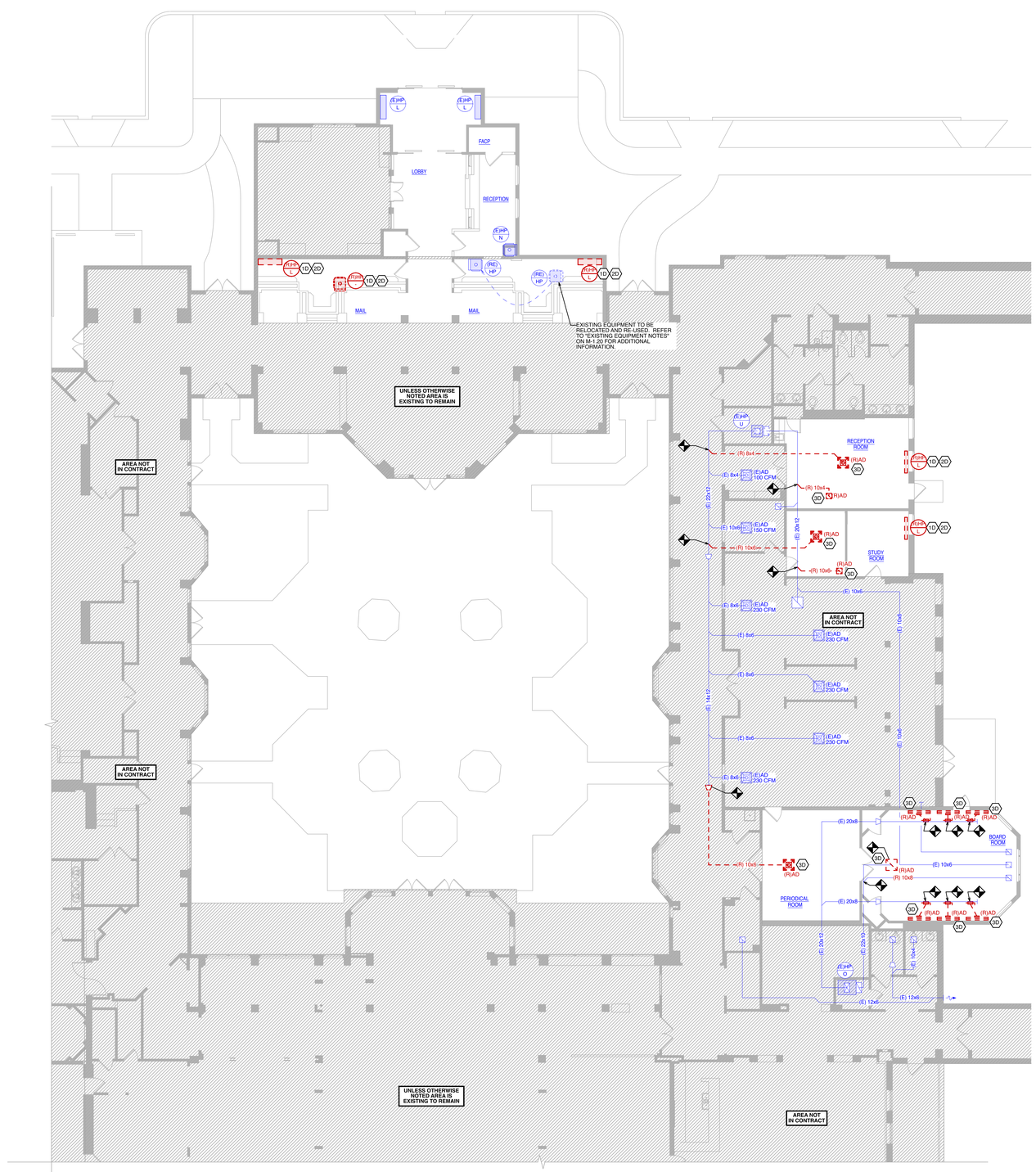
APPROVAL STAMPS



1 PARTIAL SECOND FLOOR DEMOLITION MECHANICAL PLAN

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

EXISTING CONDITIONS NOTE

1. THE INTENT IS TO DEMOLISH AND REMOVE ALL OF THE EXISTING MECHANICAL EQUIPMENT IN IT ENTIRETY.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. THE EXISTING CONDITIONS DOCUMENTED ON THESE DRAWINGS WERE BASED ON PLANS BY PERKINS EASTMAN ARCHITECTS, PC, DATED DECEMBER 20, 2000.
3. ALTHOUGH SOME AREAS OF THE PLAN HAVE BEEN MODIFIED PER OBSERVATIONS IN THE FIELD, THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM FINAL FIELD VERIFICATION OF ALL OF THE EXISTING CONDITIONS PRIOR TO COMMENCING WORK TO CONFIRM THE FOLLOWING.
   a. REFLECTED CEILING PLANS.
   b. CEILING HEIGHTS AND CONSTRUCTION.
   c. ALL EXISTING SUPPLY AND RETURN HEATING PIPING ROUTING/LOCATION, MATERIAL, SIZE, RISE/DROP LOCATIONS, POINT OF CONNECTION TO EXISTING TO REMAIN MECHANICAL EQUIPMENT, DIRECTION OF FLOW, ETC.

DRAWING SYMBOLS

(R)	MECHANICAL WORK TO BE DEMOLISHED
	MECHANICAL WORK TO BE DEMOLISHED
(E)	MECHANICAL WORK TO REMAIN
	EXISTING MECHANICAL WORK TO REMAIN
	NEW MECHANICAL WORK
	POINT OF DEMOLITION, CUT AND CAP EXISTING

DEMOLITION SHEET NOTES

1D MECHANICAL CONTRACTOR SHALL DEMOLISH AND REMOVE WATER SOURCE HEAT PUMP AND ASSOCIATED CONTROLS. CONTRACTOR SHALL REMOVE ALL ASSOCIATED W/SHP MECHANICAL PIPING AND CAP BACK TO MAIN. VERIFY EXACT LOCATION OF EXISTING HEAT AND EXISTING CONTROLS IN FIELD.

2D ELECTRICAL CONTRACTOR SHALL DISCONNECT AND SAFE-OFF EXISTING WATER SOURCE HEAT PUMP BRANCH CIRCUIT AND CAP BACK TO MAIN.

3D MECHANICAL CONTRACTOR SHALL DEMOLISH AND REMOVE AIR DEVICE AND CAP BACK DUCTWORK DO MAIN AS NOTED.

