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HVAC SPECIFICATIONS

1. GENERAL 1.1 DESCRIPTION OF WORK: A. ALL FIXTURES, EQUIPMENT, ACCESSORIES, MATERIALS, AND LABOR REQUIRED TO PROVIDE COMPLETE, COORDINATED, AND FULLY FUNCTIONAL HVAC SYSTEMS GENERALLY AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN. 1. HEATING SYSTEM 2. COOLING SYSTEM 3. VENTILATION SYSTEM 4. EXHAUST SYSTEMS 5. DRYER VENT SYSTEMS 1.2 RELATED DOCUMENTS: A. THE REQUIREMENTS OF THE CIVIL, ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL APPLY TO AND BE CONSIDERED A PART OF THE HVAC WORK IN-SO-FAR AS THEY APPLY TO THE HVAC WORK AND ARE REQUIRED FOR COORDINATION. 1.3 JOB CONDITIONS: A. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF THE WORK DESCRIBED AND INDICATED. B. PROVIDE FITTINGS, OFFSETS, TRANSITIONS, CONTROL TRANSFORMERS AND ACCESSORIES REQUIRED TO MEET CONDITIONS OF THE PROJECT. C. PROVIDE SERVICE ACCESS FOR EQUIPMENT, CONTROL COMPONENTS, VALVES, FILTERS AND SPECIALTIES. D. PROVIDE ACCESS PANELS FOR VALVES, ACCESS DOORS, MOT. DAMPERS, ETC. CONCEALED BEHIND FINISHED SURFACES. DOOR TO HAVE SAME FINERATING AS FINISHED SURFACE. E. MODIFY DUCT DIMENSIONS AS REQUIRED BY BUILDING STRUCTURE OR OTHER WORK AT NO ADDITIONAL COSTS TO THE OWNER. MAINTAIN EQUIVALENT FREE AREA SIZES. 1.4 CONFORMANCE TO REGULATIONS: A. WORK SHALL CONFORM WITH 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2021 VIRGINIA MECHANICAL CODE, NFPA, AND LOCAL ORDINANCES. B. WORK SHALL CONFORM WITH 2026 VIRGINIA HOUSING MDCR, 2026 UNIVERSAL DESIGN 2020 ENTERPRISE GREEN COMMUNITIES, DOE EFFICIENT NEW HOMES PROGRAM MULTIFAMILY VERSION 2, REV. 1, ENERGY STAR MULTIFAMILY MFNC 1.1, EPA INDOOR AIR PLUS VERSION 2. 1.5 QUALITY ASSURANCE: A. COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NOTES AND DETAILS SHOWN HEREIN FOR INSTALLATION OF EQUIPMENT. B. COMPLY WITH REQUIREMENTS OF SMACNA AND ASHRAE. 1.6 MATERIALS AND EQUIPMENT: A. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE EQUIVALENT TO PRODUCTS SPECIFIED. B. CONTRACTOR SHALL GUARANTEE EQUIVALENCE AND IS RESPONSIBLE FOR MODIFICATIONS REQUIRED AND COORDINATION WITH OTHER TRADES TO FIT SUBSTITUTED PRODUCT INTO THE PROJECT. C. MATERIALS AND EQUIPMENT OF THE SAME TYPE AND USE SHALL BE FROM A SINGLE MANUFACTURER. D. PROTECT STORED MATERIALS AND EQUIPMENT FROM WEATHER. E. IF HVAC EQUIPMENT IS OPERATED DURING CONSTRUCTION, PROVIDE TEMPORARY FILTERS TO PROTECT AIR HANDLING EQUIPMENT. 1.7 SUBMITTALS: A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT SPECIFIED HEREIN AND ON THE DRAWINGS. SHOP DRAWINGS AND PRODUCT DATA SHALL BE IDENTIFIED PER INDICATIONS ON DRAWINGS. SHALL BE MARKED TO INDICATED SPECIFIC ITEM BE PROPOSED, AND SHALL BE ORGANIZED IN AN ORDERLY MANNER. SUBMIT IN .PDF FORMAT VIA EMAIL. B. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT INSTALLED IN THIS PROJECT. INCLUDE COPIES OF SPECIFIC EQUIPMENT WARRANTIES IN MANUAL. C. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH TWO COPIES OF AS-BUILT DOCUMENTATION. ALL CHANGES TO THE BIDDING DOCUMENTS SHALL BE NEATLY AND CLEARLY IDENTIFIED ON THE AS-BUILT DOCUMENTATION. 1.8 PROJECT CLOSEOUT: A. REPLACE OR REPAIR DAMAGED EQUIPMENT AND CLEAN ALL EXPOSED SURFACES. B. TOUCH-UP SHOP APPLIED FINISHES TO RESTORE DAMAGED OR SOILED AREAS. C. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF EQUIPMENT UTILIZING OPERATION AND MAINTENANCE MANUAL. MINIMUM INSTRUCTION PERIOD SHALL BE TWO HOURS. D. REPLACE FILTERS IN AIR HANDLING EQUIPMENT AT TIME OF PROJECT TURNOVER TO OWNER. E. VACUUM INTERIORS OF DUCTWORK AND EQUIPMENT WHICH BECOMES DIRTY, PRIOR TO PROJECT TURNOVER TO OWNER. CLEAN ANY DIRTY EQUIPMENT COILS. 2. PRODUCTS 2.1 PIPING SYSTEMS: A. CONDENSATE DRAIN - SCH. 40 PVC WITH SOLVENT WELD FITTINGS B. REFRIGERANT - TYPE C&C OR ARC COPPER, SILVER SOLDER FITTINGS.	2.2 HVAC EQUIPMENT: A. REFER TO SCHEDULE SHEETS AND EQUIPMENT LIST FOR MANUFACTURERS AND MODEL NUMBERS. B. ALTERNATE MANUFACTURER'S ARE: LENNOX, YORK, MCQUAY, TITUS, CARRIER, SANYO, MITSUBISHI, TRANE, COOK, CARNES, TWIN CITY, ACME, METALAIRE C. PROVIDE MINIMUM MERV 11 RETURN AIR FILTERS FOR AIR HANDLING EQUIPMENT. 2.3 AIR DISTRIBUTION: A. METAL DUCTWORK: SHOP FABRICATED AS FOLLOWS. 1. MATERIALS: GALVANIZED STEEL SHEET, ASTM A 527-85 2. CONSTRUCTION: PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR LOW PRESSURE SYSTEM UP TO 2" W.C. CONSTRUCTION 3. JOINT SEALANT: UL LISTED FOSTER MASTIC, HARDCAST FTA-20, KINGCO 18-136. 4. SUPPLY AIR BRANCH DUCTS RUN IN CONCEALED AREAS MAY BE PRE-INSULATED, UL CLASS 1, FLEXIBLE DUCT. 5. DRYER VENT SHALL BE RIGID GALVANIZED STEEL WITH LONG RADIUS ELBOWS AND NO SCREWS PROTRUDING INTO VENT. USE RIVETS AT JOINT AND FITTING CONNECTIONS. USE FLEXIBLE METAL VENT AT CONNECTION TO DRYER. MINIMUM THICKNESS OF VENT TO BE 26 GAUGE. FIRESTOP VENT PENETRATIONS THRU FIRE RATED CONSTRUCTION PER UL 263 (SEE DETAILS) 6. EXHAUST VENT SHALL BE RIGID GALVANIZED 26 GAUGE FIRESTOP VENT PENETRATIONS THROUGH FIRE RATED CONSTRUCTION PER UL 263 (SEE DETAILS) 7. CAPS AND DOUBLE WALL CAPS TO BE CONSTRUCTED OF HIGH TEMPERATURE PLASTIC POLYMER, SUITABLE FOR USE WITH ELECTRIC DRYER OPERATION. REMOVABLE FRONT LOUVER, BIRDSCREEN NOT BE USED FOR DRYERS. USE X-VENT OR SIMILAR. SELECT MODEL TO MATCH BUILDING MATERIALS AND COLOR. B. DAMPERS - AS MANUF. BY RUSKIN, CESCO, ARROW, CREATIVE METALS, PREFCO 1. VOLUME DAMPERS SHALL BE GALVANIZED STEEL, 16 GAUGE, BLADE HEIGHT SHALL NOT EXCEED 12". DAMPER LINKAGE AND LOCKING QUADRANT SHALL BE OUTSIDE OF AIRSTREAM. 2. MOTORIZED DAMPERS - REFER TO EQUIPMENT LIST ON DRAWINGS. 3. FIRE DAMPERS SHALL BE UL LISTED TYPE "B" WITH BLADE POCKET OUTSIDE OF AIRSTREAM. DYNAMIC TYPE WITH 212F RATED LINK, POTTORF OR EQUAL DAMPERS IN CEILING TO BE RADIATION TYPE WITH THERMAL BLANKET. SECURE DAMPERS TO STRUCTURE IN CASE OF COLLAPSE. DAMPER WILL REMAIN INTACT IN FIRE RATED ASSEMBLY. PROVIDE INSTALLATION INSTRUCTIONS ON SITE FOR INSPECTORS. C. ACCESS DOORS - 1. FACTORY BUILT WITH SASH LOCKS, BUTT HINGE, GASKET, 24 GA. DOOR AND 22 GA. FRAME. 2. ACCESS DOOR IN INSULATED DUCT SHALL BE DOUBLE CONSTRUCTION, WITH INSULATION ENCASED 3. MINIMUM SIZE TO BE 75% SIZE OF DUCT IN WHICH INSTALLED, OR 10" X 10". 4. CESCO MODEL HAD-10, LOUVERS AND DAMPERS, KEES, INC. OR AIR BALANCE. 2.4 CONTROLS: A. PROVIDE ALL RELAYS, TRANSFORMERS, CONTROL WIRING, TERMINAL BLOCKS, ETC. FOR A COMPLETE SYSTEM. B. 1. COMPONENT MANUFACTURER'S AND MODEL NUMBERS AS SPECIFIED ON DRAWINGS. B. THE WARRANTY PERIOD SHALL COMMENCE AFTER 60 DAYS OF BENEFICIAL USE, MEASURED FROM THE DATE OF ACCEPTANCE FROM THE OWNER. 3. 3.1 EXECUTION PIPING SYSTEMS: A. VERIFY INVERT ELEVATIONS PRIOR TO EXCAVATION. B. BACKFILL BURIED PIPE IN TRENCHES WITH DIRT FREE OF ROCK, STONE OR DEBRIS. C. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO ROUGH-IN. D. COORDINATE ROUTING OF WORK WITH OTHER TRADES AND INSTALL TO ALLOW MAXIMUM HEADROOM CLEARANCES, SERVICE ACCESS AND MAINTAIN PROPER PITCH OF SLOPING LINES. E. INSULATE PIPING SYSTEMS AS FOLLOWS: 1. REFRIGERANT - CLOSED CELLULAR RUBBER, THICKNESS PER CODE/EARTHCHRAFT REQUIREMENTS. 2. HORIZONTAL CONDENSATE DRAIN - 1/2" THICK FIBERGLASS WITH ASJ. 3. SEAL VAPOR BARRIERS. SECURE WITH ADHESIVE AND SEAL JOINTS WITH SEALANT. 4. PROVIDE GALVANIZED STEEL SADDLE AT HANGERS SURROUNDING INSULATED PIPE. 5. DO NOT COMPRESS INSULATION EXCEPT IN AREAS OF STRUCTURAL INTERFERENCE. 6. INSTALL PRE-FITTED PLASTIC ELBOWS OR APPLY CANVAS JACKET IN THREE LAYERS AT ELBOWS. 7. INSULATE FITTINGS, VALVES AND EQUIPMENT BODIES. 8. PROVIDE 2 COATS OF GREY WEATHERPROOFISH ON EXTERIOR REFRIGERANT PIPING. F. PROVIDE SLEEVES FOR PIPING PENETRATING WALLS. INSULATION SHALL BE CONTINUOUS THROUGH SLEEVES. G. FIRESTOP PIPING PASSING THROUGH FIRE RATED WALLS OR CEILINGS. H. PATCH FINISHED AREAS DISTURBED BY WORK TO MATCH SURROUNDING AREAS. I. WELDING SHALL BE DONE BY CERTIFIED WELDERS FOR THE APPROPRIATE SYSTEM BEING WELDED. J. MAKE CONNECTIONS OF DISSIMILAR METALLIC PIPING WITH DIELECTRIC UNIONS. K. DO NOT USE PLASTIC PIPING IN RETURN AIR PLENUM SPACES. L. PROVIDE SHUT OFF VALVES AT EQUIPMENT CONNECTIONS. M. HANGERS SUPPORTING COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COVERED. HANGERS SUPPORTING INSULATED PIPING SHALL BE SIZED TO SURROUND INSULATION AND STEEL SADDLE. N. CLEAN AND FLUSH PIPING THEN TEST PIPING SYSTEMS AS FOLLOWS: 1. REFRIGERANT PIPING - DEEP VACUUM METHOD. PULL A VACUUM TO 500 MICRONS BREAK VACUUM THREE TIMES WITH DRY NITROGEN SYSTEM TO HOLD BELOW 500 MICRONS FOR SEVEN MINUTES. REPEAT AS NECESSARY. 2. CONDENSATE DRAIN PIPING - W/ 10 FT. WATER COLUMN OR 5 PSI COMPRESSED AIR FOR 12 HOURS. 3. TESTS SHALL SHOW NO SUBSTANTIAL LOSS IN PRESSURE. 4. PIPING RUN IN CONCEALED AREAS SHALL BE LEAK TESTED PRIOR TO BEING CONCEALED 5. SUBMIT WRITTEN REPORT OF TEST RESULTS.	3.2 HVAC EQUIPMENT: A. PROVIDE PERMANENT TAG ON EQUIPMENT INDICATING EXPIRATION DATE OF WARRANTIES. LOCATE TAG IN A READILY VISIBLE LOCATION. B. PROVIDE FACTORY AUTHORIZED START-UP OF EQUIPMENT AND SUBMIT TEST REPORTS. (INCLUDE IN O&M MANUAL). COMPLY WITH MANUFACTURER REQUIREMENTS AND NOTES STATED ON THE CONSTRUCTION DOCUMENTS FOR INSTALLATION OF EQUIPMENT. BALANCE THE OUTSIDE AIR CFM TO QUANTITIES LISTED. D. SPLIT SYSTEM UNITS: 1. SUPPORT INDOOR UNIT FROM STRUCTURE WITH ALL THREAD STEEL RODS AND SPRING TYPE VIBRATION ISOLATORS. INSTALL LEVEL. CONNECT DUCTWORK WITH FLEXIBLE DUCT CONNECTIONS. INSTALL TO ALLOW PROPER SERVICE ACCESS. 2. PROVIDE DRAIN PAN BENEATH UNITS. 3. PROVIDE CONDENSATE DRAIN PIPING AND EXTEND TO HUB DRAIN OR TO EXTERIOR. VERIFY TERMINATION POINT WITH LOCAL CODE OFFICIAL AND ARCHITECT. 4. CONNECT REFRIGERANT PIPING AND CONTROL WIRING. 3.3 AIR DISTRIBUTION: A. DUCTWORK: 1. SEAL JOINTS IN DUCTWORK WITH COATING OF HARDCAST SEALANT OR UL LISTED FSK DUCT TAPE. FOLLOW EARTHCHRAFT GUIDELINES FOR DUCT SEALING. 2. INSTALL INTERNAL ENDS OF SLIP JOINTS IN DIRECTION OF AIRFLOWS. 3. MAXIMUM ANGLE OF OFFSETS AND TRANSITIONS SHALL NOT EXCEED 30 DEGREES. 4. ADEQUATELY SUPPORT DUCT AS PER CODE REQUIREMENTS 5. ELIMINATE SAGGING AND COMPRESSION OF DUCT. 5. TRANSITION DUCTS TO FIT EQUIPMENT. PROVIDE FLEXIBLE DUCT CONNECTIONS TO AIR HANDLERS AND PACKAGED UNITS. 6. USE LONG RADIUS RIGID DUCT FITTINGS AT ELBOWS IN FLEXIBLE DUCT. FLEXIBLE DUCT EXCEEDING 60 DEGREE ANGLE. ELBOWS IN FLEXIBLE DUCT LESS THAN 60 DEGREE ANGLE SHALL BE LONG SWEEP TYPE. B. INSULATE DUCT SYSTEMS PER CODE OR AS FOLLOWS, WHICHEVER IS MORE STRINGENT: 1. WITHIN BUILDING STRUCTURE AND INSIDE OF BUILDING INSULATION ENVELOPE (OUTSIDE AIR, SUPPLY AND RETURN AIR DUCTS). WITH 3/8" THICK FOIL FACED AIR CELL INSULATION, REFLECTIX OR EQUAL. MINIMUM R=6 2. INSULATE SUPPLY AIR AND RETURN AIR DUCTS OUTSIDE OF BUILDING INSULATION WITH FOIL FACED AIR CELL INSULATION - MINIMUM R = 6.0 INSTALLED 3. EXHAUST AND EXPOSED SPIRAL AIR DUCTS: DO NOT INSULATE 4. SECURE INSULATION TO DUCTS W/ ADHESIVE AT 60% COVERAGE AND SECURE WITH MECHANICAL FASTENERS AND WASHERS AT 18" CENTERS. SEAL VAPOR BARRIER 5. INSULATE EXTERIOR SA AND RA DUCTS WITH TWO-1" THICK LAYERS OF CLOSED CELL RUBBER SEAL JOINTS WEATHERTIGHT. PROVIDE BLOCKING TO PITCH TOP AT 4% SLOPE. TOP LAYERS SHALL COVER ALL SIDES. PROVIDE FPM RUBBER JACKET OVER INSULATION WITH SEAMS AND JOINTS SEALED WEATHERTIGHT. C. DAMPERS, ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE. 1. ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE. 2. PROVIDE COMBINATION DAMPER/EXTRACTOR/SPIN-IN FOR ROUND DUCT CONNECTIONS TO TRUNK DUCTS. PROVIDE 45 DEGREE BEVEL INLET WITH BALANCE DAMPER FOR RECTANGULAR DUCT CONNECTIONS TO TRUNK DUCT. DAMPER ADJUSTMENT TO BE LOCATED ON BOTTOM SIDE OF DUCT. D. ACCESS DOORS - PROVIDE IN DUCT FOR ACCESS TO COILS, FILTERS, FIRE & MOTORIZED DAMPERS, AND ALL OTHER EQUIPMENT NOT OTHERWISE ACCESSIBLE. INSTALL TO ALLOW SERVICE ACCESS. PROVIDE LABEL ON ACCESS DOOR INDICATING DEVICE SERVED. E. BALANCE AIR DISTRIBUTION TO WITHIN 10% OF DESIGN AND SUBMIT REPORT. 1. REPORT SHALL IDENTIFY ZONES, DESIGN AIRFLOWS AND FINAL AIRFLOWS (SUPPLY AIR, RETURN AIR AND OUTSIDE AIR), SUPPLY AND RETURN STATIC PRESSURES, ENTERING AND LEAVING AIR TEMPERATURES. 2. INCLUDE EXHAUST FAN SYSTEMS, AND HVAC EQUIPMENT. 3. COMPLY WITH NEBB AND AABC REQUIREMENTS. 3.4 CONTROLS: A. SEAL PROBE PENETRATIONS FOR DUCT MOUNTED SENSORS. B. PROVIDE JUNCTION BOX HOUSING FOR CONTROL WIRING INTERLOCK TO COMPONENTS. C. ROUTE CONDUCTORS NEATLY AND PARALLEL OR PERPENDICULAR TO BUILDING CONSTRUCTION. WIRING AND CONDUCTORS IN FINISHED SPACES TO BE RUN CONCEALED. D. SEQUENCE OF CONTROL. 1. ON A CALL FOR COOLING - BLOWER AND COOL COMPRESSOR SHALL BE ENABLED. 2. ON A CALL FOR HEAT - BLOWER AND HEAT COMPRESSOR SHALL BE ENABLED. ON A CALL FOR ADDITIONAL HEAT, AUX. ELECTRIC STRIP HEAT SHALL BE ENABLED AND STAGED. 3. OA TO BE INTRODUCED INTO APARTMENTS BY ERVS IN UNITS. 5. PROGRAM THERMOSTATS PER OWNER'S SCHEDULING. 6. FLOAT SWITCH IN DRAIN PAN TO DISABLE HVAC UNIT IN CASE OF WATER IN PAN. 7. IN COMMON AND COMMERCIAL SPACES, OUTSIDE AIR TO BE INTRODUCED WHEN BLOWER RUNS. FOR UNITS WITH AIR QUALITY SENSOR, THERMOSTAT TO ENABLE SENSOR TO OPEN MOTORIZED OA DAMPER TO SETPOINT IN CASE OF POOR RA QUALITY (1000 PPM IN OCCUPIED MODES ONLY), OTHERWISE: OA DAMPER TO CLOSE.
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B1 MECHANICAL SPECIFICATIONS

