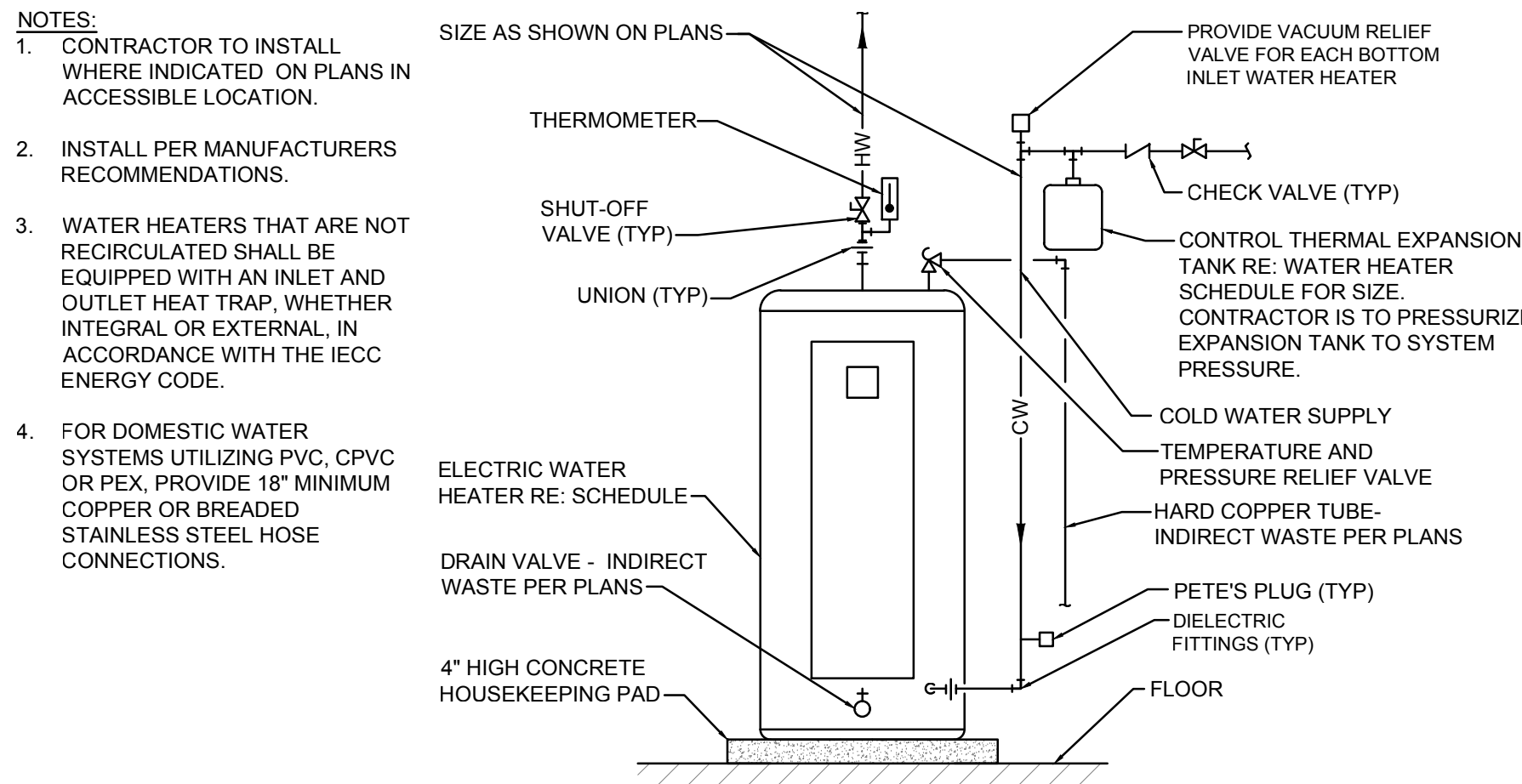
NOTES:

- PROVIDE WITH TEMPERATURE AND PRESSURE RELIEF VALVE AND DRAIN.
- PROVIDE WITH CONTROL THERMAL EXPANSION TANK, WATTS MODEL, SCHEDULED WITH WATTS SCV SERVICE CHECK VALVE.
- COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE.