DEMOLITION GENERAL NOTES

1. REMOVE DESIGNATED ELEMENTS AS SHOWN ON DRAWINGS.
2. CAP AND SEAL DUCTS AT POINT OF DEMOLITION UNLESS RECONNECTED ELSEWHERE IN DOCUMENTS.
3. ALL PIPING, VALVES, FITTINGS, ETC. SHOWN OR DESCRIBED TO BE DEMOLISHED SHALL BE CUT BACK TO MAINS AND CAPPED UNLESS RECONNECTED ELSEWHERE IN THE DOCUMENTS. PATCH INSULATION AS REQUIRED.
4. ALL MECHANICAL EQUIPMENT AND ASSOCIATED APPURTENANCES SHOWN OR DESCRIBED SHALL BE REMOVED AND DEMOLISHED.
5. ALL ELECTRICAL WIRING SHALL BE DEMOLISHED BACK TO MAIN PANEL UNLESS INDICATED TO BE RECONNECTED.
6. COMPLY WITH APPLICABLE NFPA STANDARDS WHEN TORCH CUTTING. OBTAIN WRITTEN CONSENT OF OWNER PRIOR TO TORCH CUTTING.
7. PROVIDE, ERECT, AND MAINTAIN TEMPORARY PARTITIONS TO PREVENT SPREAD OF DUST, FUMES, NOISE, SMOKE, ETC. TO PROVIDE FOR CONTINUING OWNER OCCUPANCY.
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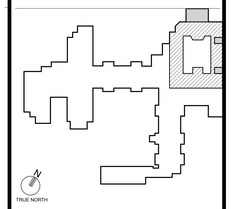
9. DEMOLISH IN AN ORDERLY AND CAREFUL MANNER TO PROTECT EXISTING ITEMS, WHICH ARE NOT INDICATED TO BE ALTERED OR ARE EXISTING TO REMAIN.
10. CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT BUILDING AREAS. MAINTAIN PROTECTED LEGAL EGRESS AND ACCESS AT ALL TIMES. KEEP REQUIRED EXIT WAYS UNENCUMBERED AT ALL TIMES AND ARTIFICIALLY LIGHTED.
11. ALL SYSTEMS CONTAINING REFRIGERANT SHALL BE EVACUATED FOR REFRIGERANT RECYCLING PRIOR TO DEMOLITION.
12. REMOVE AND DEMOLISH MATERIALS FROM THE SITE AS WORK PROGRESSES AND DISPOSE OF IN A PROPER, LEGAL MANNER.
13. WHERE EXISTING PIPING AND DUCTWORK INTERFERES WITH ANY NEW PIPING OR DUCTWORK, THE PIPING OR DUCTWORK SHALL BE REMOVED AND RELOCATED.
14. PRIOR TO ISSUING A BID, THE MECHANICAL CONTRACTOR SHALL WALK THE SITE TO CONFIRM THE EXTENT OF DEMOLITION.
15. COORDINATE ALL DEMOLITION WORK WITH FACILITIES MANAGEMENT PRIOR TO SHUT DOWN OF ANY SERVICE MAINS TO PERFORM THE REQUIRED WORK.
16. HVAC CONTRACTOR SHALL CUT CAP AND SAFE OFF ALL MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK AND DROP TO THE FLOOR FOR REMOVAL BY DEMOLITION SUBCONTRACTOR.

KEYPLAN



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STATE OF MARYLAND SCOTT A. WHITE No. 43252 PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE

Collington
A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

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DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

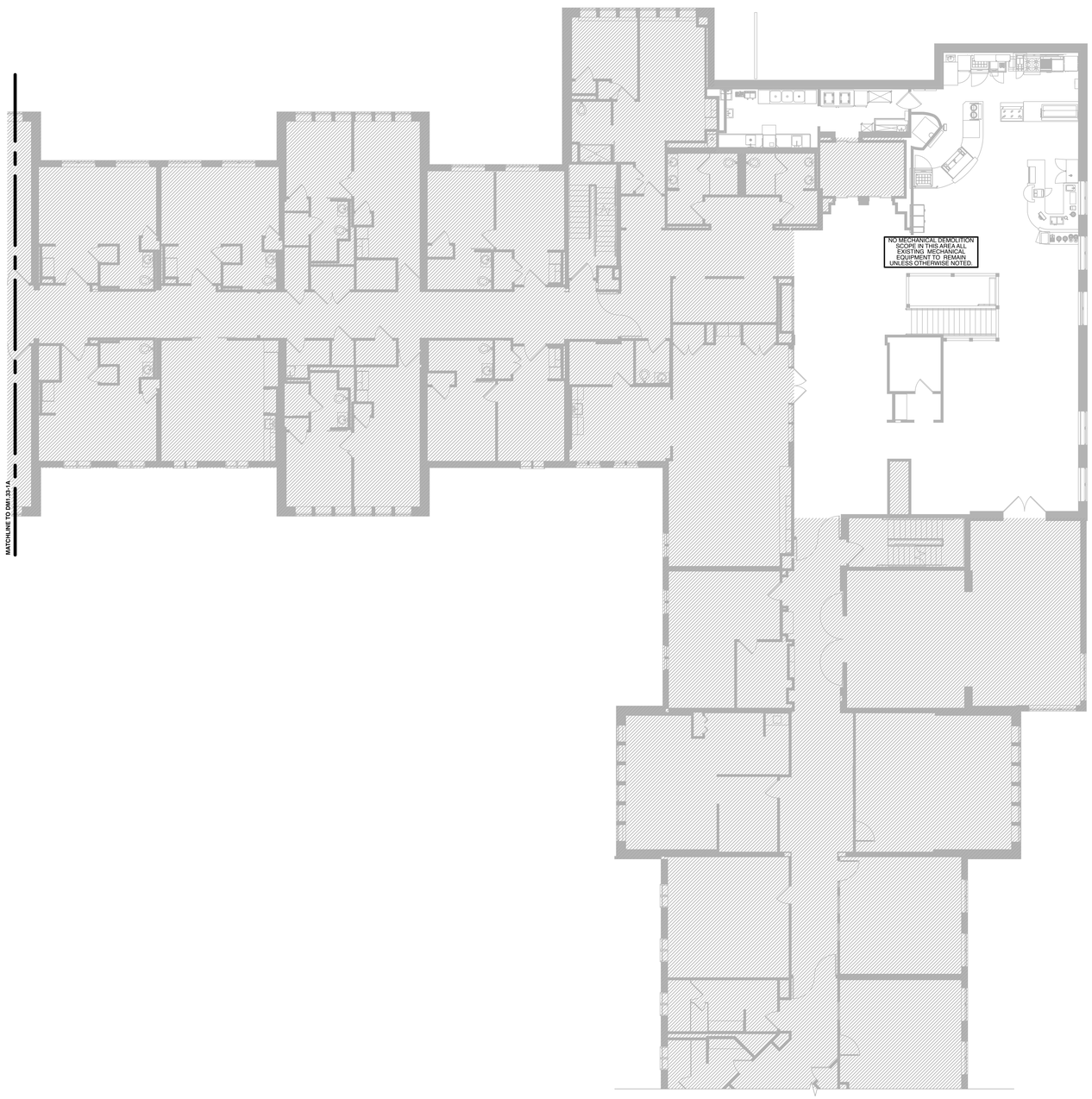
PARTIAL SECOND FLOOR DEMOLITION MECHANICAL PLAN

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING DM1.20-1A

APPROVAL STAMPS



THIRD FLOOR DEMOLITION MECHANICAL PLAN - AREA 'C'