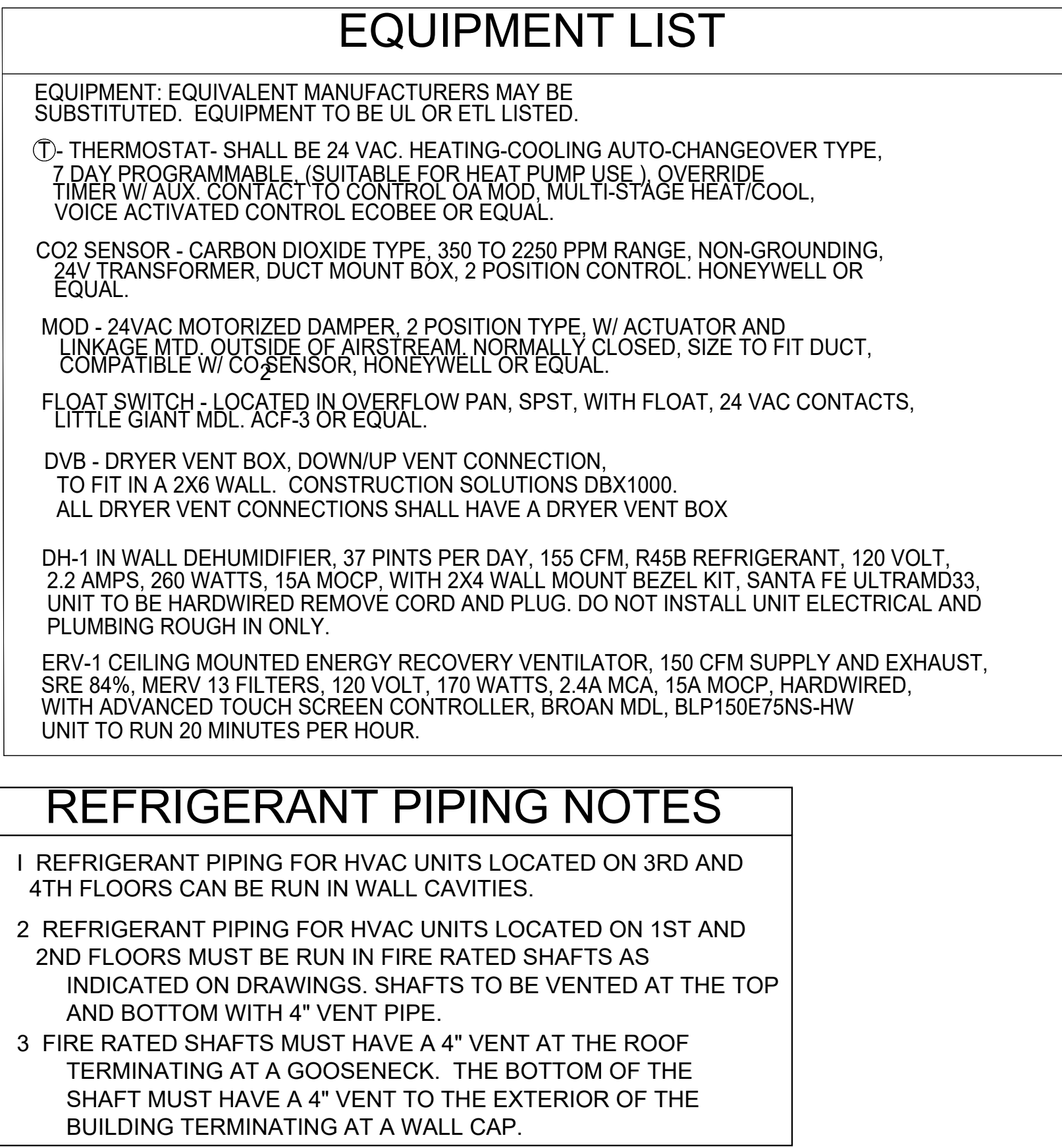
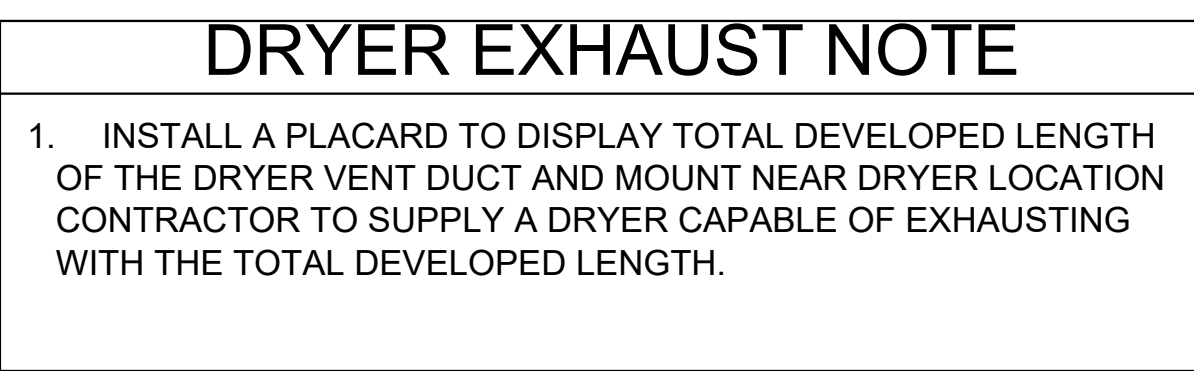
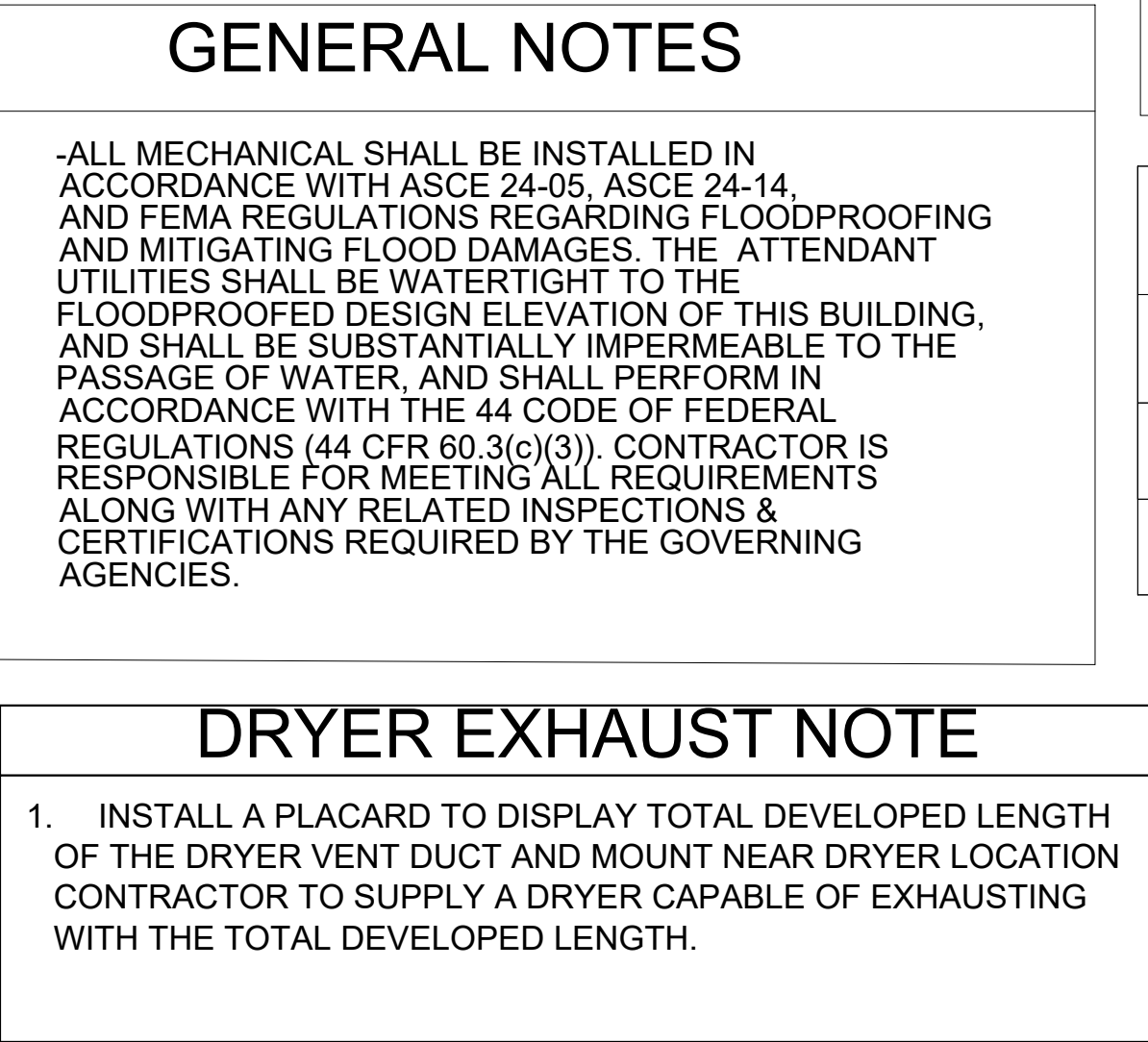
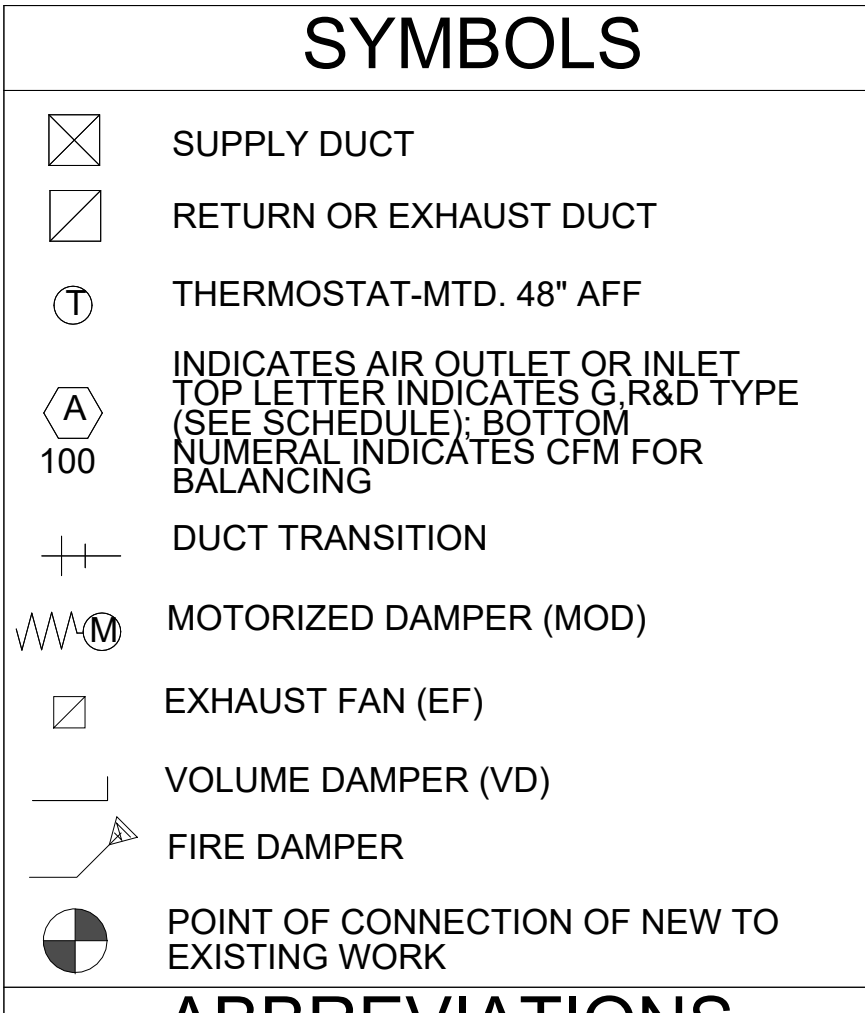
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5/14/2026	VH 4% HOTC APP.	1
6/30/2026	CONSTRUCTABILITY REVIEW	2