GAS EQUIPMENT CONNECTION DETAIL

NO SCALE



ELECTRIC WATER HEATER DETAIL

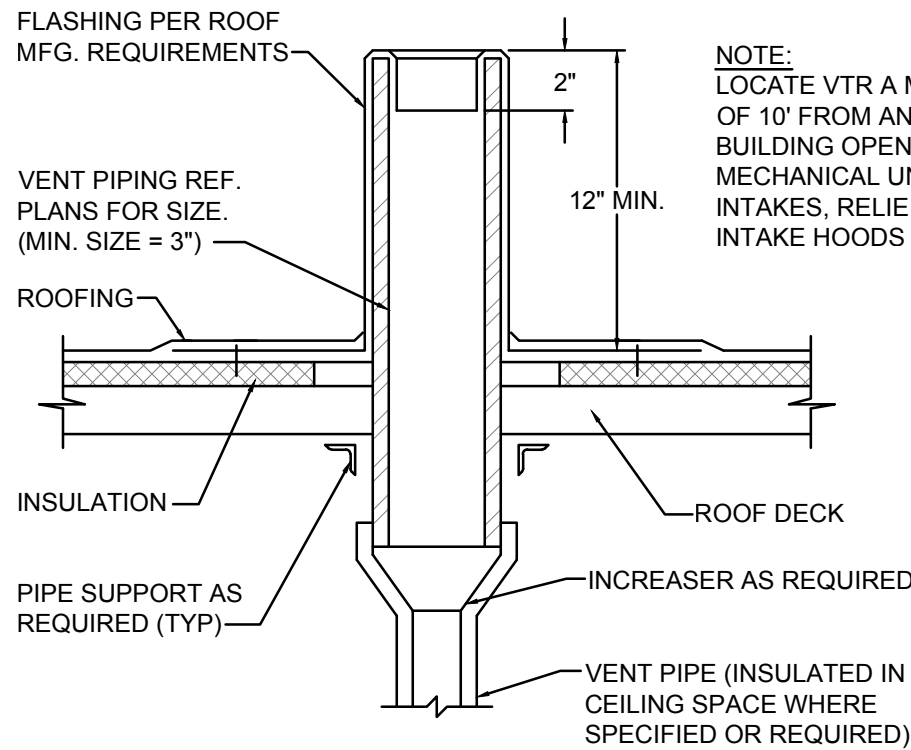
NO SCALE

GENERAL NOTES (TYPICAL ALL SHEETS)

- A. PLUMBING CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS AND IS IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL LAWS AND CODES AND/OR REQUIREMENTS, INCLUDING HEALTH CODES AND BUILDING OWNER.
- B. ALL EXISTING PIPING SHOWN ON DRAWINGS IS SCHEMATIC AND IS BASED ON EXISTING RECORD DRAWINGS PROVIDED BY THE OWNER AND DO NOT REFLECT EXACT EXISTING CONDITIONS. CONTRACTOR TO FIELD VERIFY EXACT DEPTH AND/OR LOCATIONS OF EACH SITE. CONTRACTOR SHALL REROUTE NEW WORK TO ACCOMMODATE EXACT LOCATIONS OF EXISTING UTILITIES, STUBOUTS AND/OR CONNECTIONS.
- C. CUTTING AND PATCHING OF FLOORS, WALLS, CEILING, ETC., REQUIRED IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS OF THE ARCHITECTS AND/OR BUILDING OWNER REQUIREMENTS.
- D. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID ROUTING CONFLICTS.
- E. ANY MATERIAL REMOVED THAT OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF BY CONTRACTOR.
- F. INSTALL ELASTOMERIC JOINT SEALER AROUND ALL PIPES PASSING THRU INTERIOR NON-RATED CONCRETE AND MASONRY WALLS, GYPSUM BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL PIPES. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- G. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL EQUIPMENT BY OTHERS. VERIFY CONNECTIONS SIZES AND REQUIREMENTS.
- H. PLUMBING CONTRACTOR SHALL PROVIDE PRO-SET SYSTEMS "TRAP GUARD" IN ALL FLOOR DRAIN TRAPS WITHIN PROJECT SCOPE OF WORK.