1

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

DEMOLITION GENERAL NOTES

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11. ALL SYSTEMS CONTAINING REFRIGERANT SHALL BE EVACUATED FOR REFRIGERANT RECYCLING PRIOR TO DEMOLITION.
12. REMOVE AND DEMOLISH MATERIALS FROM THE SITE AS WORK PROGRESSES AND DISPOSE OF IN A PROPER, LEGAL MANNER.
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14. PRIOR TO ISSUING A BID, THE MECHANICAL CONTRACTOR SHALL WALK THE SITE TO CONFIRM THE EXTENT OF DEMOLITION.
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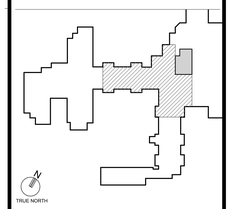
KEYPLAN



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PROJECT TITLE

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A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

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540.344.6664 ▪ Fax 540.343.6925
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DESIGNER :	DRAWN : LB/EP
ARCHITECT :	CHECKED : JB
ENGINEER : LB/EP	APPROVED : SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

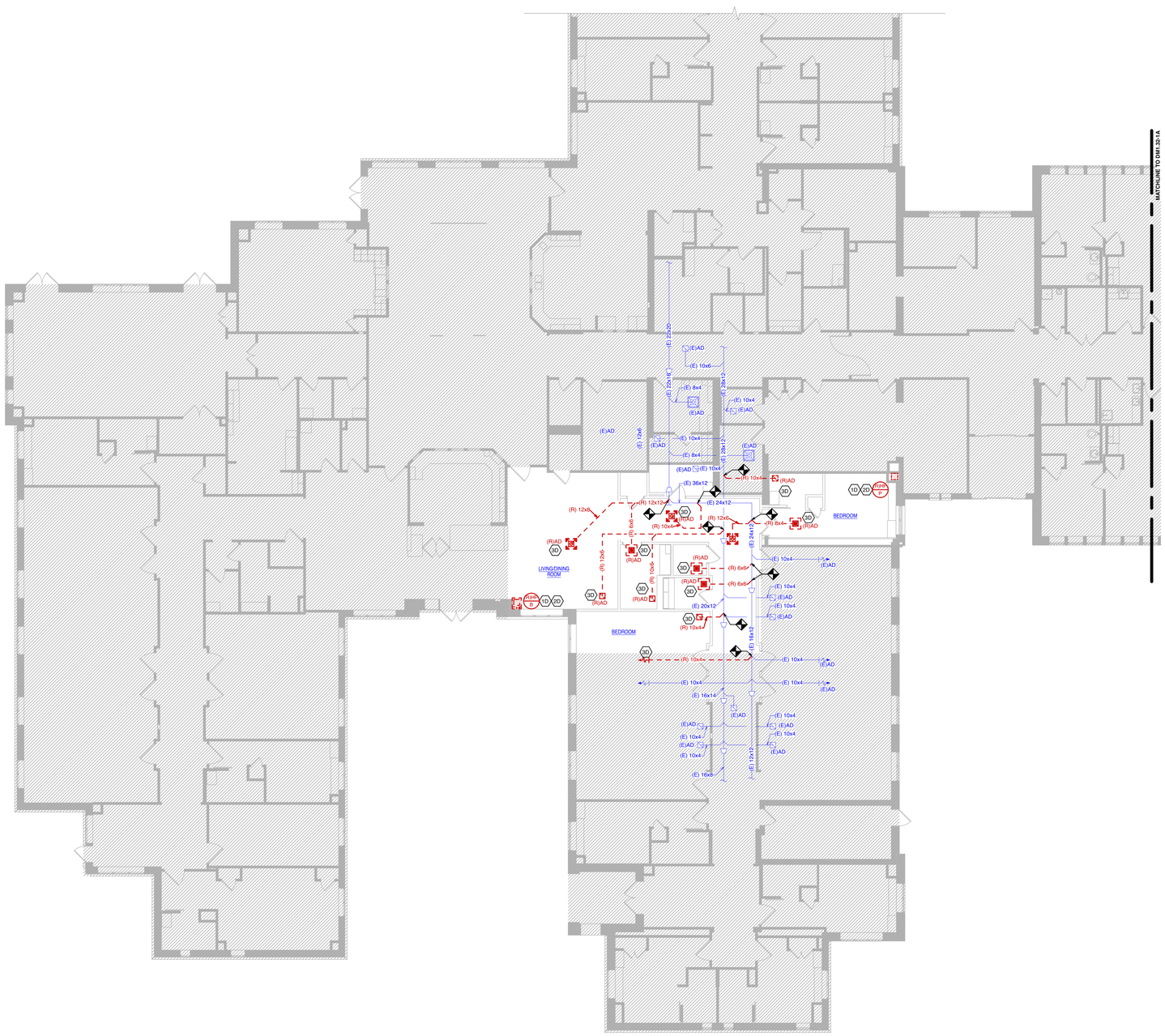
THIRD FLOOR DEMOLITION MECHANICAL PLAN - AREA 'C'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING DM1.32-1A

APPROVAL STAMPS



THIRD FLOOR DEMOLITION MECHANICAL PLAN - AREA 'D'

1

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

DEMOLITION GENERAL NOTES

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DEMOLITION SHEET NOTES

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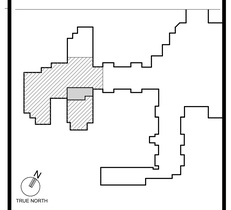

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DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

THIRD FLOOR DEMOLITION MECHANICAL PLAN - AREA 'D'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING DM1.33-1A

APPROVAL STAMPS

1 FOURTH FLOOR DEMOLITION MECHANICAL PLAN - AREA 'C'

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

DEMOLITION GENERAL NOTES

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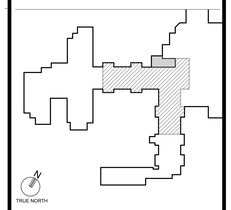

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ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FOURTH FLOOR DEMOLITION MECHANICAL PLAN - AREA 'C'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING DM1.42-1A