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05/14/2026
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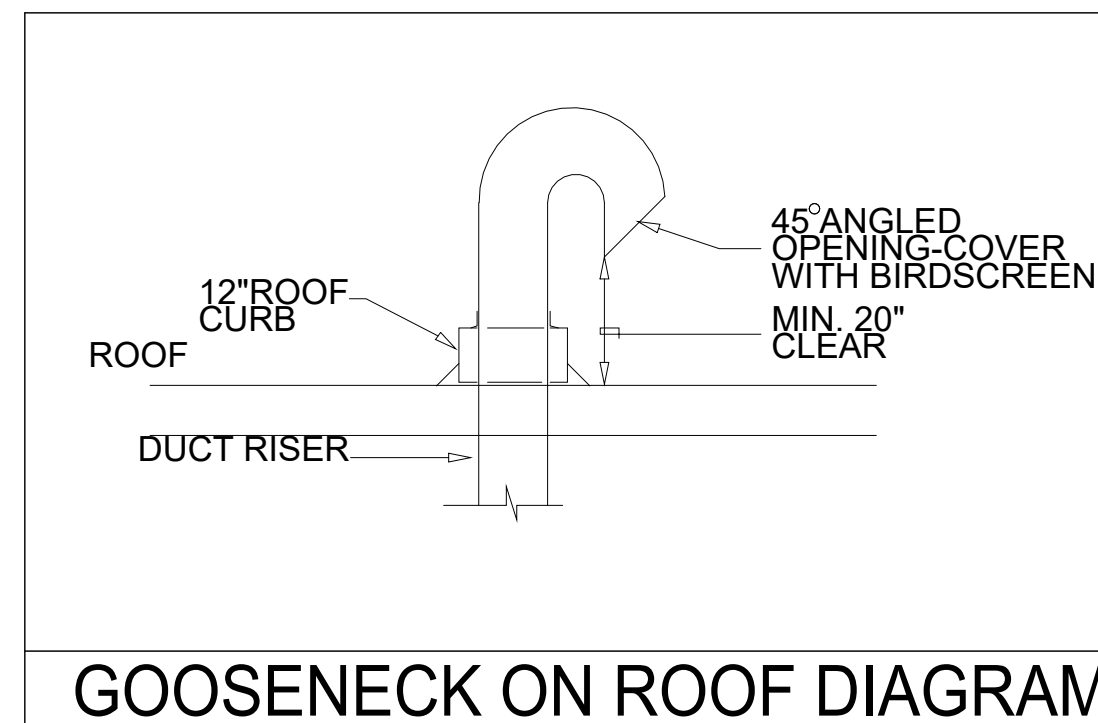
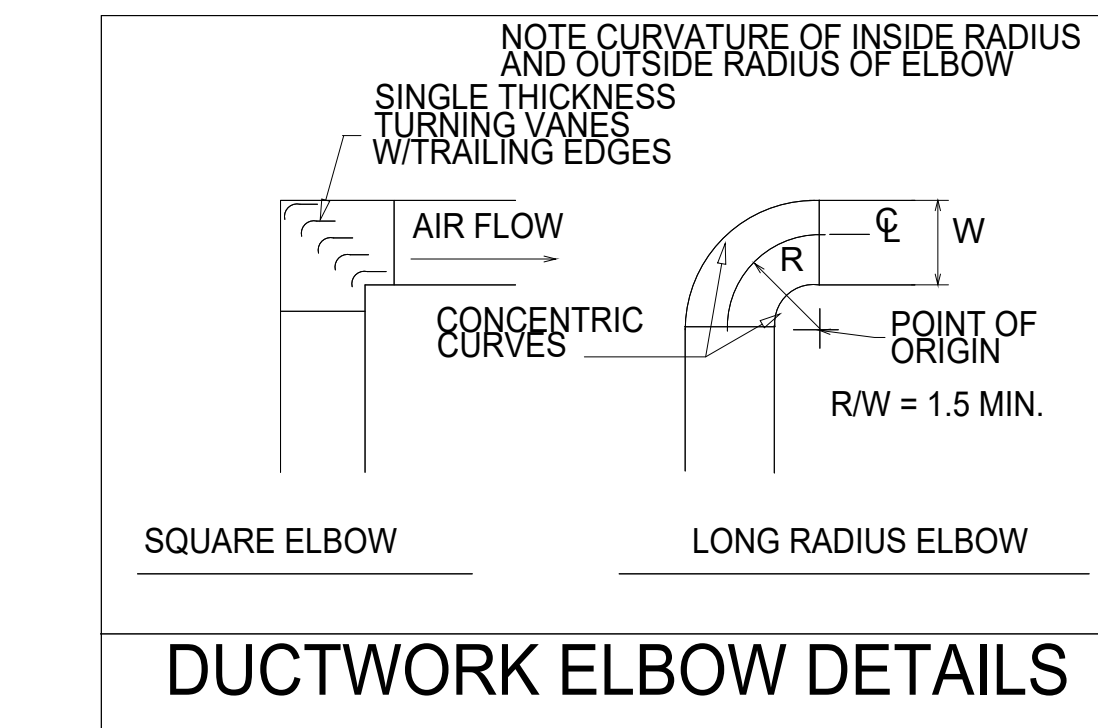
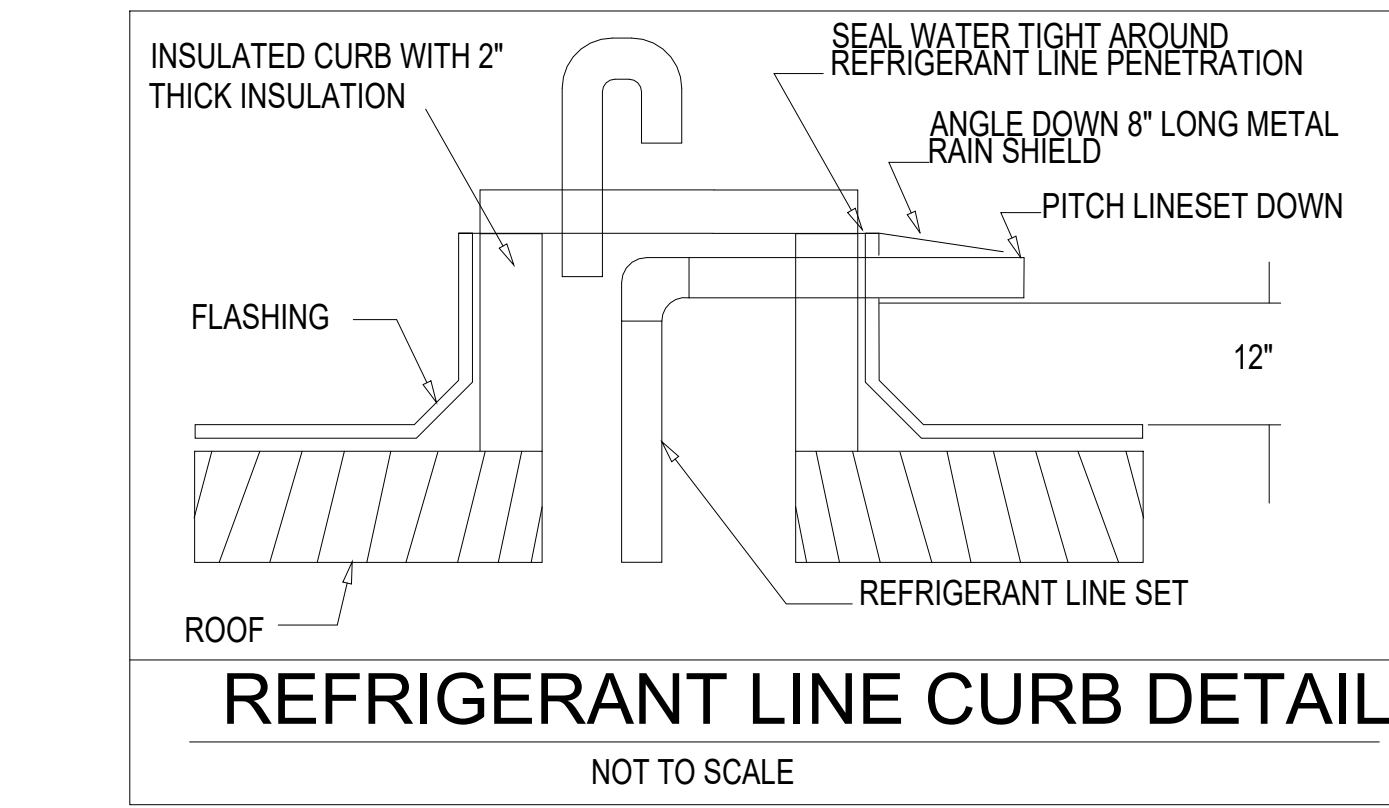


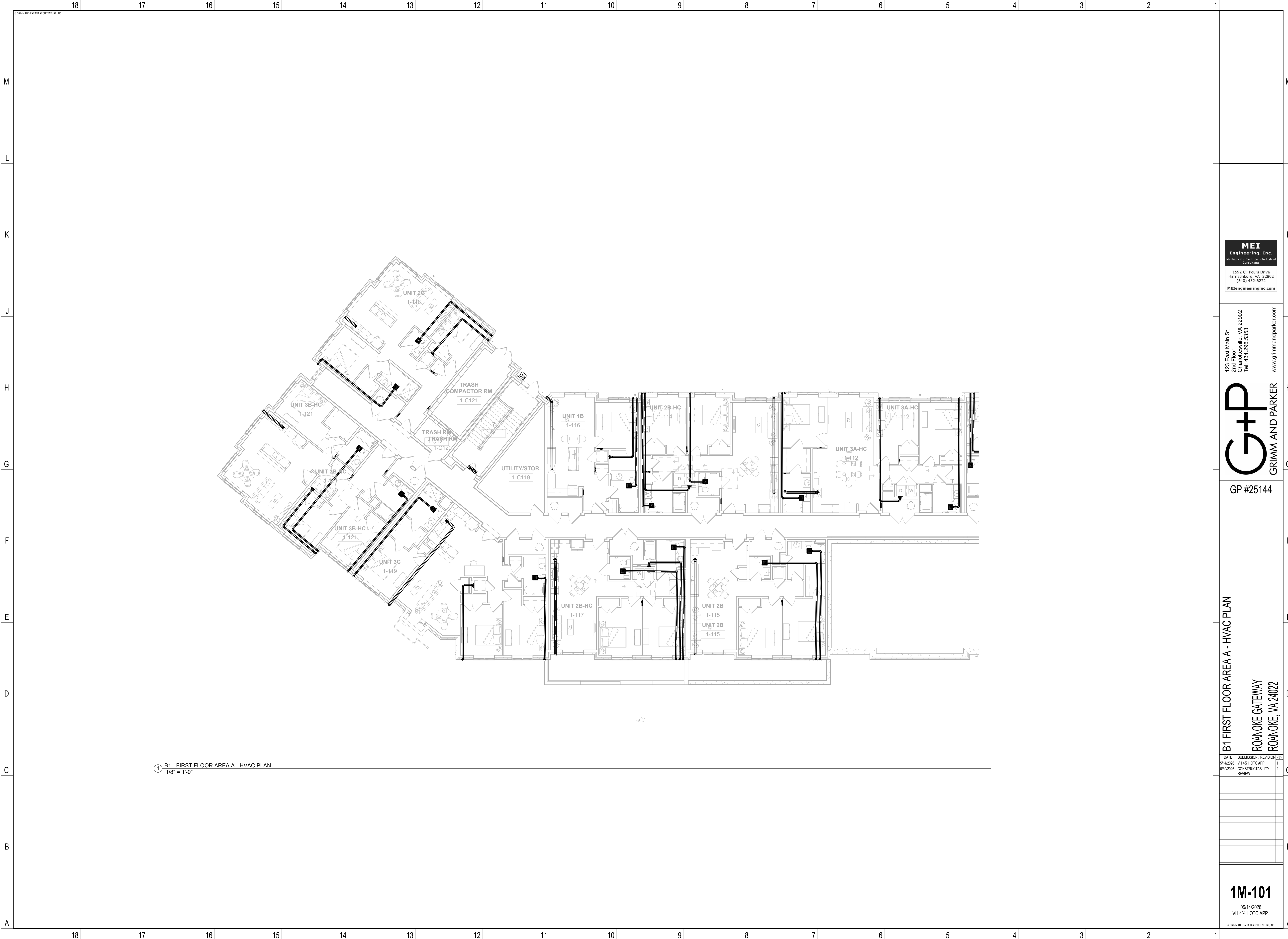
NOTES

- ① WITH SAFETY SWITCH
- ② WITH BACKDRAFT DAMPER
- ③ PROVIDE MATCHING CURB

NOTES:	
①	COOLING CAPACITIES AT 95F DB/67F EWB TEMPERATURES. PROVIDE BLOWER TIME DELAY RELAYS. R-454B REFRIGERANT.
②	REFER TO DRAWINGS FOR EXACT AIRFLOW QUANTITIES.
③	W/ COMPRESSOR TIME DELAY, COMPRESSOR CRANKCASE HEATER, REFRIGERANT LINE FILTER DRIER, HIGH AND LOW PRESSURE SWITCHES, RA FILTER.
④	ELECTRIC HEAT REQUIRES IT OWN CIRCUITS. VOLTAGE TO BE OWER FROM OUT SIDE UNIT.

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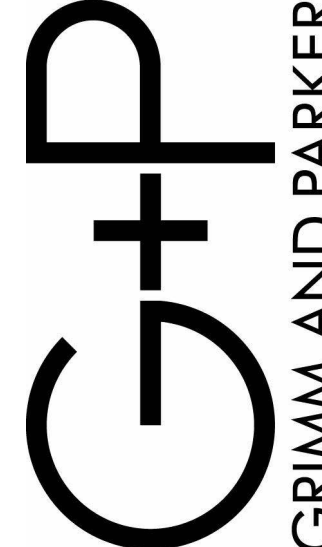




1 B1 - FIRST FLOOR AREA A - HVAC PLAN
1/8" = 1'-0"

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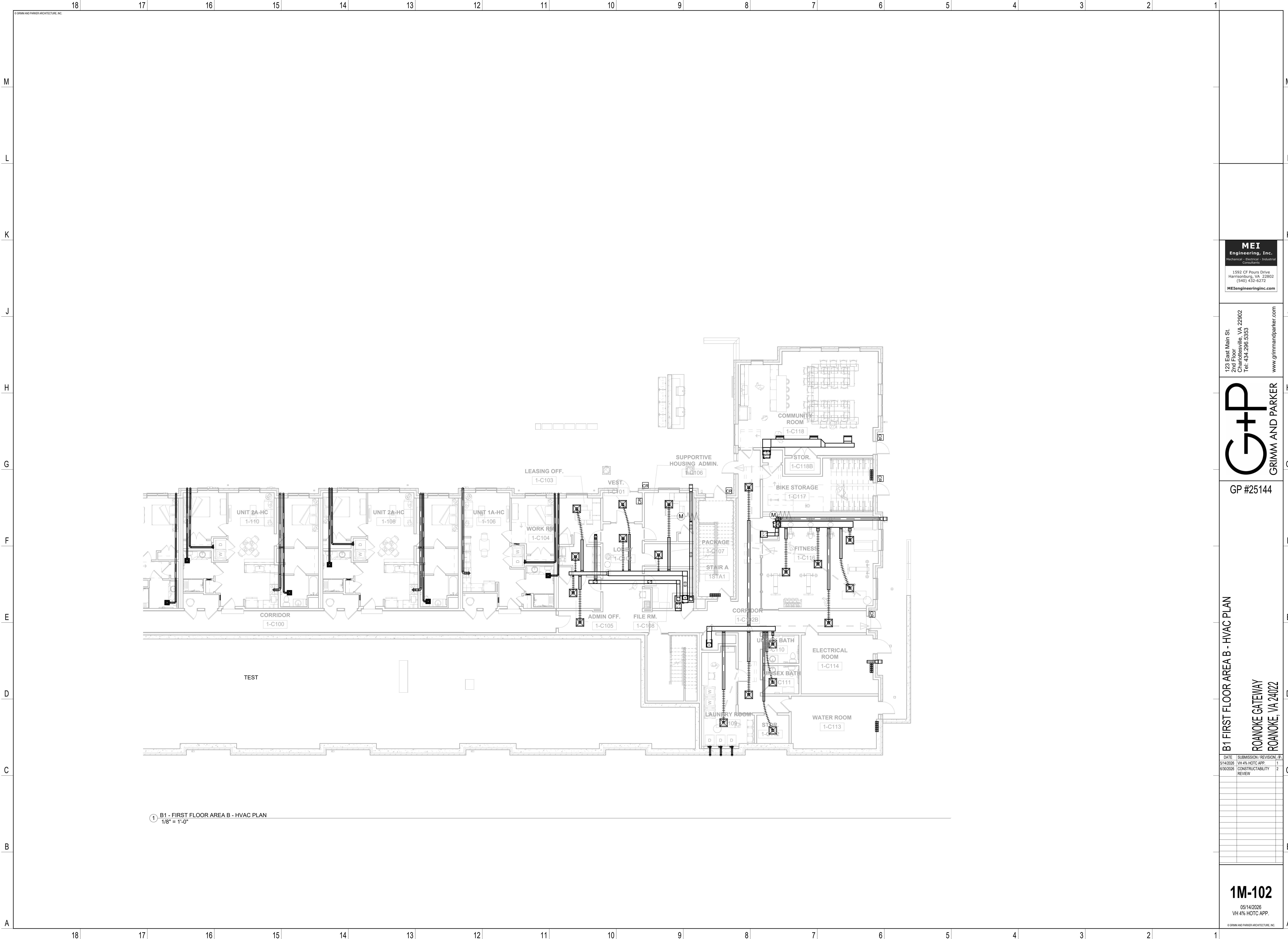


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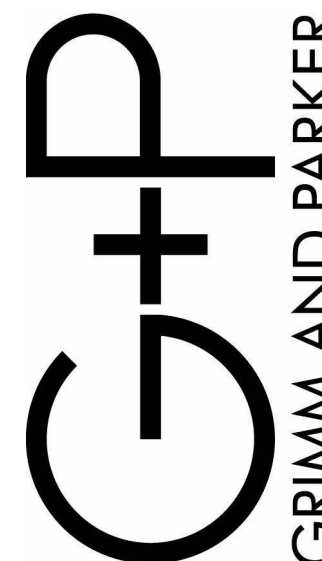
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① B1 - FIRST FLOOR AREA B - HVAC PLAN
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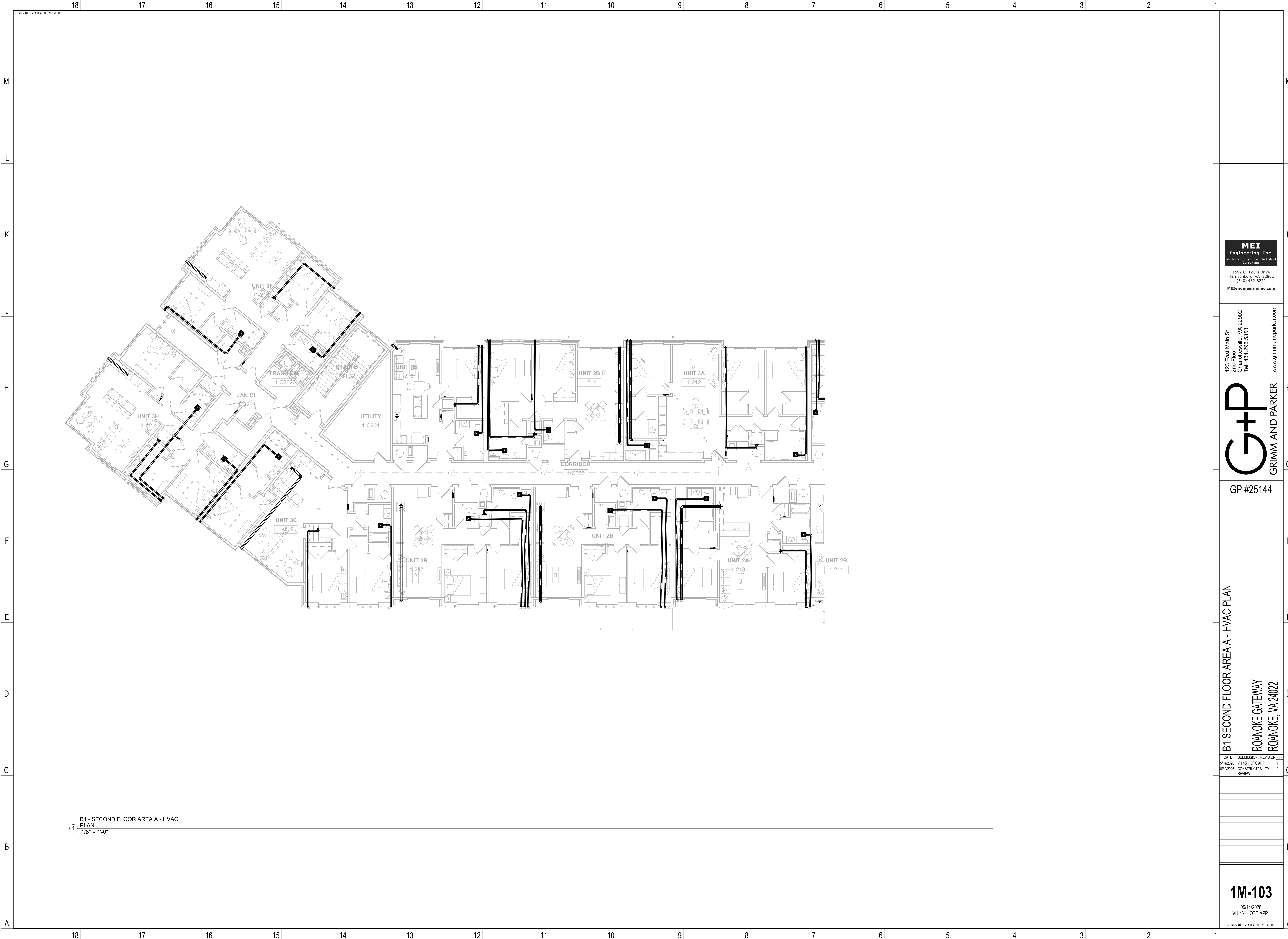