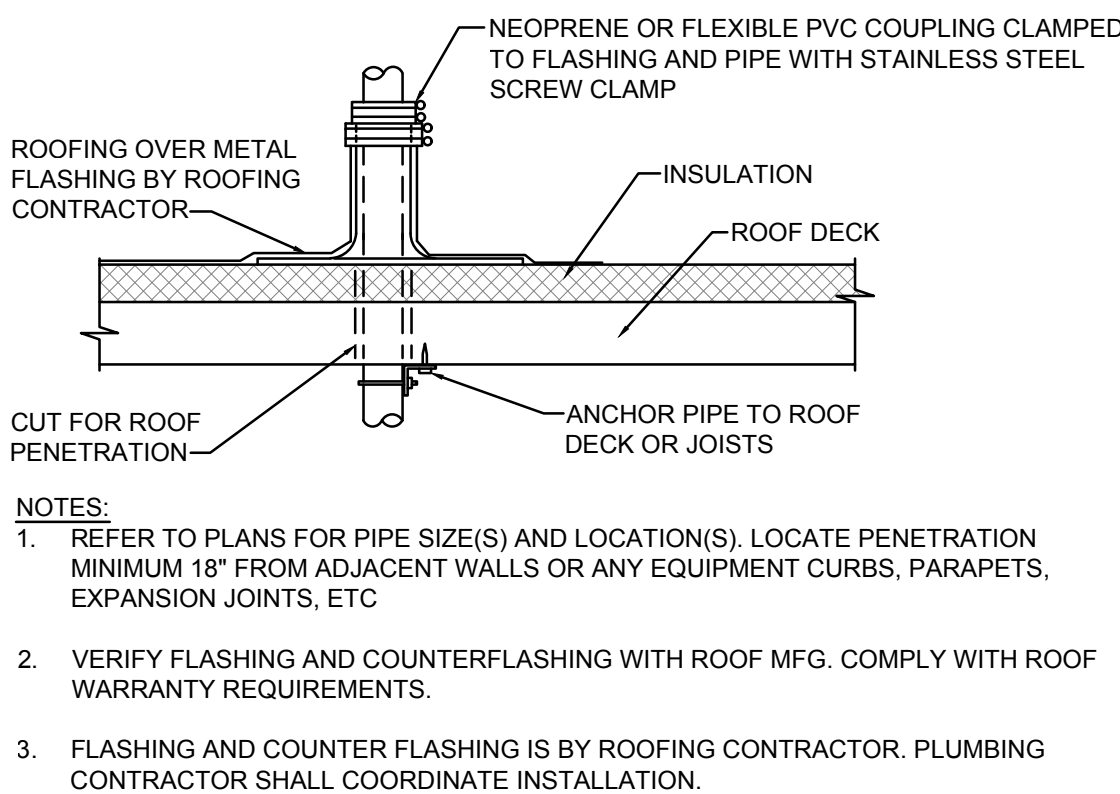
PLUMBING SYMBOLS

- EXISTING TO REMAIN
- NEW PIPING
- FLOW ARROW
- CW - COLD WATER
- HW - HOT WATER
- NG - NATURAL GAS
- CA - COMPRESSED AIR
- V - SANITARY VENT ABOVE GROUND/FLOOR
- W - SANITARY WASTE BELOW GROUND/FLOOR
- GAS SHUT-OFF COCK
- CHECK VALVE
- SHUT OFF VALVE
- FLOOR DRAIN OR EQMT FLOOR DRAIN
- PIPE DROP/PIPE RISE
- BOTTOM OUTLET TEE
- TOP OUTLET TEE
- WCO - WALL CLEAN OUT
- FFCO - FINISHED FLOOR CLEANOUT
- VTR - SANITARY VENT THROUGH ROOF
- EQUIPMENT TYPE AND DESIGNATION
- PLUMBING FIXTURE DESIGNATION
- EXISTING TO REMAIN
- CONNECT TO EXISTING



VENT THRU ROOF DETAIL

NO SCALE



SINGLE PIPE ROOF PENETRATION DETAIL

NO SCALE

studioNorth
ARCHITECTURE

3315 N Oak Trafficway | Kansas City, MO 64116
816 | 888 | 7380
NP Studio North, LLC
Missouri Certificate of Authorization No. A-2017040540

PLUMBING DESIGN-BUILD BY GEN CONTRACTOR
MECHANICAL DESIGN-BUILD BY GEN CONTRACTOR
ELECTRICAL DESIGN-BUILD BY GEN CONTRACTOR
FIRE PROTECTION DESIGN-BUILD BY GEN CONTRACTOR
CONTRACTOR FORGE CONSTRUCTION

Lankford Fendler + associates
1730 Walnut Street Kansas City, Missouri 64108
1912 Euclid Avenue, St. Joseph, Missouri 64501
Phone: 816.221.1411 | Fax: 816.221.1429
LANKFORD FENDER + ASSOCIATES, CONSULTING ENGINEERS, INC.
CORPORATE ID: 2024 Permit No. 147450-00
CMA No. 2000001168

H&R BLOCK DEPOT

1220 NW Main St
Lee's Summit, MO 64086

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| Project No. | 2024-032 | |
| Date: | 04.26.24 | |
| Issued For: | Permit Submittal | |
| Drawn By: | F. Crubaugh | |
| Reviewed By: | | |
| Revisions: | | |
| No. | Date | Description |
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PLUMBING NOTES, SYMBOLS,
DETAILS, & SCHEDULES