APPROVAL STAMPS

EXISTING CONDITIONS NOTE

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1. REMOVE DESIGNATED ELEMENTS AS SHOWN ON DRAWINGS.
2. CAP AND SEAL DUCTS AT POINT OF DEMOLITION UNLESS RECONNECTED ELSEWHERE IN DOCUMENTS.
3. ALL PIPING, VALVES, FITTINGS, ETC. SHOWN OR DESCRIBED TO BE DEMOLISHED SHALL BE CUT BACK TO MAINS AND CAPPED UNLESS RECONNECTED ELSEWHERE IN THE DOCUMENTS. PATCH INSULATION AS REQUIRED.
4. ALL MECHANICAL EQUIPMENT AND ASSOCIATED APPURTENANCES SHOWN OR DESCRIBED SHALL BE REMOVED AND DEMOLISHED.
5. ALL ELECTRICAL WIRING SHALL BE DEMOLISHED BACK TO MAIN PANEL UNLESS INDICATED TO BE RECONNECTED.
6. COMPLY WITH APPLICABLE NFPA STANDARDS WHEN TORCH CUTTING. OBTAIN WRITTEN CONSENT OF OWNER PRIOR TO TORCH CUTTING.
7. PROVIDE, ERECT, AND MAINTAIN TEMPORARY PARTITIONS TO PREVENT SPREAD OF DUST, FUMES, NOISE, SMOKE, ETC. TO PROVIDE FOR CONTINUING OWNER OCCUPANCY.
8. PROVIDE, ERECT, AND MAINTAIN TEMPORARY BARRIERS AND SECURITY DEVICES AS REQUIRED.
9. DEMOLISH IN AN ORDERLY AND CAREFUL MANNER TO PROTECT EXISTING ITEMS, WHICH ARE NOT INDICATED TO BE ALTERED OR ARE EXISTING TO REMAIN.
10. CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT BUILDING AREAS. MAINTAIN PROTECTED LEGAL EGRESS AND ACCESS AT ALL TIMES. KEEP REQUIRED EXIT WAYS UNENCUMBERED AT ALL TIMES AND ARTIFICIALLY LIGHTED.
11. ALL SYSTEMS CONTAINING REFRIGERANT SHALL BE EVACUATED FOR REFRIGERANT RECYCLING PRIOR TO DEMOLITION.
12. REMOVE AND DEMOLISH MATERIALS FROM THE SITE AS WORK PROGRESSES AND DISPOSE OF IN A PROPER, LEGAL MANNER.
13. WHERE EXISTING PIPING AND DUCTWORK INTERFERES WITH ANY NEW PIPING OR DUCTWORK, THE PIPING OR DUCTWORK SHALL BE REMOVED AND RELOCATED.
14. PRIOR TO ISSUING A BID, THE MECHANICAL CONTRACTOR SHALL WALK THE SITE TO CONFIRM THE EXTENT OF DEMOLITION.
15. COORDINATE ALL DEMOLITION WORK WITH FACILITIES MANAGEMENT PRIOR TO SHUT DOWN OF ANY SERVICE MAINS TO PERFORM THE REQUIRED WORK.
16. HVAC CONTRACTOR SHALL CUT CAP AND SAFE OFF ALL MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK AND DROP TO THE FLOOR FOR REMOVAL BY DEMOLITION SUBCONTRACTOR.

DRAWING SYMBOLS

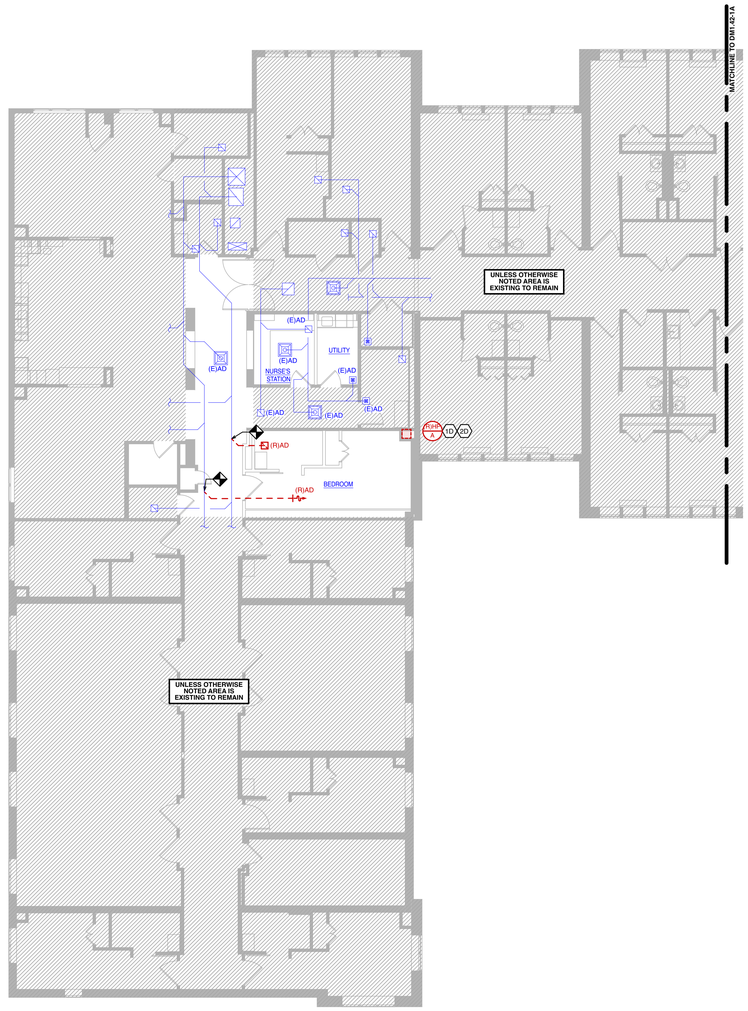
(R)	MECHANICAL WORK TO BE DEMOLISHED
	MECHANICAL WORK TO BE DEMOLISHED
(E)	MECHANICAL WORK TO REMAIN
	EXISTING MECHANICAL WORK TO REMAIN
	NEW MECHANICAL WORK
	POINT OF DEMOLITION, CUT AND CAP EXISTING

DEMOLITION SHEET NOTES

1D MECHANICAL CONTRACTOR SHALL DEMOLISH AND REMOVE WATER SOURCE HEAT PUMP AND ASSOCIATED CONTROLS. CONTRACTOR SHALL REMOVE ALL ASSOCIATED WSHP MECHANICAL PIPING AND CAP BACK TO MAIN. VERIFY EXACT LOCATION OF EXISTING HEAT AND EXISTING CONTROLS IN FIELD.

2D ELECTRICAL CONTRACTOR SHALL DISCONNECT AND SAFE-OFF EXISTING WATER SOURCE HEAT PUMP BRANCH CIRCUIT AND CAP BACK TO MAIN.

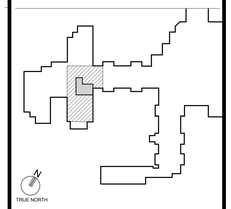
3D MECHANICAL CONTRACTOR SHALL DEMOLISH AND REMOVE AIR DEVICE AND CAP BACK DUCTWORK DO MAIN AS NOTED.



1 FOURTH FLOOR DEMOLITION MECHANICAL PLAN - AREA 'D'

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

KEYPLAN



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STATE OF MARYLAND SCOTT A. WHITE No. 43252 PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027.

PROJECT TITLE

Collington A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 305 South Jefferson Street
Roanoke, Virginia 24011.2003
540.344.6664 ▪ Fax 540.343.6925
www.sfcs.com

DESIGNER :	DRAWN : LB/EP
ARCHITECT :	CHECKED : JB
ENGINEER : LB/EP	APPROVED : SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