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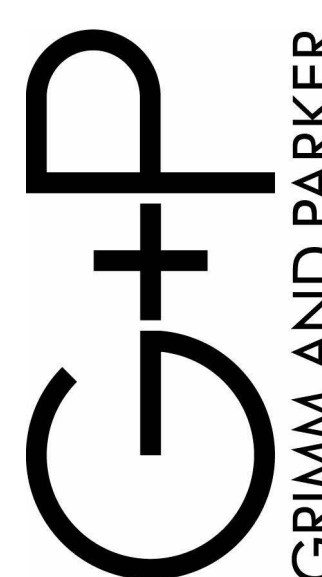
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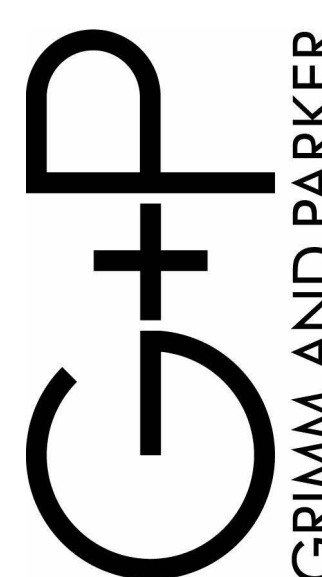
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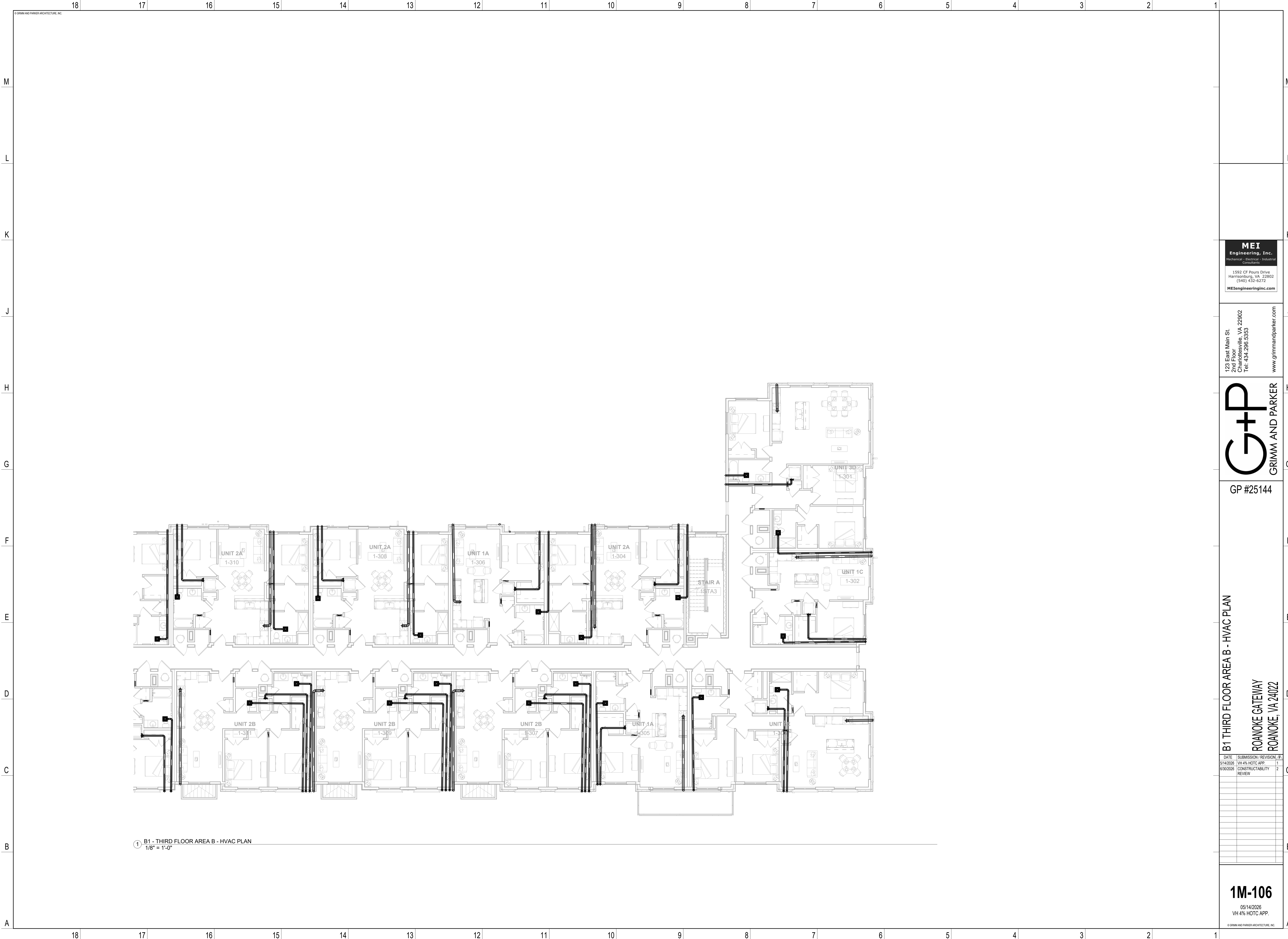


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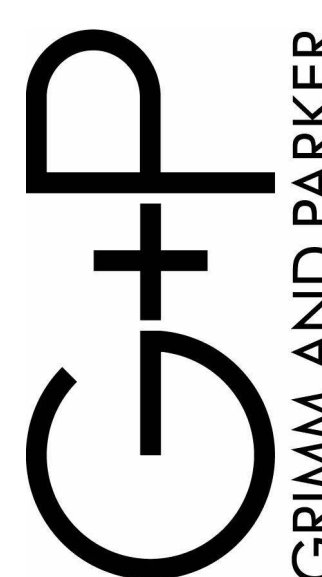
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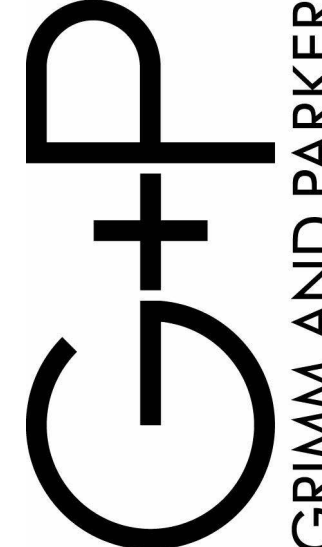
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VH 4% HOTC APP.
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B1 - FOURTH FLOOR AREA B - HVAC
PLAN
1/8" = 1'-0"

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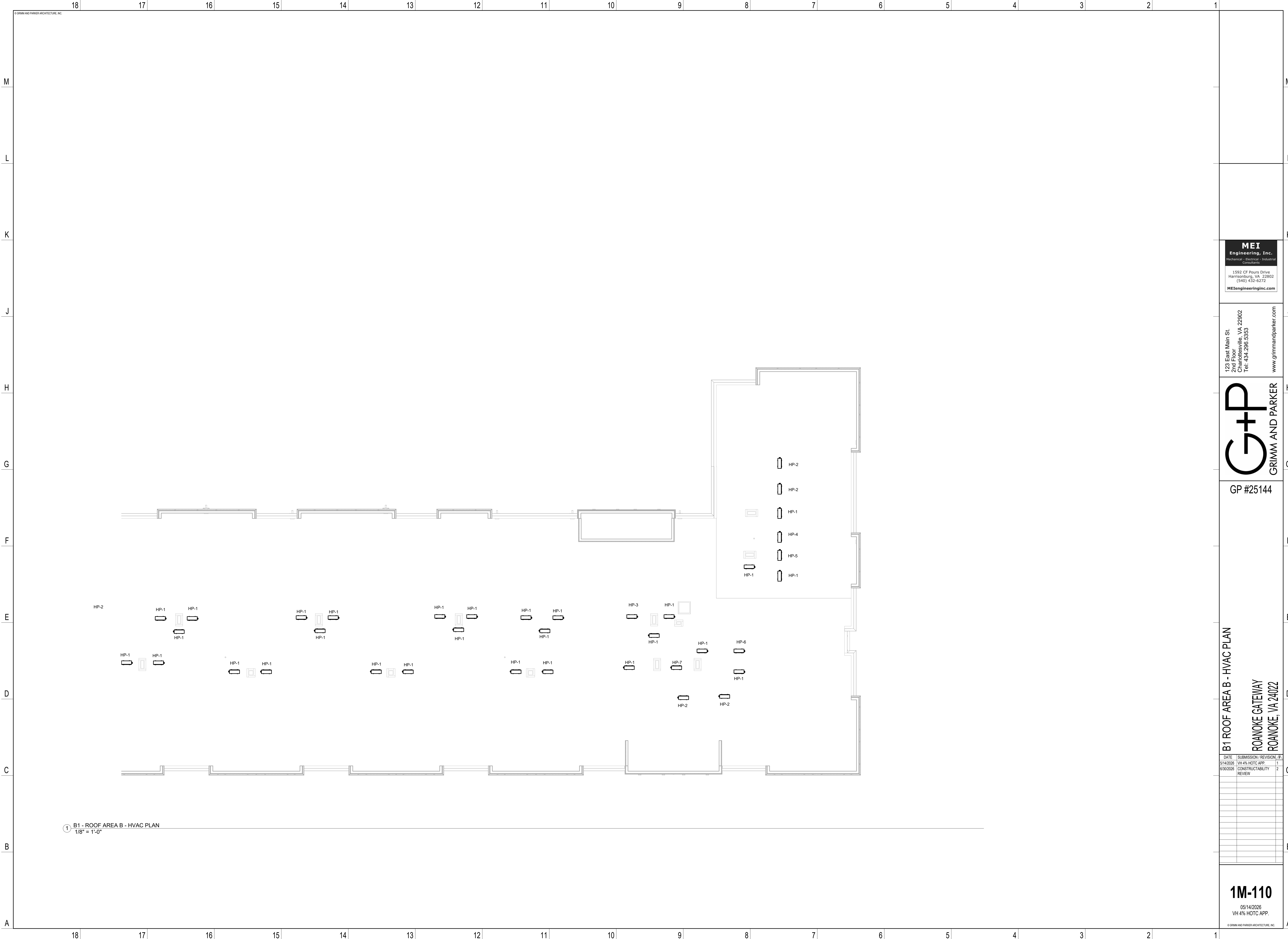