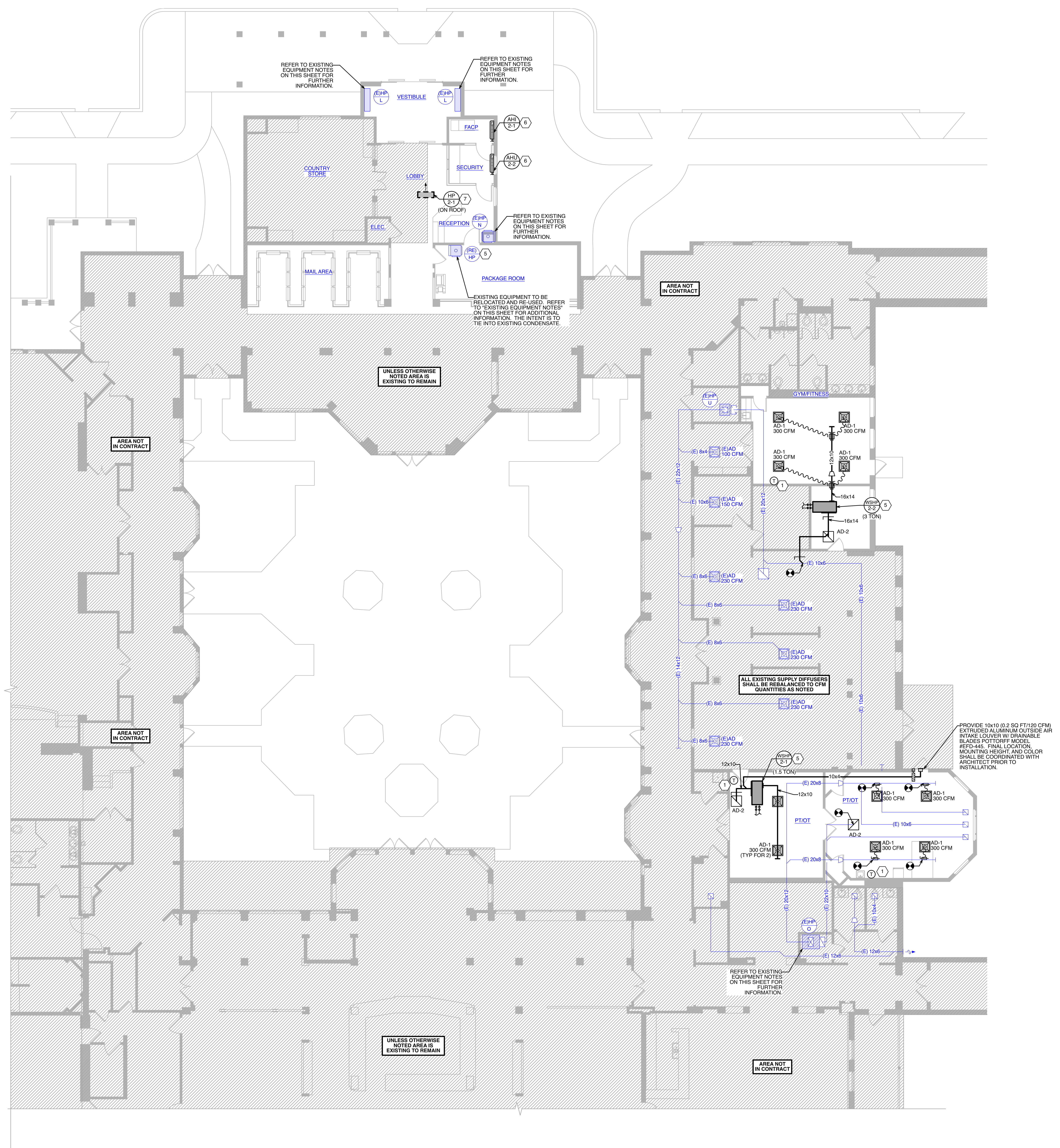
FOURTH FLOOR DEMOLITION MECHANICAL PLAN - AREA 'D'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING DM1.43-1A

APPROVAL STAMPS



1 PARTIAL SECOND FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1' - 0"

SHEET NOTES

1. PROVIDE NEW WALL MOUNTED CONTROLLER/ SENSOR. FINAL CONTROLLER TO BE DETERMINED.
2. CONTRACTOR SHALL ENSURE A MINIMUM 10'-0" HORIZONTAL SEPARATION IS MAINTAINED BETWEEN ALL EXHAUST AIR OUTLETS AND INTAKE AIR INLETS. LOCATION OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH ARCHITECT. REFER TO ARCHITECTURAL ELEVATIONS FOR FURTHER INFORMATION.
3. PROVIDE X-VENT, SINGLE, DOUBLE, OR TRIPLE TO TERMINATE EXAUST DUCT WITH INTEGRAL BACKDRAFT DAMPER, COORDINATE FINAL LOCATION, COLOR, AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO TYPICAL UNIT (M1.80 THRU M1.84) PLANS FOR CONTINUATION.
4. 4"Ø DRYER VENT FROM DRYER TO WALL TERMINATION. COORDINATE EXACT LOCATION OF DRYER VENT CONNECTION WITH ARCHITECTURAL PLANS. SIZE AND INSTALL RIGID DUCT DRYER VENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS COORDINATE FINAL ROUTING OF EXHAUST DUCTWORK WITH ALL TRADES PRIOR TO INSTALLATION. PROVIDE FLUSH MOUNTED DRYER BOX AS MANUFACTURED BY "GUY GREY" (MODEL NO.:DB425). PROVIDE BOOSTER FAN IF VENT LENGTH EXCEEDS MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING ITEMS FOR ALL WATER SOURCE HEAT PUMPS.
   - PROVIDE A WATER SENSING SWITCH LOCATED IN THE PAN OR UNIT. THE SWITCH SHALL DE-ENERGIZE THE HEAT PUMP AND SIGNAL AN ALARM SHOULD THE WATER BE SENSED.
   - ENSURE ALL MANUFACTURES REQUIRED MAINTENANCE CLEARANCES ARE MET.
   - UNIT DESIGNATION SHALL MATCH EACH SPECIFIC ROOM NUMBER.
   - BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.
   - PROVIDE NEW SELF-BALANCING HOSE KIT, EXTEND AND CONNECT CWS & CWR TO MAINS IN CORRIDOR. REFER TO MECHANICAL FLOOR PLANS FOR CONTINUATION. REFER TO DETAIL 4/ M5.0 FOR FURTHER INFORMATION. SHUT OFF VALVES SHALL BE LOCATED BELOW THE FIRE RATED FLOOR/ CEILING ASSEMBLY. PROVIDE ACCESS PANEL (MIN 24"x24") COORDINATE EXACT LOCATION WITH ARCHITECT.
6. REFER TO THE FOLLOWING NOTES FOR EACH AHU:
   - RUN REFRIGERANT PIPING FROM INDOOR AHU TO CORRESPONDING OUTDOOR UNIT ON ROOF. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL RUNS WITH ARCHITECT.
   - CONDENSATE SHALL TIE INTO NEAREST CONDENSATE LINE. REFER TO DRAWINGS FOR LOCATION OF CONDENSATE LINES. PROVIDE CONDENSATE PUMP IF REQUIRED. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
   - COORDINATE THE FINAL LOCATION OF AHU W/ ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE CLEARANCES.
7. REFER TO THE NOTES BELOW FOR EACH HP:
   - RUN REFRIGERANT PIPING FROM OUTDOOR UNIT TO CORRESPONDING INDOOR UNIT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
   - PROVIDE EQUIPMENT SUPPORT RAILS FOR EACH HP SECURE TO ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   - COORDINATE FINAL LOCATION OF OUTDOOR UNITS WITH ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE AND SERVICE CLEARANCES.