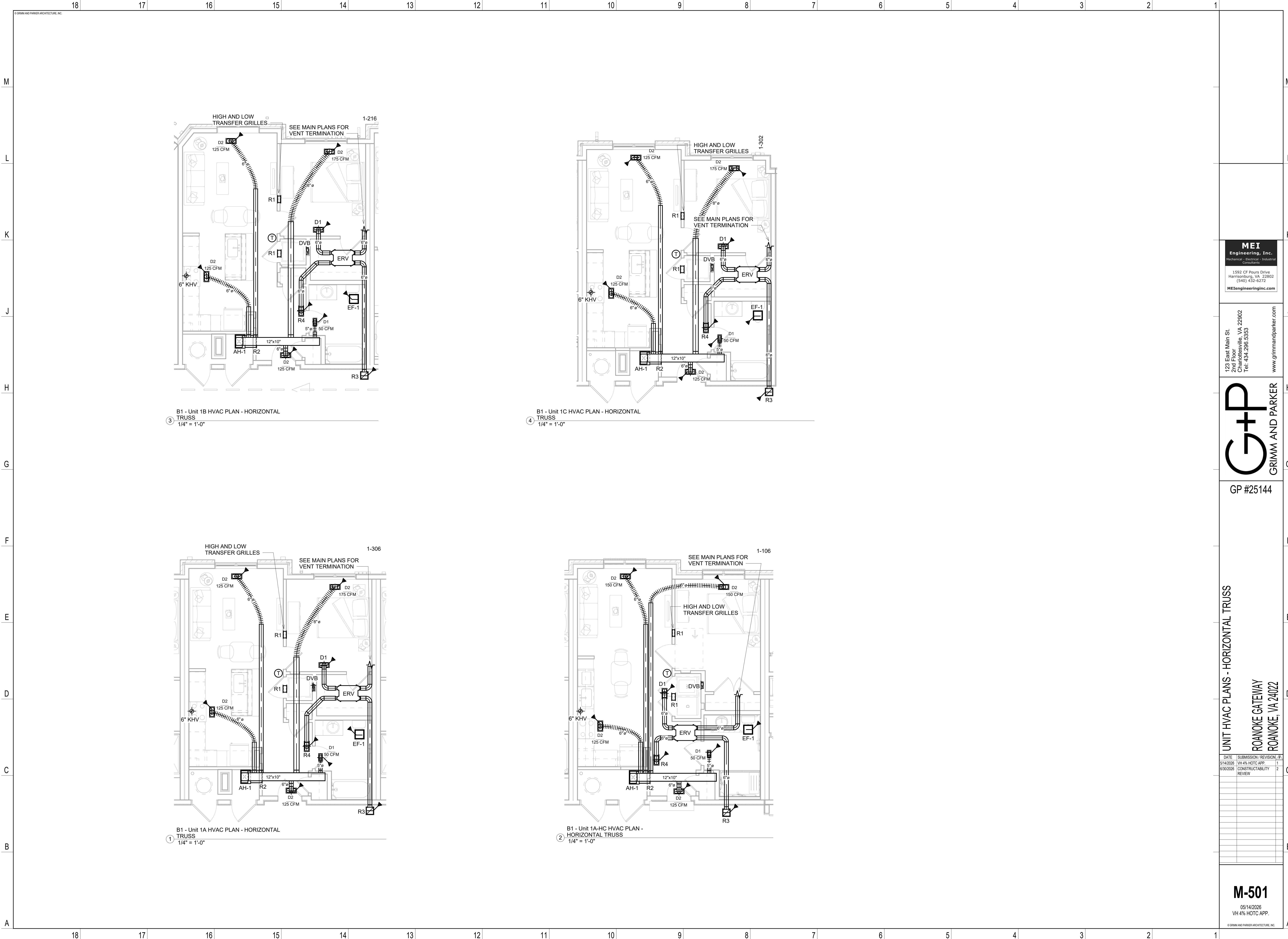
GP #25144

B1 FOURTH FLOOR AREA B - HVAC PLAN
ROANOKE GATEWAY
ROANOKE, VA 24022

DATE	SUBMISSION / REVISION	BY
5/14/2026	VH 4% HOTC APP.	1
6/30/2026	CONSTRUCTABILITY REVIEW	2

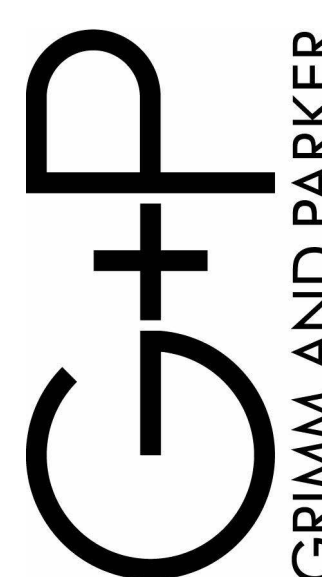
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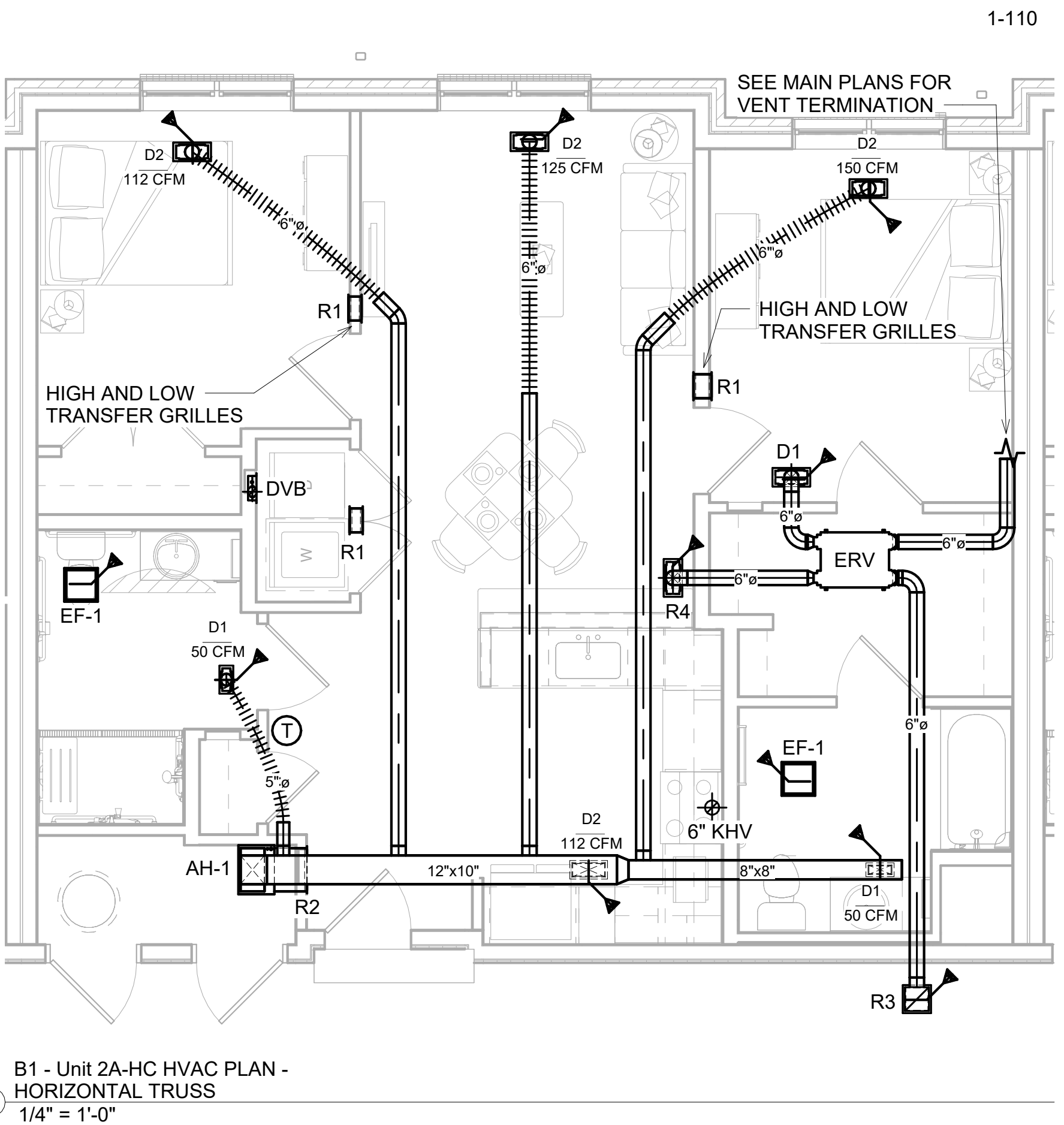
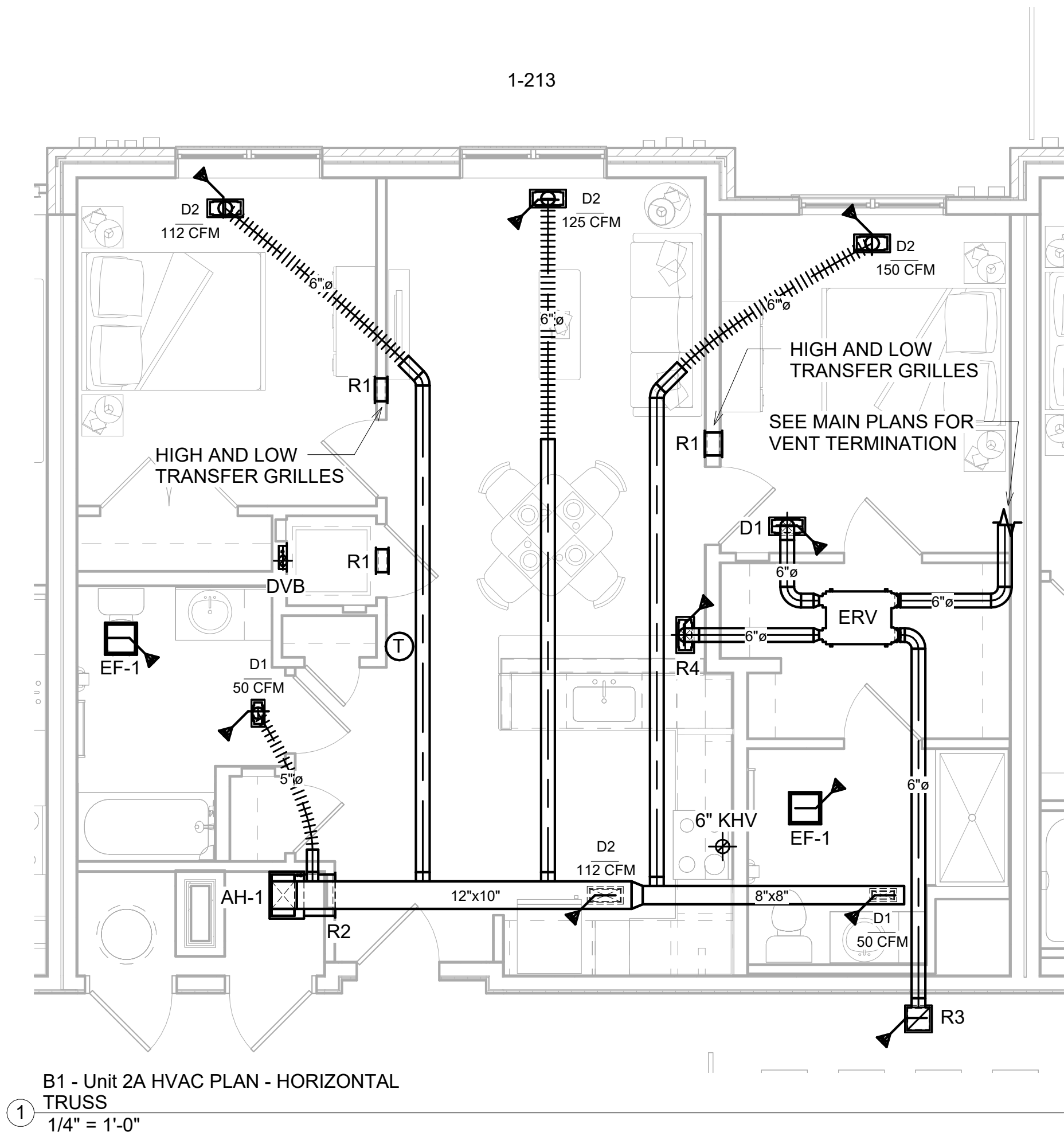
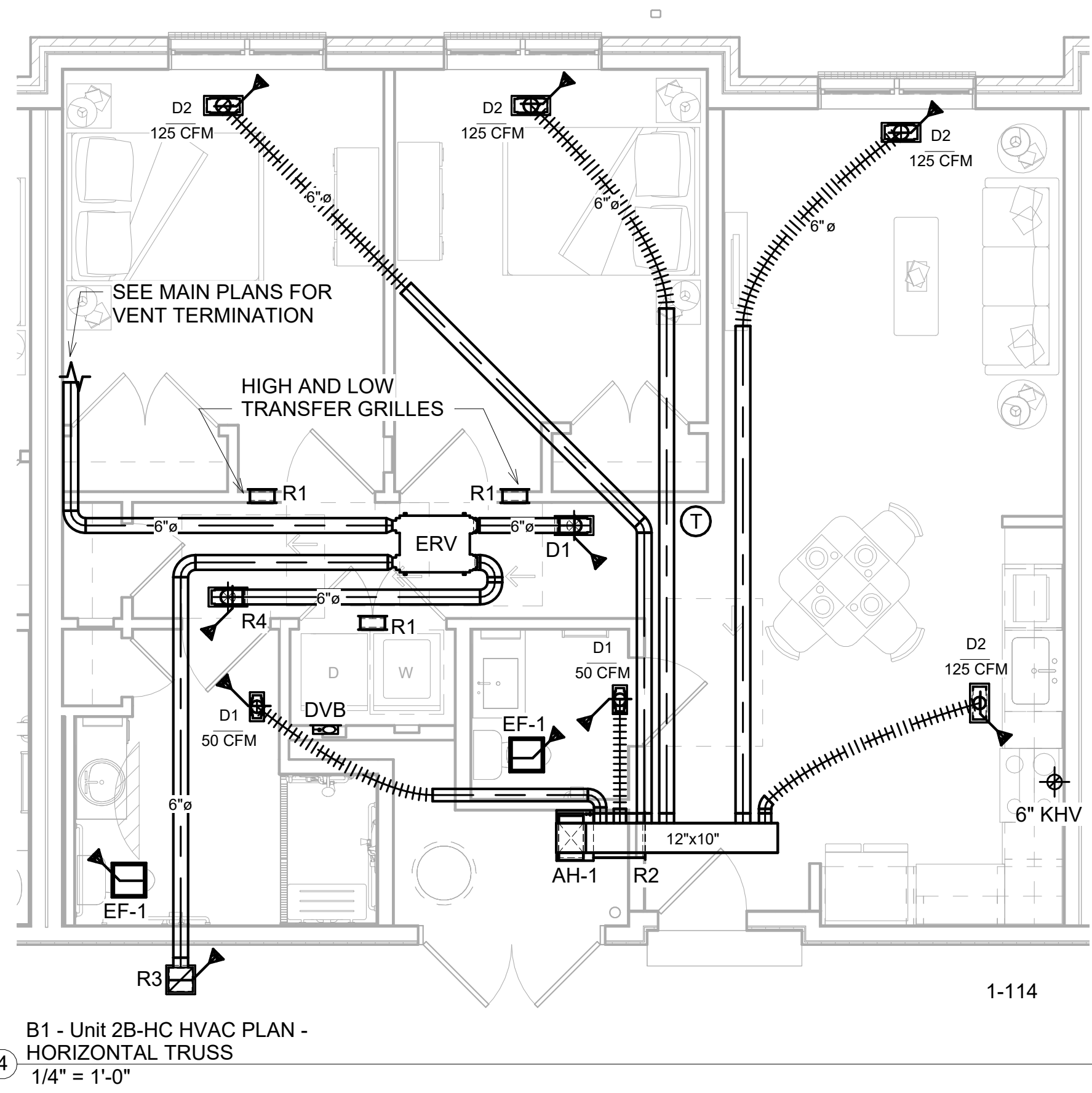
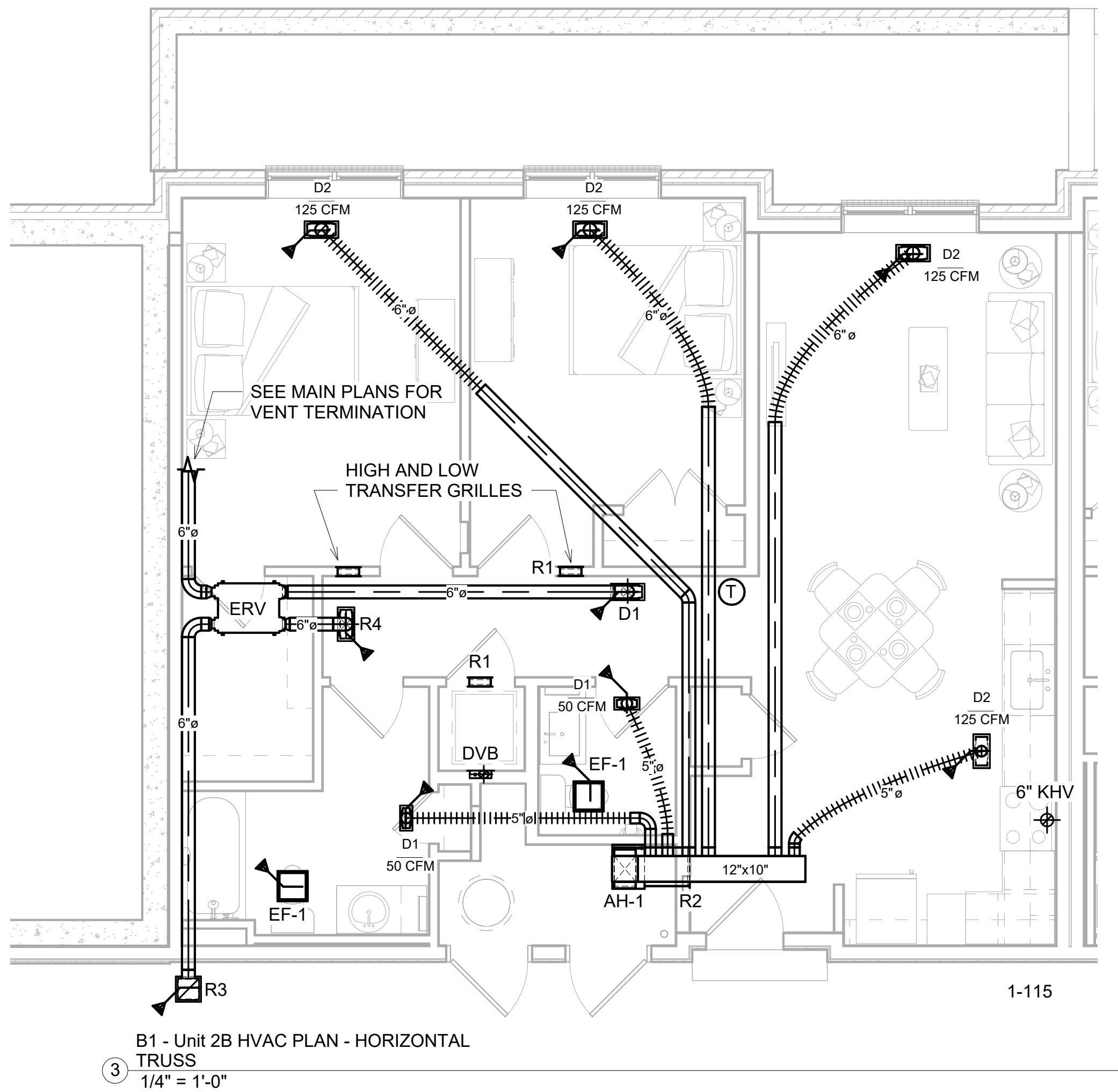


GP #25144

UNIT HVAC PLANS - HORIZONTAL TRUSS
ROANOKE GATEWAY
ROANOKE, VA 24022

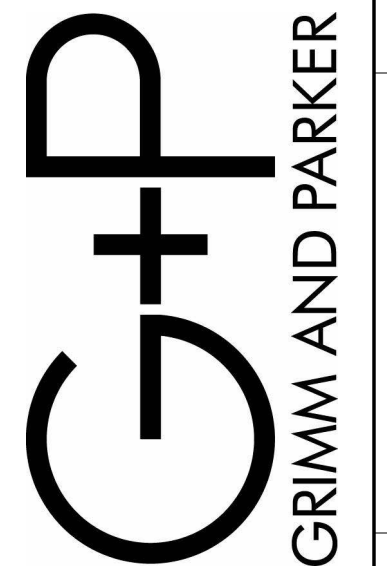
DATE	SUBMISSION / REVISION	BY
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M-501
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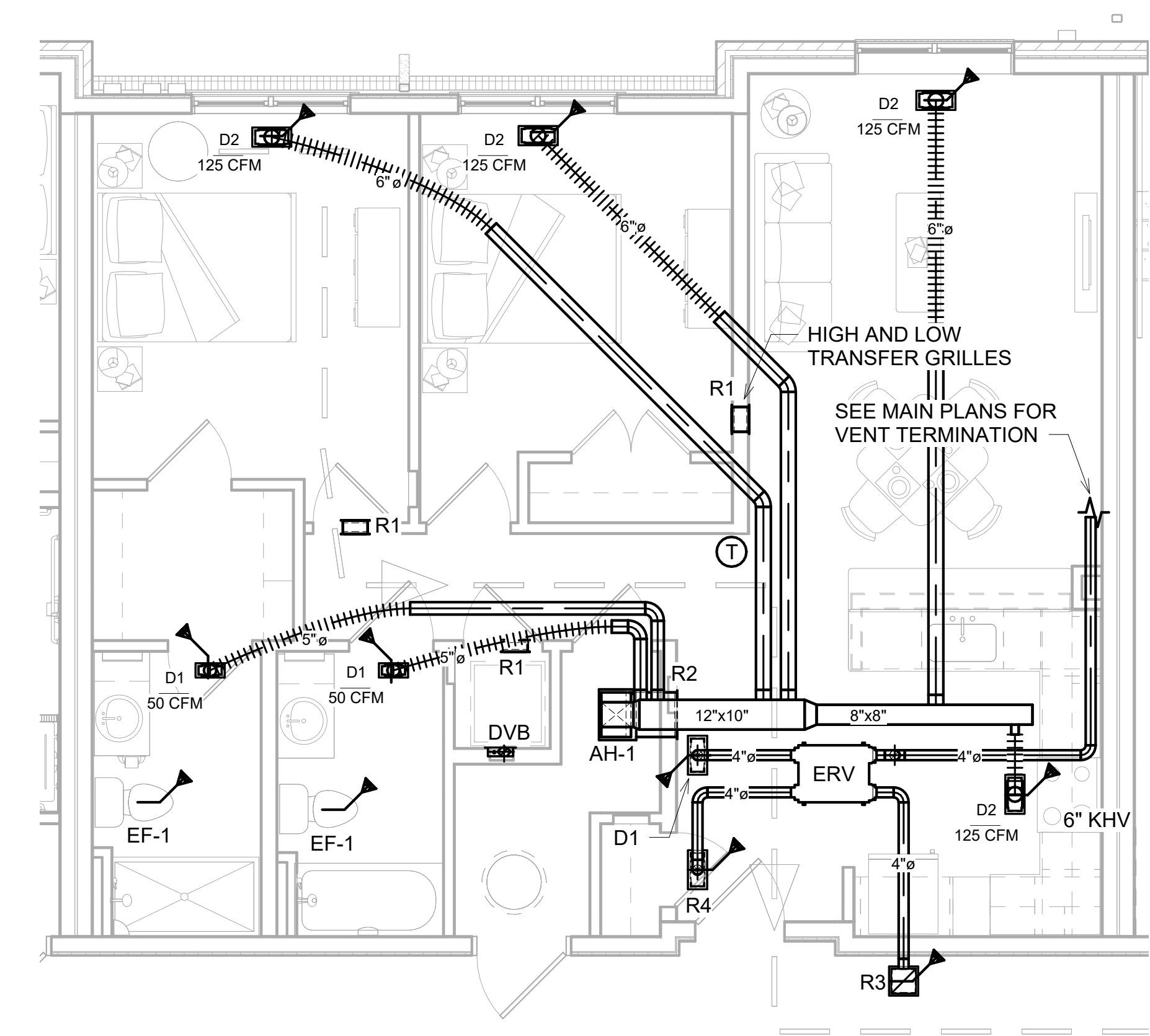