GENERAL NOTES

1. ALL EXHAUST AIR AND INTAKE AIR TERMINATIONS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, 2018 INTERNATIONAL MECHANICAL CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. FINAL LOCATION OF ALL TERMINATIONS SHALL BE FIELD COORDINATED AND SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS AND 10 FEET FROM MECHANICAL AIR INTAKES UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PROVIDE A FIRE DAMPER AND ACCESS PANEL AT ALL FIRE RATED CEILING AND WALL PENETRATIONS. ALL REQUIRED CEILING RADIATION DAMPERS SHALL BE WITH APPROVED UL RATING. COORDINATE ALL LOCATIONS WITH ARCHITECT.
3. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ALL MECHANICAL EQUIPMENT TO ENSURE THAT THE EQUIPMENT IS FULLY ACCESSIBLE FOR SERVICE AND EVENTUAL REPLACEMENT. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND INSTALLATION MANUALS FOR ALL MECHANICAL EQUIPMENT EARLY IN THE PROJECT FOR ENGINEER AND ARCHITECT'S REVIEW.
5. CONTRACTOR SHALL PROVIDE A SET OF FULLY COORDINATED SHOP DRAWINGS, INCLUDING ALL DUCTWORK AND HVAC PIPING (I.E. CONDENSATE, REFRIGERANT PIPING, ETC.), FOR REVIEW AND APPROVAL. COORDINATE ALL MECHANICAL WORK WITH PLUMBING WORK, ELECTRICAL WORK, STRUCTURE, FIRE SUPPRESSION WORK AND ALL OTHER TRADES PRIOR TO SUBMITTAL FOR REVIEW.
6. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM.
7. ALL DUCTWORK SIZES ARE SHOWN WITH CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED AS INDICATED IN THE "MATERIAL AND INSULATION SCHEDULE".
8. FINAL LOCATION, ELEVATION, COLOR AND FINISH OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR FINAL LOCATIONS, ELEVATIONS AND ALIGNMENT OF ALL VENTS ON EXTERIOR WALLS.
9. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD #8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
10. ALL SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL RETURN AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK THAT IS INSTALLED IN JOIST SPACE ON THE TOP FLOOR IS WITHIN THE THERMAL ENVELOPE AND SHALL BE INSULATED SIMILARLY. INSULATION WORK SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO "MATERIAL AND INSULATION SCHEDULE" FOR FURTHER INFORMATION.
11. ALL BRANCH DUCTWORK IN COMMON AREAS, CORRIDORS AND AMENITY SPACES SHALL HAVE FULLY ACCESSIBLE BALANCING DAMPERS. IF BALANCING DAMPERS ARE LOCATED ABOVE AN INACCESSIBLE SPACE, CONTRACTOR SHALL PROVIDE ACCESS PANEL (MIN. 24"x24") FOR ACCESS. COORDINATE FINAL LOCATION OF ALL ACCESS PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
12. COORDINATE FINAL LOCATION OF ALL SUPPLY, RETURN AND EXHAUST AIR DEVICES WITH LIGHTING PLANS, FIRE ALARM DEVICE LOCATIONS, SPRINKLER HEAD LOCATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS.
13. ALL DUCTWORK CHASE/SHAFT FINAL LOCATIONS, SIZES AND ALL SHAFT REQUIREMENTS SHALL BE FULLY COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
14. DUCTWORK SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE STRUCTURAL FRAMING AND DECK. THE INTENT IS TO MAINTAIN CEILING HEIGHTS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, WHEN POSSIBLE.
15. DRAWING PLANS, SCHEMATIC AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEMS. INDICATED DUCT LOCATION, CONFIGURATIONS AND ARRANGEMENTS ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO PRODUCE A COMPLETE SET OF COORDINATION DRAWINGS INCLUDING ALL DUCT ELEVATIONS, CHANGES IN DIRECTION, TRANSITIONS AND ELEVATION CHANGES REQUIRED FOR A COMPLETELY COORDINATED INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
16. ALL INDICATED DOOR UNDERCUTS SHALL BE MINIMUM OF 3/4" HIGH. COORDINATE ALL DOOR UNDERCUTS WITH ARCHITECT.
17. CONTRACTOR SHALL PROVIDED REQUIRED DUCT FLANGES AND TRANSITION SO THAT ALL TERMINATIONS TO GRILLES, REGISTERS, AND DIFFUSERS ARE SEALED. CONTRACTOR SHALL ENSURE THAT ALL AIR DEVICES ARE NOT SCEWED OR FASTENED DIRECTLY TO THE DRYWALL. ALL TRANSITIONS SHALL BE SEALED PER ENERGY STAR REQUIREMENTS.

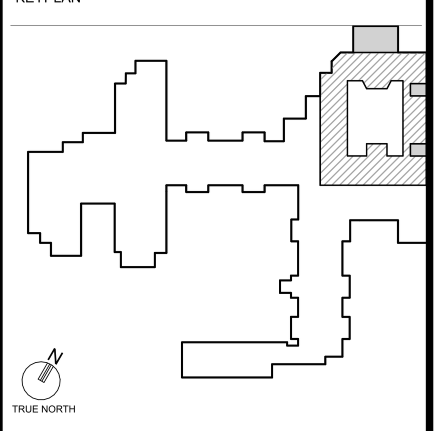
DRAWING SYMBOLS

(E)	EXISTING MECHANICAL EQUIPMENT TO REMAIN
(R)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
(N)	NEW MECHANICAL EQUIPMENT
thin blue line	EXISTING MECHANICAL EQUIPMENT TO REMAIN
red dashed line	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
heavy black line	NEW MECHANICAL EQUIPMENT
⊗	POINT OF CONNECTION, EXTEND AND CONNECT TO EXISTING
◆	POINT OF DEMOLITION, CUT AND CAP EXISTING

EXISTING EQUIPMENT NOTES

1. ALL EXISTING HVAC EQUIPMENT TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING LUBRICATION, ADJUSTMENT OR REPLACEMENT OF PARTS, REPLACEMENT OF VALUES AND GAUGES AND CHECKING FOR PROPER OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD MAJOR WORK ON THE EQUIPMENT BE REQUIRED. THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
2. ALL EXISTING CONTROLS TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING CALIBRATION, ADJUSTMENT AND VERIFICATION OF SEQUENCE OF OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD CONTROLS NEED REPLACEMENT OR OTHER SIGNIFICANT REPAIRS THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
3. CONTRACTOR SHALL CARRY A CONTINGENCY IN THEIR PRICE TO PERFORM THESE REPAIRS. IF REPAIR WORK IS APPROVED, THE CONTRACTOR SHALL DRAW AGAINST CONTINGENCY. IF REPAIR WORK IS NOT APPROVED / REQUIRED, CONTINGENCY SHALL BE CREDITED BACK TO OWNER.