GP #25144

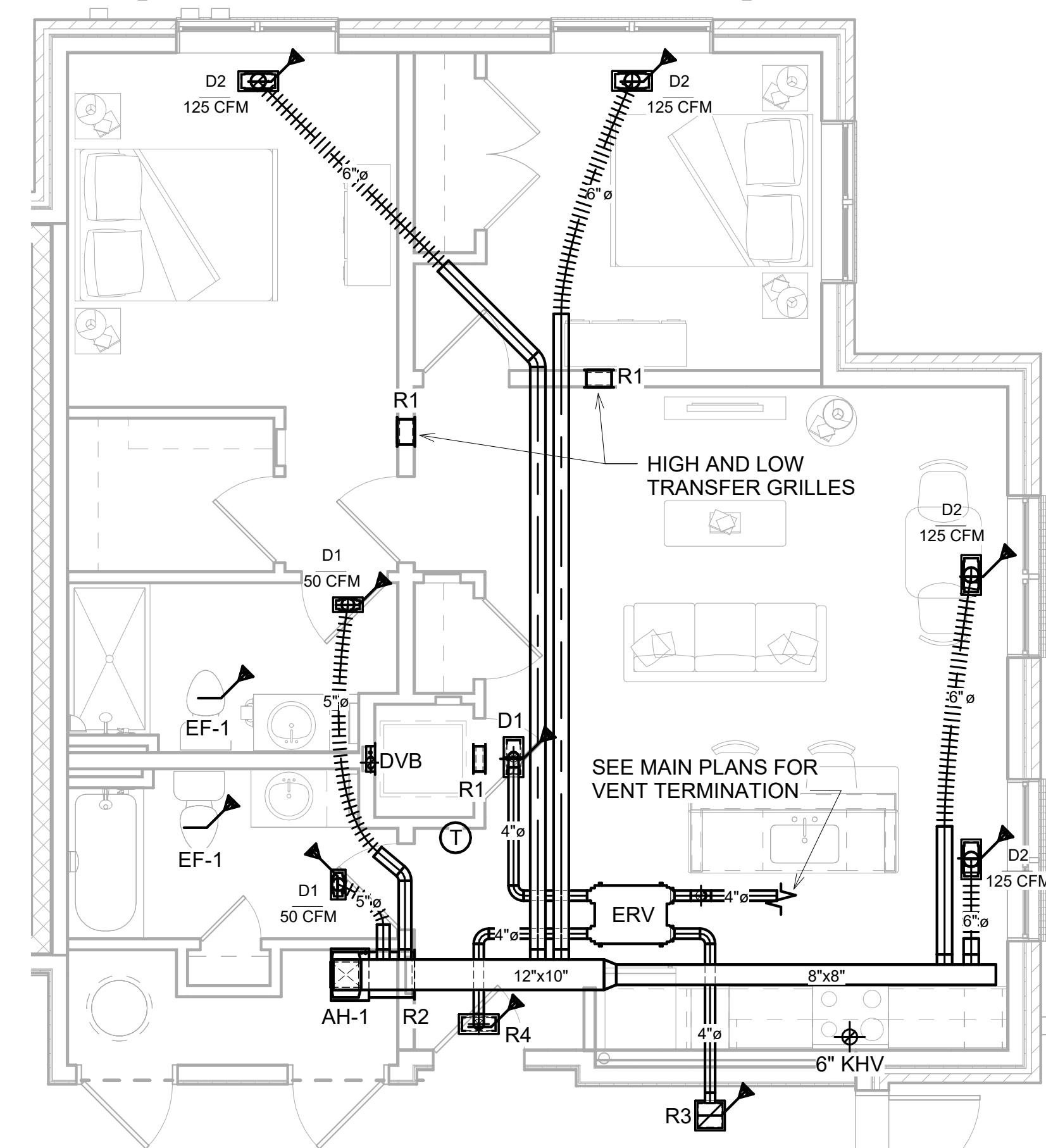
UNIT HVAC PLANS - HORIZONTAL TRUSS
ROANOKE GATEWAY
ROANOKE, VA 24022

DATE	SUBMISSION / REVISION	BY
5/14/2026	VH 4% HOTC APP.	1
6/30/2026	CONSTRUCTABILITY REVIEW	2

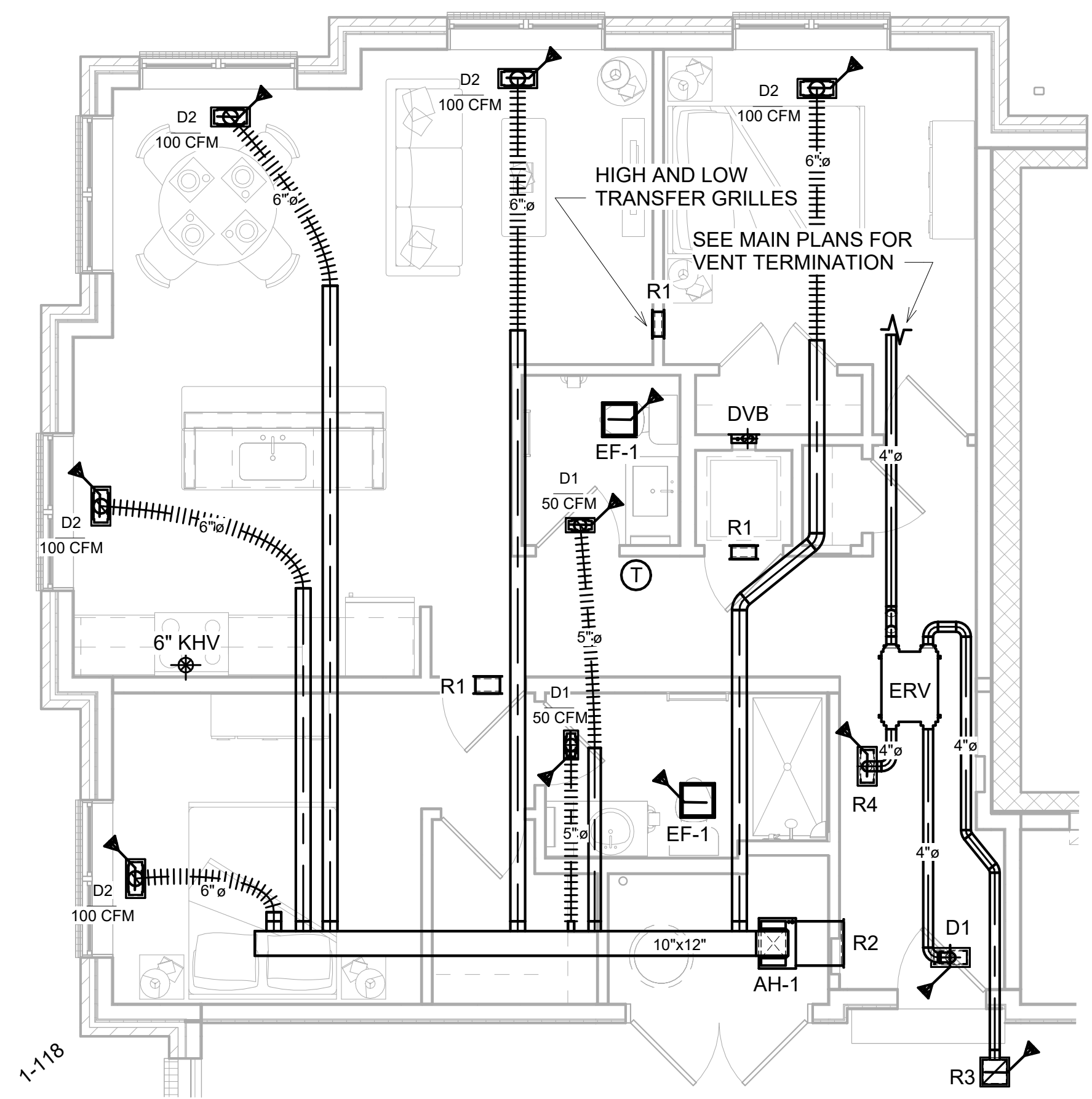
M-502
05/14/2026
VH 4% HOTC APP.



③ B1 - Unit 2E HVAC PLAN
1/4" = 1'-0"



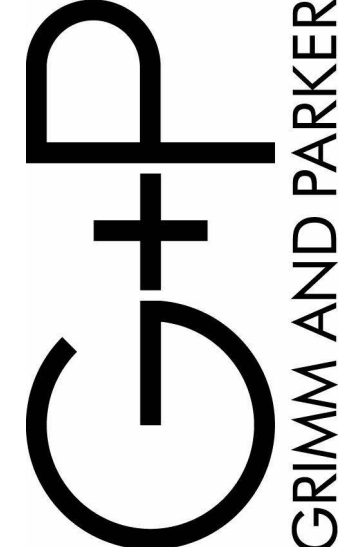
② B1 - Unit 2D HVAC PLAN
1/4" = 1'-0"



① B1 - Unit 2C HVAC PLAN
1/4" = 1'-0"

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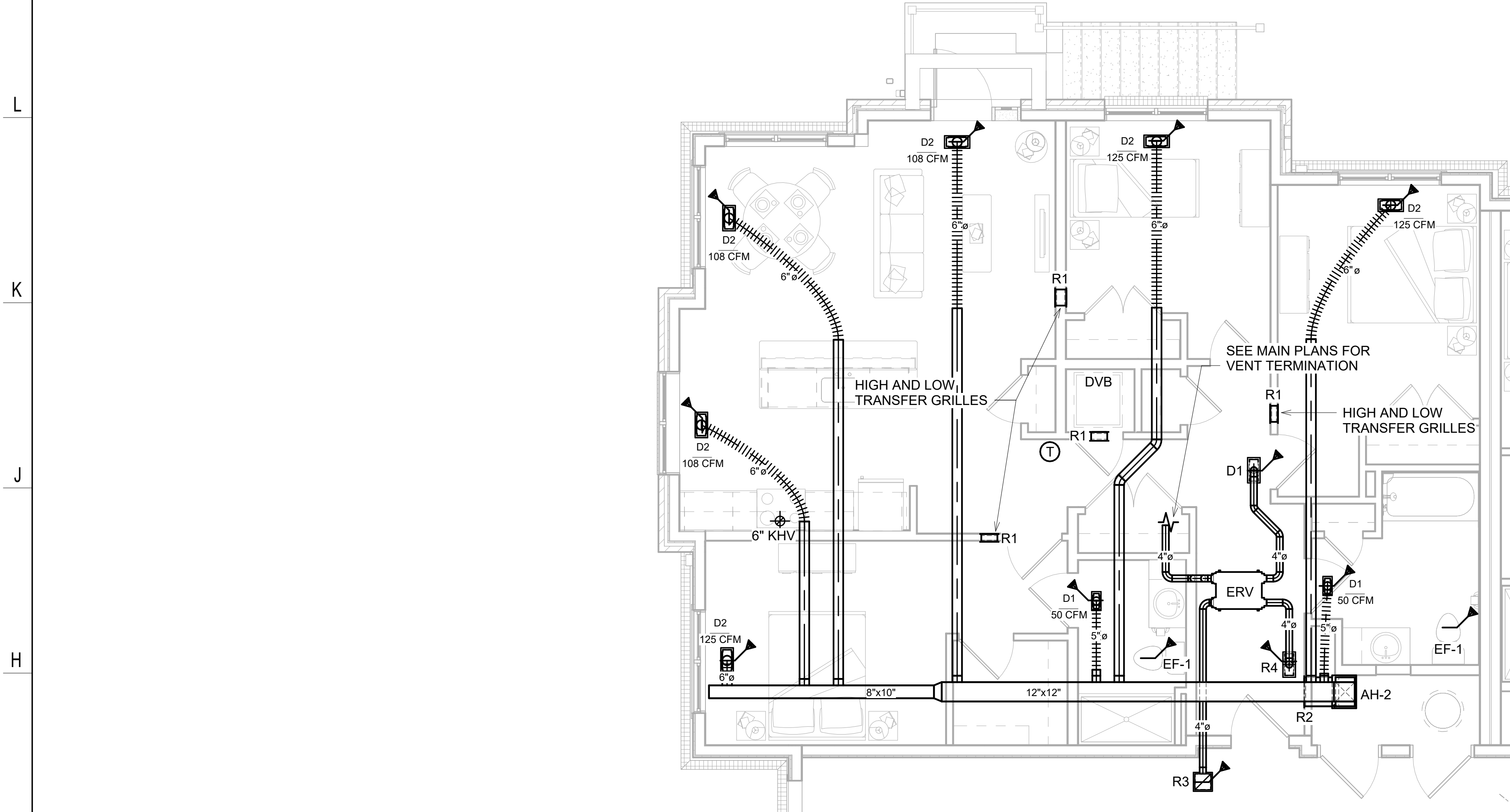


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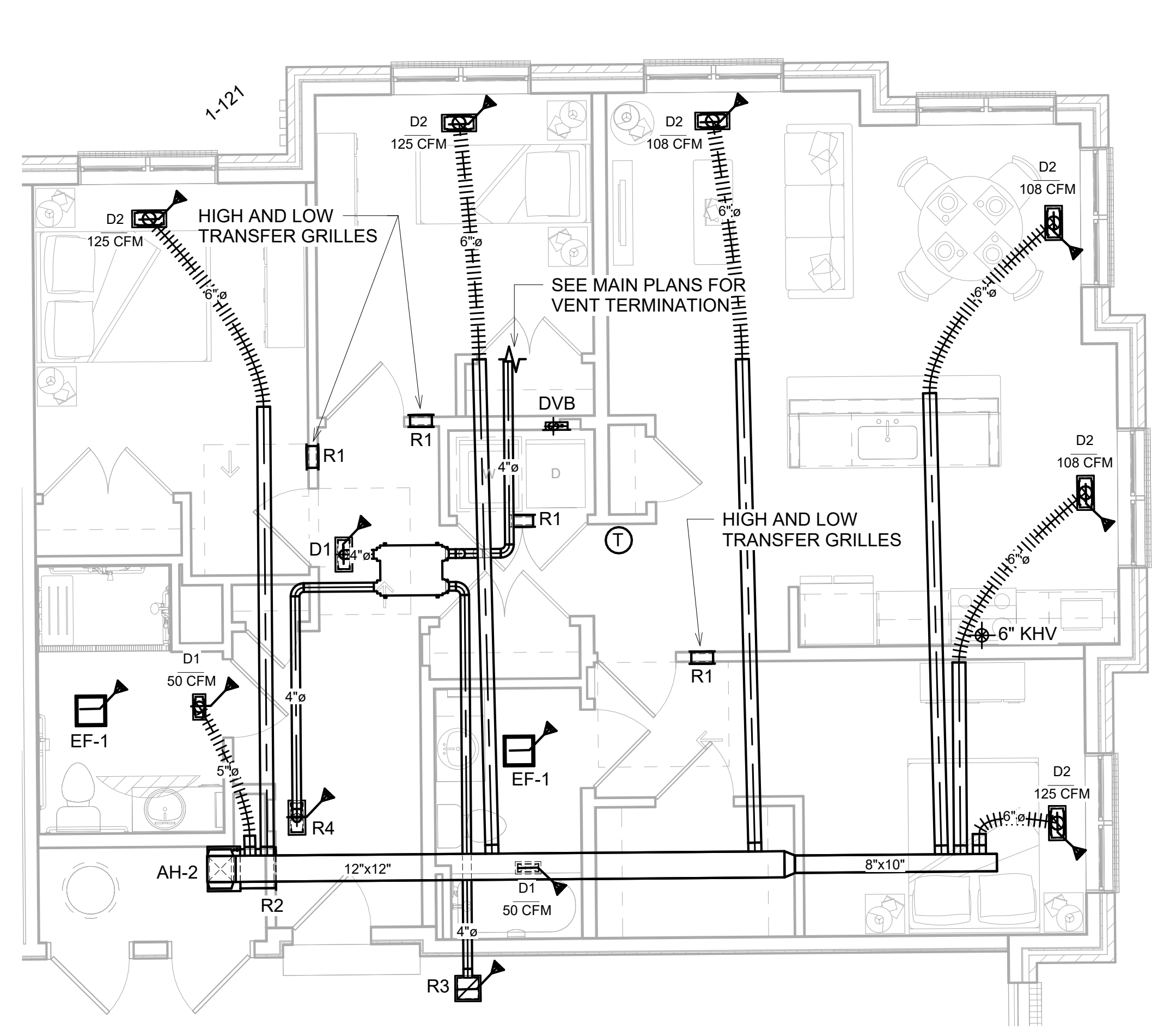
UNIT HVAC PLANS - HORIZONTAL TRUSS
ROANOKE GATEWAY
ROANOKE, VA 24022

DATE	SUBMISSION / REVISION	BY
5/14/2026	VH 4% HOTC APP.	1
6/30/2026	CONSTRUCTABILITY REVIEW	2

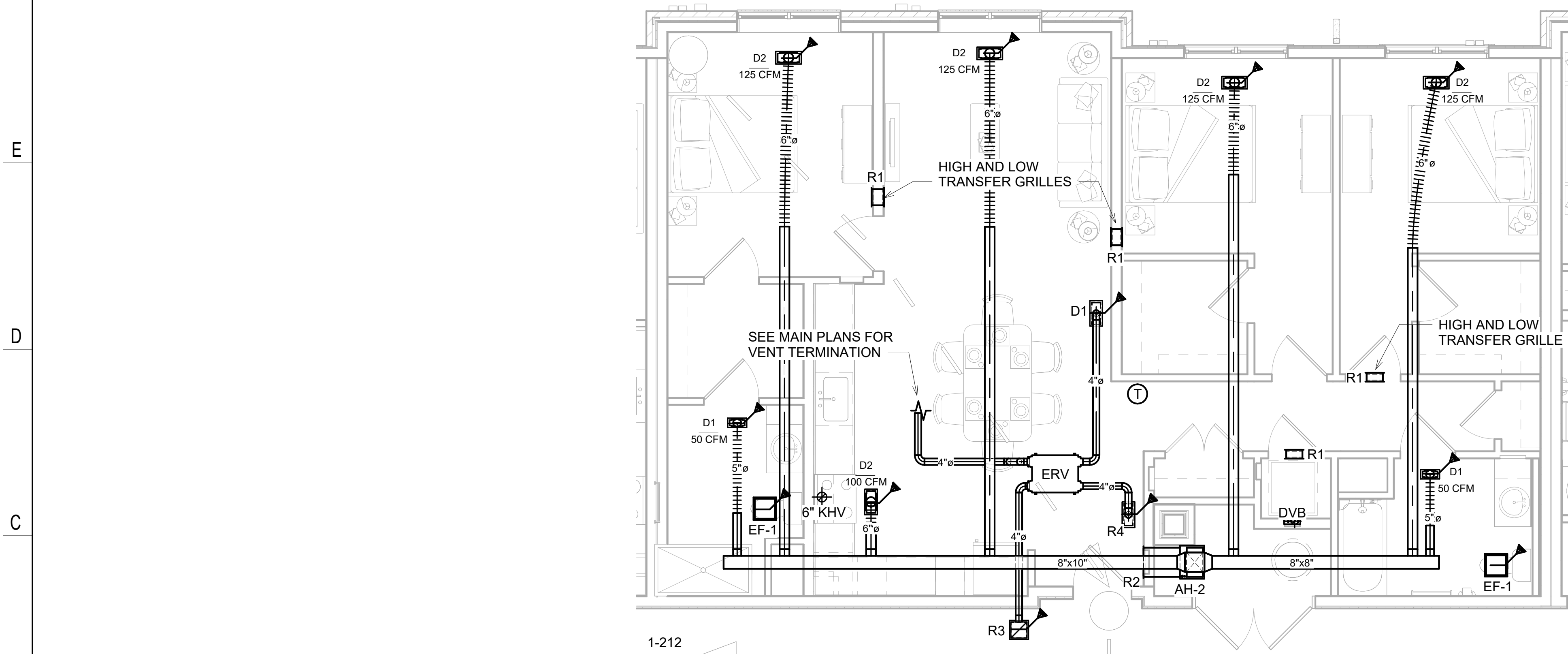
M-503
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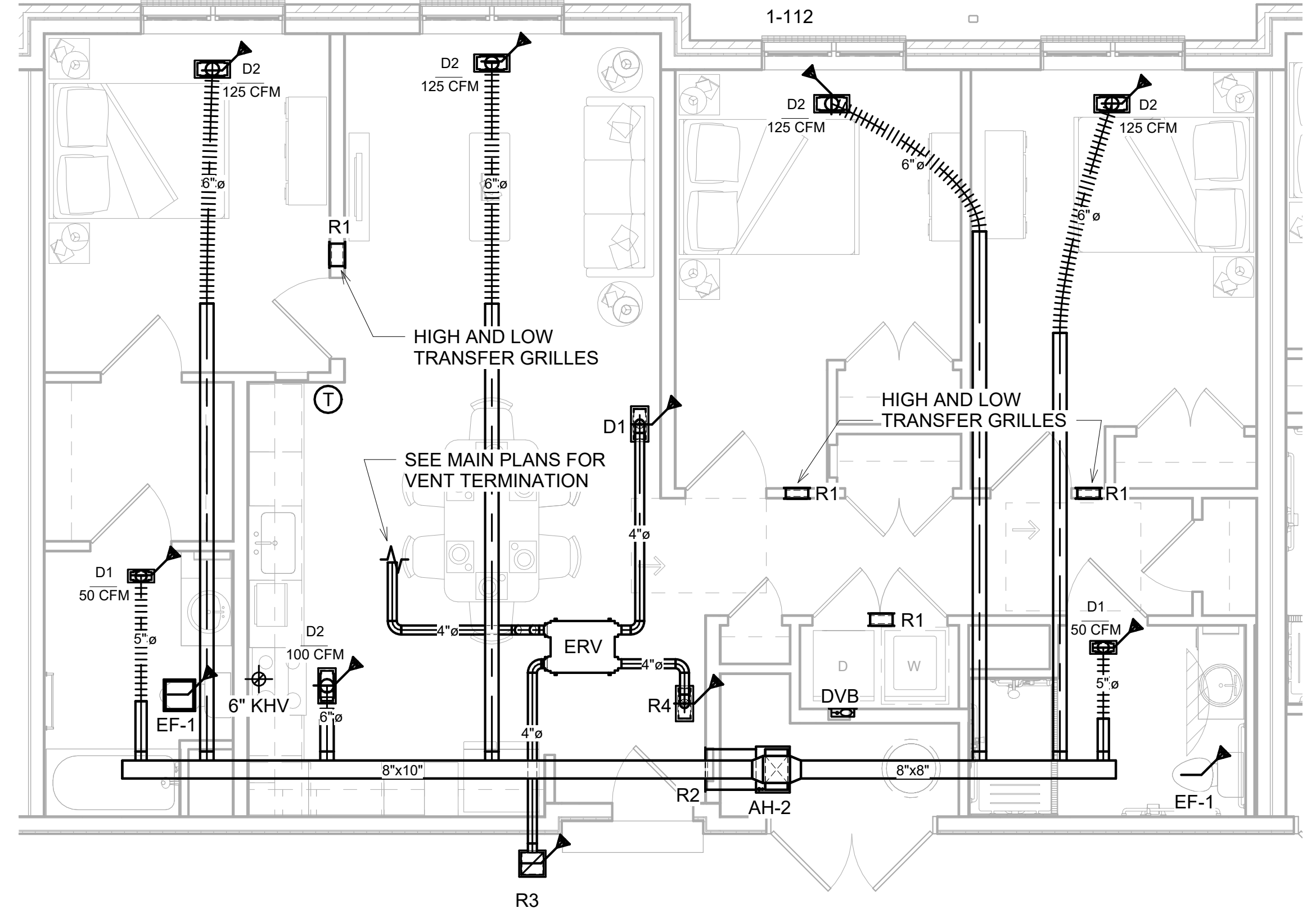
④ B1 - Unit 3B HVAC PLAN
1/4" = 1'-0"



③ B1 - Unit 3B-HC HVAC PLAN
1/4" = 1'-0"



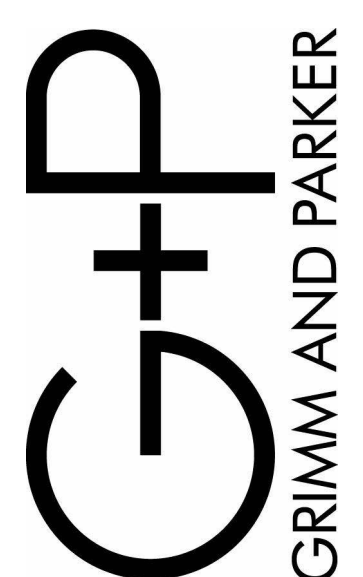
① B1 - Unit 3A HVAC PLAN
1/4" = 1'-0"



② B1 - Unit 3A-HC HVAC PLAN
1/4" = 1'-0"

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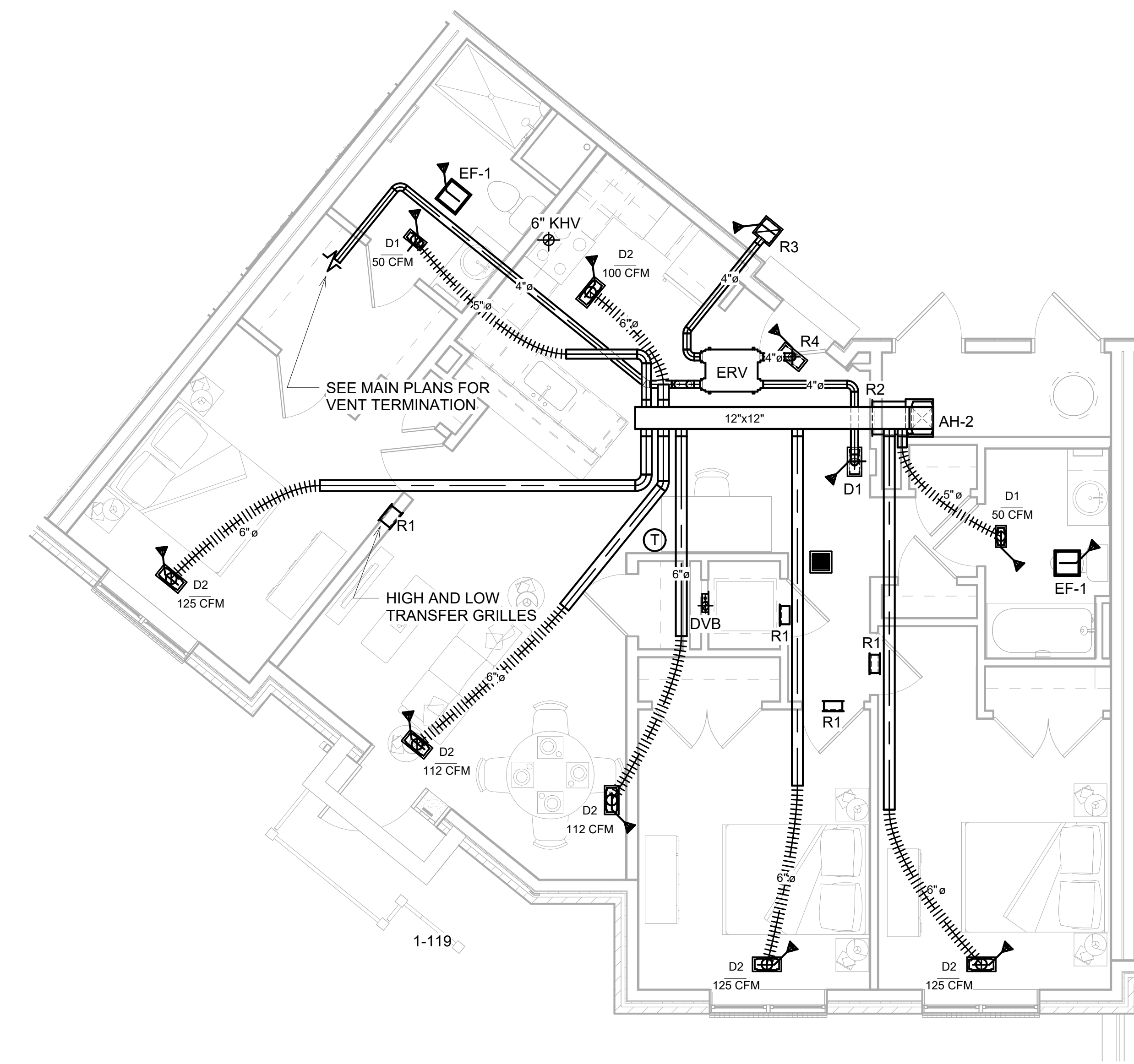


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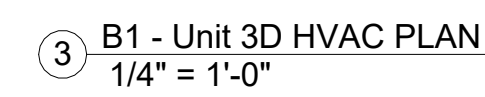
UNIT HVAC PLANS - HORIZONTAL TRUSS
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6/30/2026	CONSTRUCTABILITY REVIEW	2

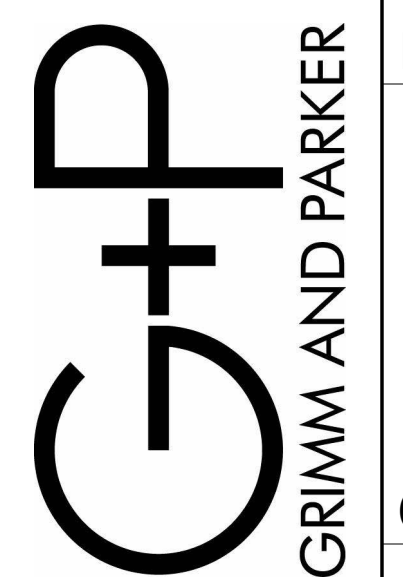
M-504
05/14/2026
VH 4% HOTC APP.



2 B1 - Unit 3C HVAC PLAN
1/4" = 1'-0"



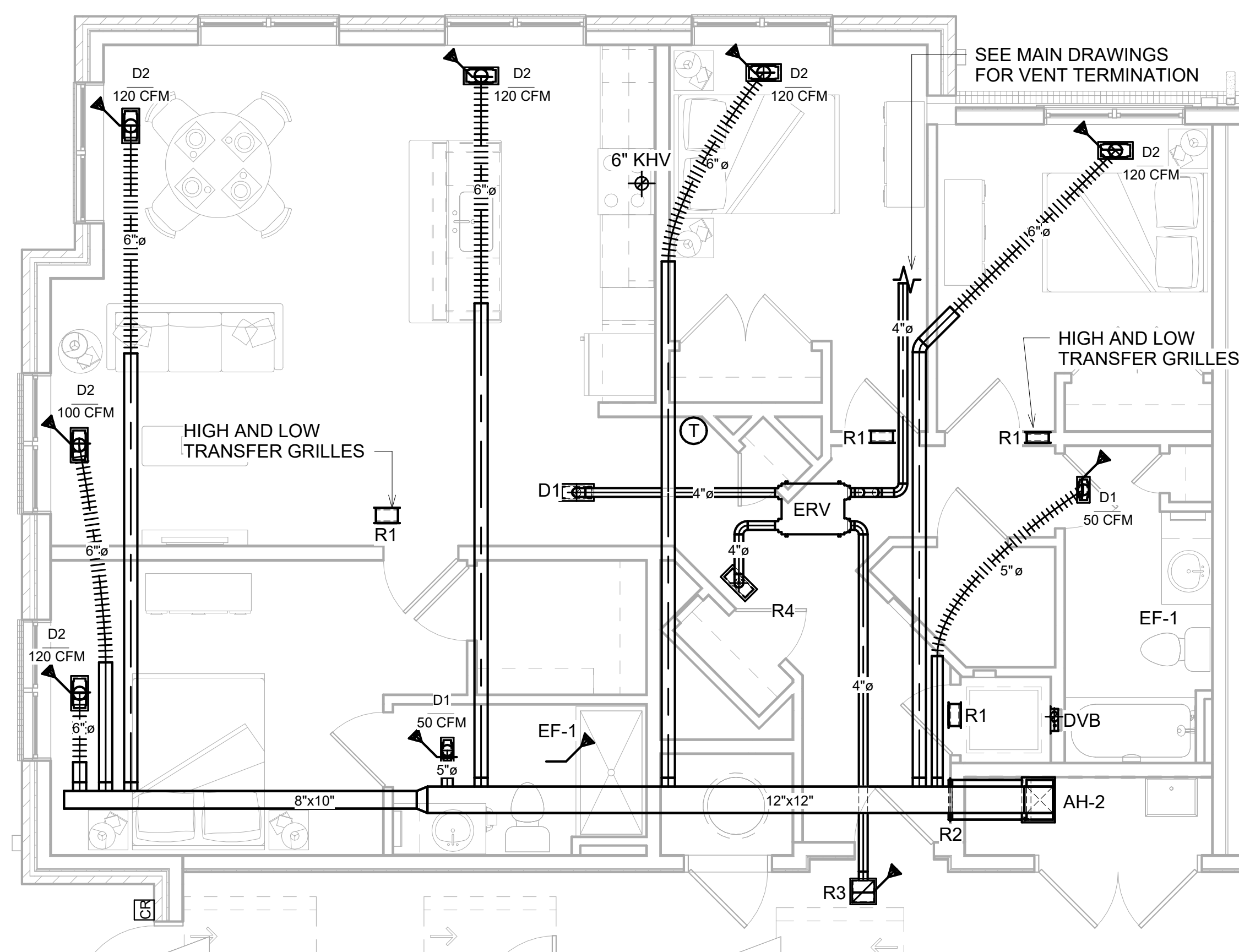
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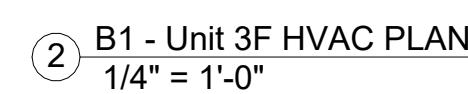
UNIT HVAC PLANS - HORIZONTAL TRUSS

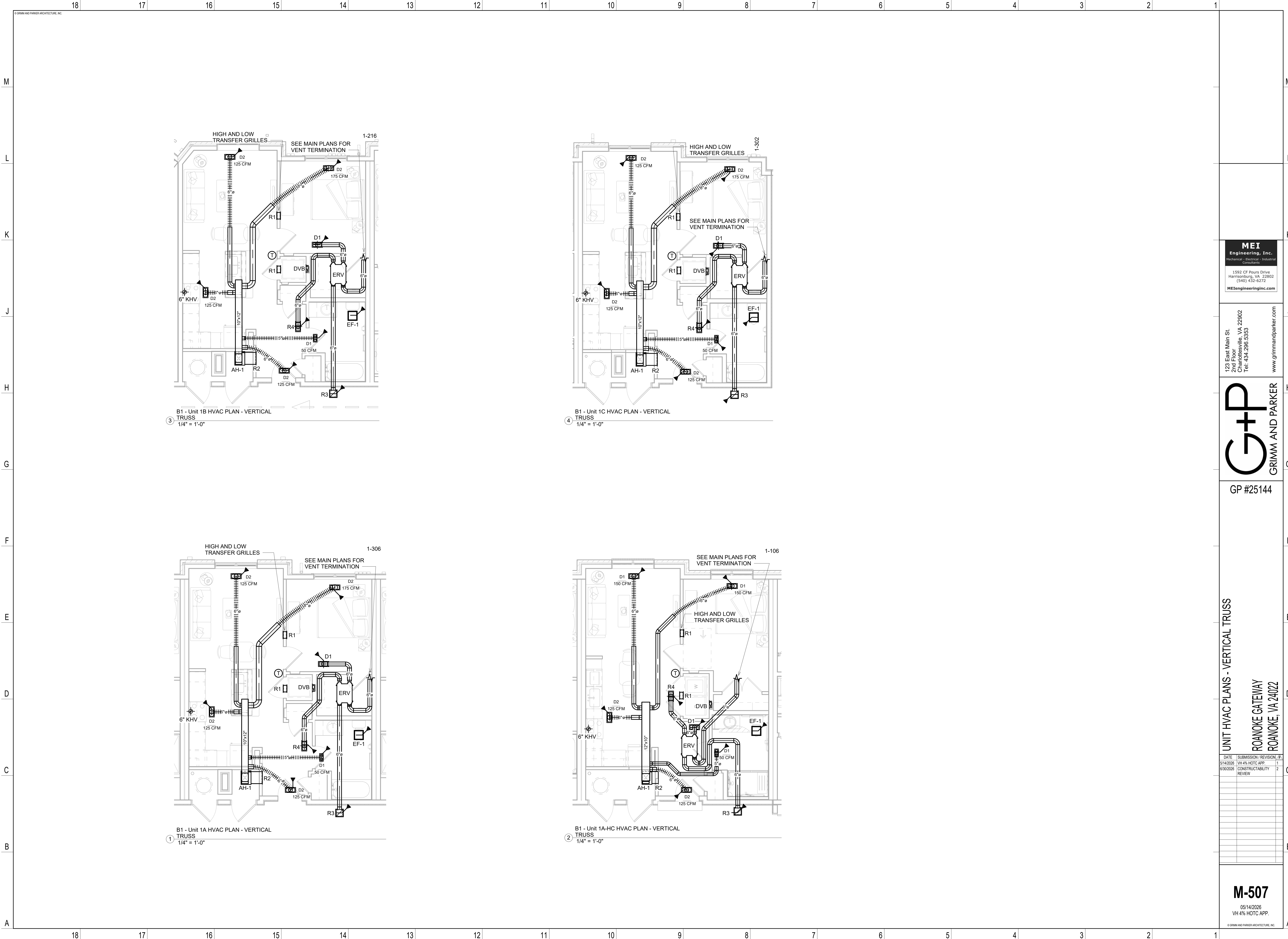
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ROANOKE, VA 24022