KEYPLAN



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STATE OF MARYLAND · SCOTT A. WHITE · No. 43252 · PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE
Collington
A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

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Planning
Interiors
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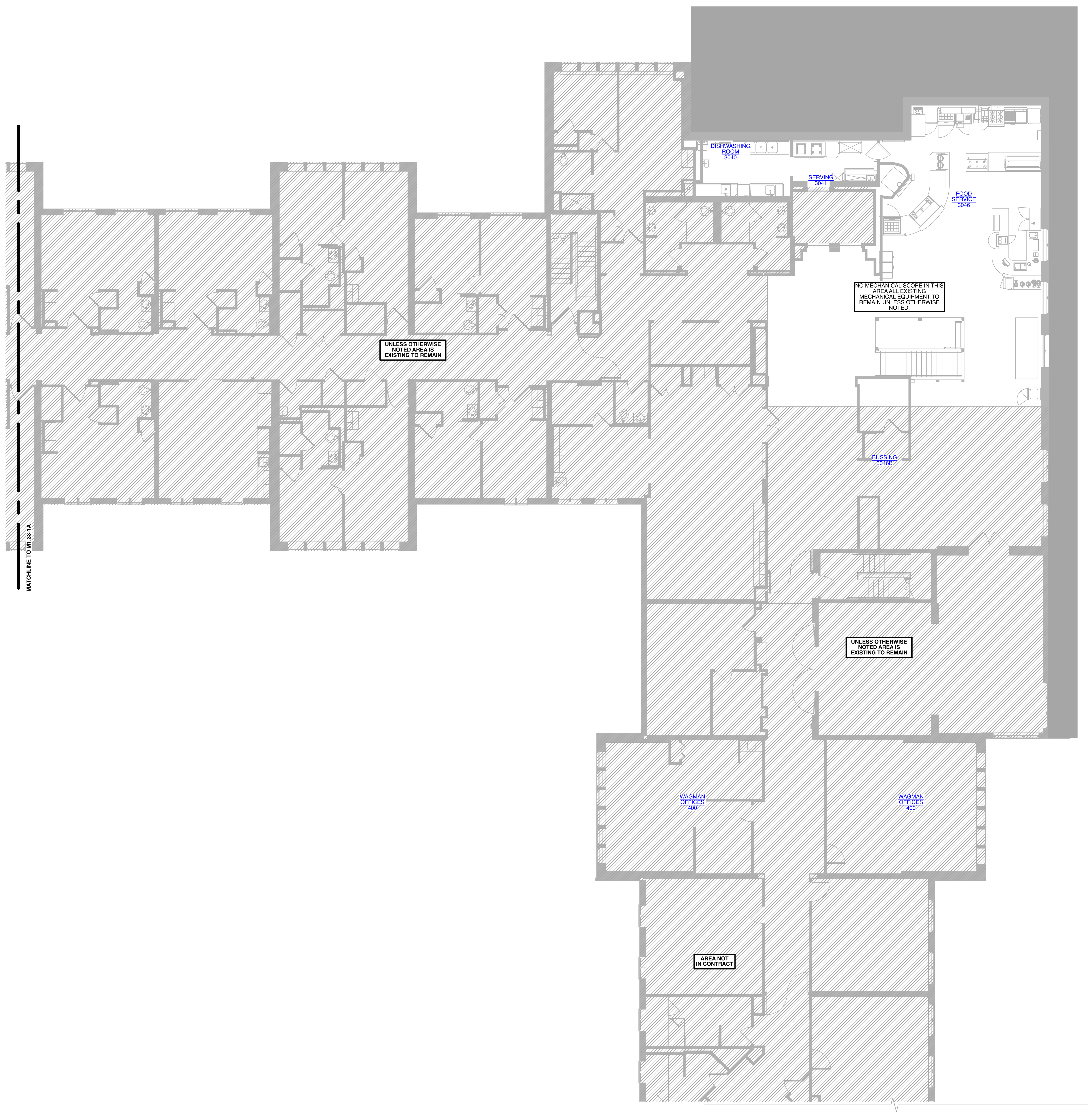
DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
PARTIAL SECOND FLOOR MECHANICAL PLAN

DATE: MAY 28, 2026
COMM. NO. 18135.00
DRAWING M1.20-1A

APPROVAL STAMPS



1 THIRD FLOOR MECHANICAL PLAN - AREA 'C'

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

SHEET NOTES

1. PROVIDE NEW WALL MOUNTED CONTROLLER/ SENSOR. FINAL CONTROLLER TO BE DETERMINED.
2. CONTRACTOR SHALL ENSURE A MINIMUM 10'-0" HORIZONTAL SEPARATION IS MAINTAINED BETWEEN ALL EXHAUST AIR OUTLETS AND INTAKE AIR INLETS. LOCATION OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH ARCHITECT. REFER TO ARCHITECTURAL ELEVATIONS FOR FURTHER INFORMATION.
3. PROVIDE X-VENT, SINGLE, DOUBLE, OR TRIPLE TO TERMINATE EXAUST DUCT WITH INTEGRAL BACKDRAFT DAMPER, COORDINATE FINAL LOCATION, COLOR, AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO TYPICAL UNIT (M1.80 THRU M1.84) PLANS FOR CONTINUATION.
4. 4"Ø DRYER VENT FROM DRYER TO WALL TERMINATION. COORDINATE EXACT LOCATION OF DRYER VENT CONNECTION WITH ARCHITECTURAL PLANS. SIZE AND INSTALL RIGID DUCT DRYER VENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS COORDINATE FINAL ROUTING OF EXHAUST DUCTWORK WITH ALL TRADES PRIOR TO INSTALLATION. PROVIDE FLUSH MOUNTED DRYER BOX AS MANUFACTURED BY "GUY GREY" (MODEL NO.:DB425). PROVIDE BOOSTER FAN IF VENT LENGTH EXCEEDS MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING ITEMS FOR ALL WATER SOURCE HEAT PUMPS.
   - PROVIDE A WATER SENSING SWITCH LOCATED IN THE PAN OR UNIT. THE SWITCH SHALL DE-ENERGIZE THE HEAT PUMP AND SIGNAL AN ALARM SHOULD THE WATER BE SENSED.
   - ENSURE ALL MANUFACTURES REQUIRED MAINTENANCE CLEARANCES ARE MET.
   - UNIT DESIGNATION SHALL MATCH EACH SPECIFIC ROOM NUMBER.
   - BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.
   - PROVIDE NEW SELF-BALANCING HOSE KIT, EXTEND AND CONNECT CWS & CWR TO MAINS IN CORRIDOR. REFER TO MECHANICAL FLOOR PLANS FOR CONTINUATION. REFER TO DETAIL 4/ M5.0 FOR FURTHER INFORMATION. SHUT OFF VALVES SHALL BE LOCATED BELOW THE FIRE RATED FLOOR/ CEILING ASSEMBLY. PROVIDE ACCESS PANEL (MIN 24"x24") COORDINATE EXACT LOCATION WITH ARCHITECT.
6. REFER TO THE FOLLOWING NOTES FOR EACH AHU:
   - RUN REFRIGERANT PIPING FROM INDOOR AHU TO CORRESPONDING OUTDOOR UNIT ON ROOF. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL RUNS WITH ARCHITECT.
   - CONDENSATE SHALL TIE INTO NEAREST CONDENSATE LINE. REFER TO DRAWINGS FOR LOCATION OF CONDENSATE LINES. PROVIDE CONDENSATE PUMP IF REQUIRED. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
   - COORDINATE THE FINAL LOCATION OF AHU W/ ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE CLEARANCES.
7. REFER TO THE NOTES BELOW FOR EACH HP:
   - RUN REFRIGERANT PIPING FROM OUTDOOR UNIT TO CORRESPONDING INDOOR UNIT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
   - PROVIDE EQUIPMENT SUPPORT RAILS FOR EACH HP SECURE TO ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   - COORDINATE FINAL LOCATION OF OUTDOOR UNITS WITH ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE AND SERVICE CLEARANCES.