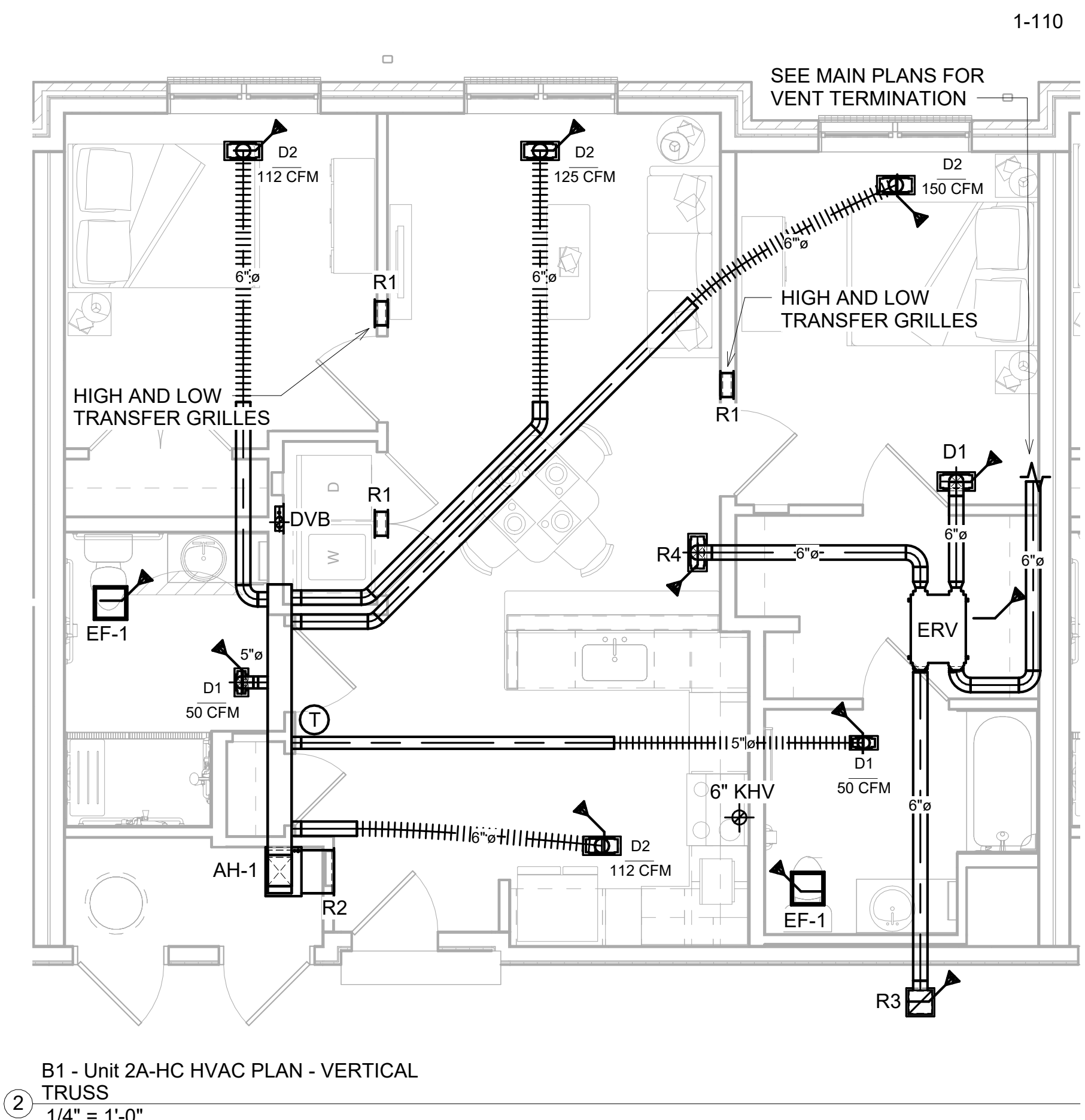
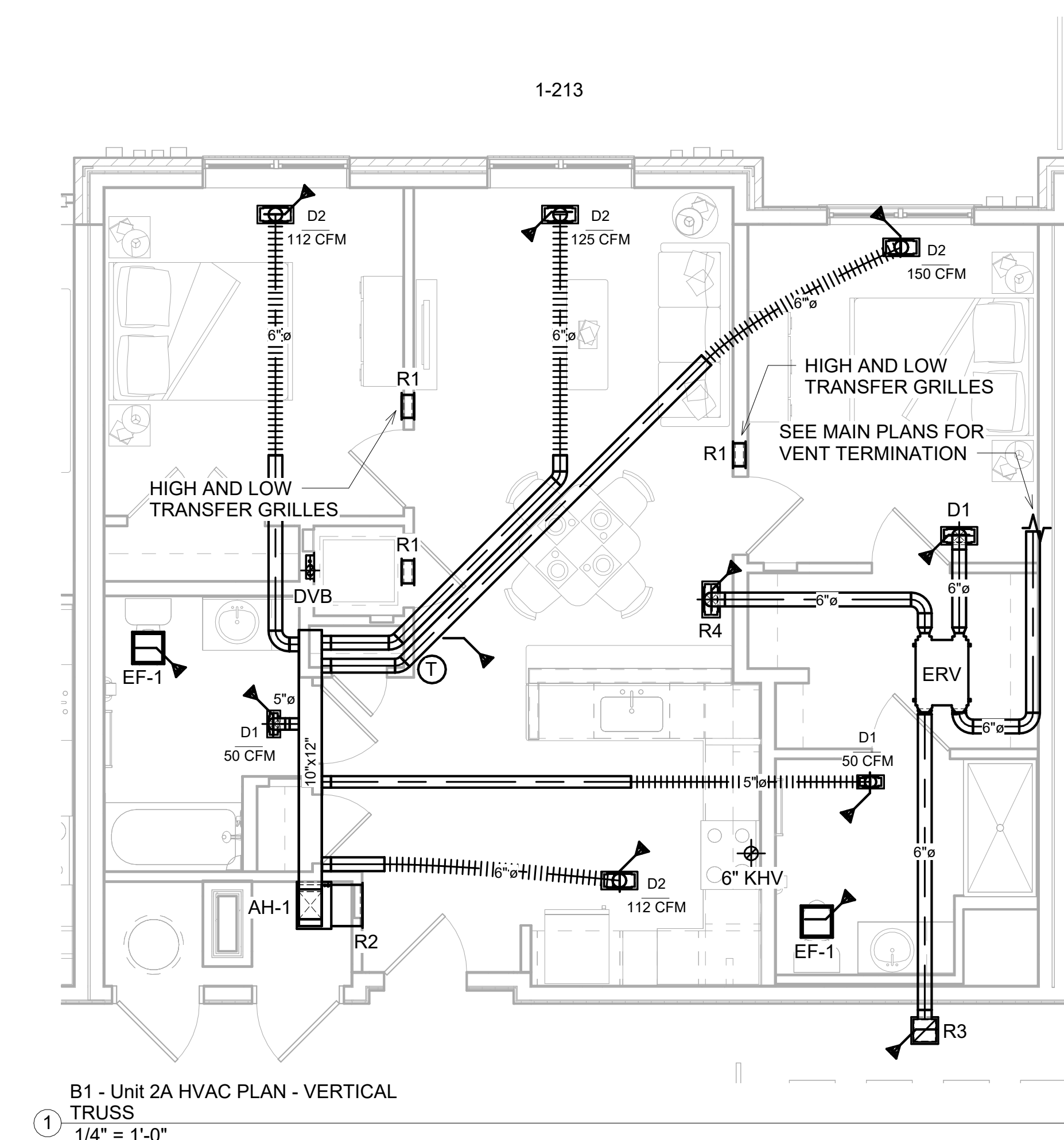
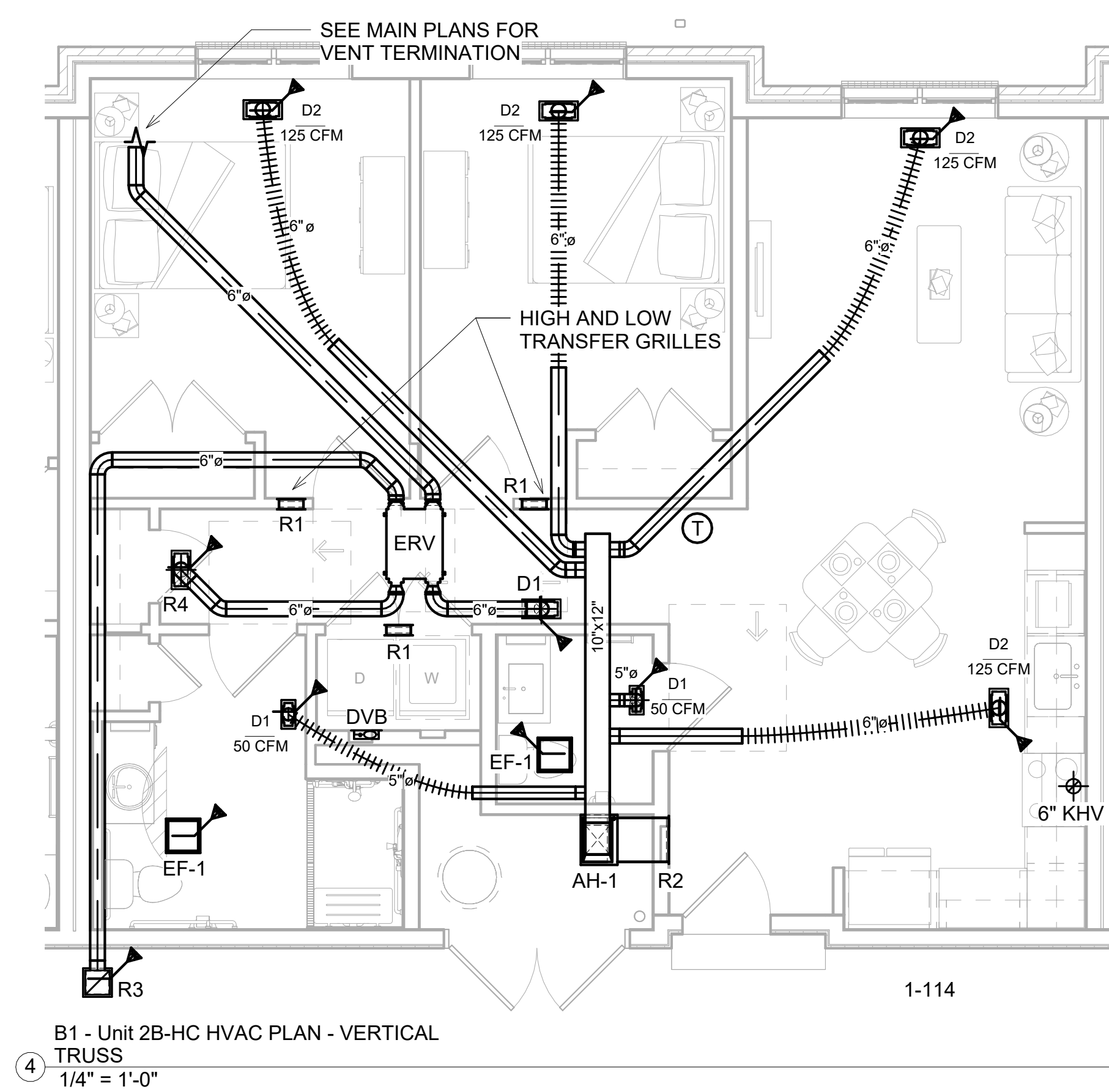
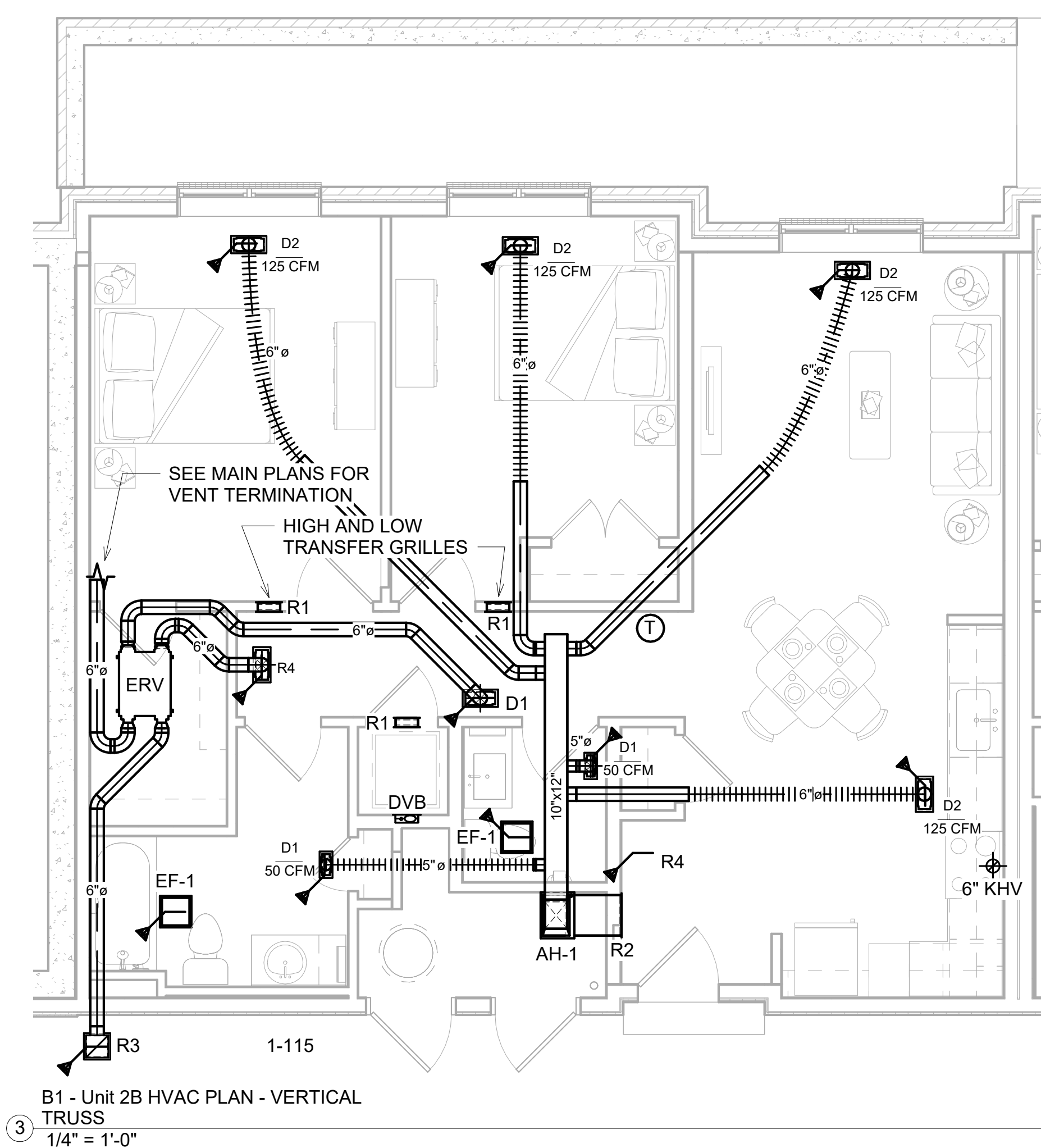
M-505
05/14/2026
VH 4% HOTC APP.



③ B1 - Unit 3G HVAC PLAN
1/4" = 1'-0"



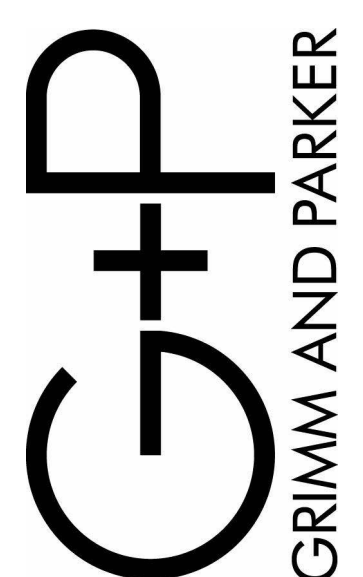




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UNIT HVAC PLANS - VERTICAL TRUSS
ROANOKE GATEWAY
ROANOKE, VA 24022

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M-508
05/14/2026
VH 4% HOTC APP.