GENERAL NOTES

1. ALL EXHAUST AIR AND INTAKE AIR TERMINATIONS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, 2018 INTERNATIONAL MECHANICAL CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. FINAL LOCATION OF ALL TERMINATIONS SHALL BE FIELD COORDINATED AND SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS AND 10 FEET FROM MECHANICAL AIR INTAKES UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PROVIDE A FIRE DAMPER AND ACCESS PANEL AT ALL FIRE RATED CEILING AND WALL PENETRATIONS. ALL REQUIRED CEILING RADIATION DAMPERS SHALL BE WITH APPROVED UL RATING. COORDINATE ALL LOCATIONS WITH ARCHITECT.
3. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ALL MECHANICAL EQUIPMENT TO ENSURE THAT THE EQUIPMENT IS FULLY ACCESSIBLE FOR SERVICE AND EVENTUAL REPLACEMENT. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND INSTALLATION MANUALS FOR ALL MECHANICAL EQUIPMENT EARLY IN THE PROJECT FOR ENGINEER AND ARCHITECT'S REVIEW.
5. CONTRACTOR SHALL PROVIDE A SET OF FULLY COORDINATED SHOP DRAWINGS, INCLUDING ALL DUCTWORK AND HVAC PIPING (I.E. CONDENSATE, REFRIGERANT PIPING, ETC.), FOR REVIEW AND APPROVAL. COORDINATE ALL MECHANICAL WORK WITH PLUMBING WORK, ELECTRICAL WORK, STRUCTURE, FIRE SUPPRESSION WORK AND ALL OTHER TRADES PRIOR TO SUBMITTAL FOR REVIEW.
6. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM.
7. ALL DUCTWORK SIZES ARE SHOWN WITH CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED AS INDICATED IN THE "MATERIAL AND INSULATION SCHEDULE".
8. FINAL LOCATION, ELEVATION, COLOR AND FINISH OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR FINAL LOCATIONS, ELEVATIONS AND ALIGNMENT OF ALL VENTS ON EXTERIOR WALLS.
9. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD #8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
10. ALL SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL RETURN AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK THAT IS INSTALLED IN JOIST SPACE ON THE TOP FLOOR IS WITHIN THE THERMAL ENVELOPE AND SHALL BE INSULATED SIMILARLY. INSULATION WORK SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO "MATERIAL AND INSULATION SCHEDULE" FOR FURTHER INFORMATION.
11. ALL BRANCH DUCTWORK IN COMMON AREAS, CORRIDORS AND AMENITY SPACES SHALL HAVE FULLY ACCESSIBLE BALANCING DAMPERS. IF BALANCING DAMPERS ARE LOCATED ABOVE AN INACCESSIBLE SPACE, CONTRACTOR SHALL PROVIDE ACCESS PANEL (MIN. 24"x24") FOR ACCESS. COORDINATE FINAL LOCATION OF ALL ACCESS PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
12. COORDINATE FINAL LOCATION OF ALL SUPPLY, RETURN AND EXHAUST AIR DEVICES WITH LIGHTING PLANS, FIRE ALARM DEVICE LOCATIONS, SPRINKLER HEAD LOCATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS.
13. ALL DUCTWORK CHASE/SHAFT FINAL LOCATIONS, SIZES AND ALL SHAFT REQUIREMENTS SHALL BE FULLY COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
14. DUCTWORK SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE STRUCTURAL FRAMING AND DECK. THE INTENT IS TO MAINTAIN CEILING HEIGHTS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, WHEN POSSIBLE.
15. DRAWING PLANS, SCHEMATIC AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEMS. INDICATED DUCT LOCATION, CONFIGURATIONS AND ARRANGEMENTS ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO PRODUCE A COMPLETE SET OF COORDINATION DRAWINGS INCLUDING ALL DUCT ELEVATIONS, CHANGES IN DIRECTION, TRANSITIONS AND ELEVATION CHANGES REQUIRED FOR A COMPLETELY COORDINATED INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
16. ALL INDICATED DOOR UNDERCUTS SHALL BE MINIMUM OF 3/4" HIGH. COORDINATE ALL DOOR UNDERCUTS WITH ARCHITECT.
17. CONTRACTOR SHALL PROVIDED REQUIRED DUCT FLANGES AND TRANSITION SO THAT ALL TERMINATIONS TO GRILLES, REGISTERS, AND DIFFUSERS ARE SEALED. CONTRACTOR SHALL ENSURE THAT ALL AIR DEVICES ARE NOT SCEWED OR FASTENED DIRECTLY TO THE DRYWALL. ALL TRANSITIONS SHALL BE SEALED PER ENERGY STAR REQUIREMENTS.

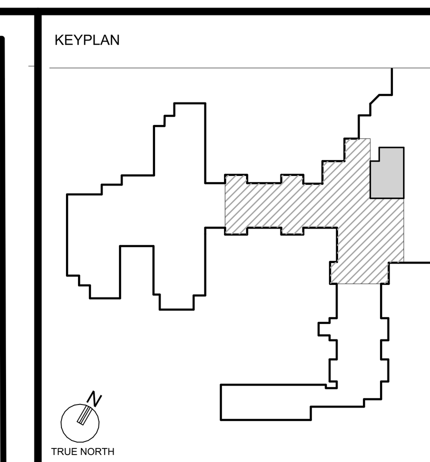
DRAWING SYMBOLS

(E)	EXISTING MECHANICAL EQUIPMENT TO REMAIN
(R)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
(N)	NEW MECHANICAL EQUIPMENT
thin line	EXISTING MECHANICAL EQUIPMENT TO REMAIN
dashed line	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
heavy line	NEW MECHANICAL EQUIPMENT
⊗	POINT OF CONNECTION, EXTEND AND CONNECT TO EXISTING
◆	POINT OF DEMOLITION, CUT AND CAP EXISTING

EXISTING EQUIPMENT NOTES

1. ALL EXISTING HVAC EQUIPMENT TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING LUBRICATION, ADJUSTMENT OR REPLACEMENT OF PARTS, REPLACEMENT OF VALUES AND GAUGES AND CHECKING FOR PROPER OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD MAJOR WORK ON THE EQUIPMENT BE REQUIRED. THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
2. ALL EXISTING CONTROLS TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING CALIBRATION, ADJUSTMENT AND VERIFICATION OF SEQUENCE OF OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD CONTROLS NEED REPLACEMENT OR OTHER SIGNIFICANT REPAIRS THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
3. CONTRACTOR SHALL CARRY A CONTINGENCY IN THEIR PRICE TO PERFORM THESE REPAIRS. IF REPAIR WORK IS APPROVED, THE CONTRACTOR SHALL DRAW AGAINST CONTINGENCY. IF REPAIR WORK IS NOT APPROVED / REQUIRED, CONTINGENCY SHALL BE CREDITED BACK TO OWNER.

KEYPLAN



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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE

Collington

A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

SFCS Architecture Engineering Planning Interiors

SFCS Inc. ▪ 305 South Jefferson Street
Roanoke, Virginia 24011.2003
540.344.6664 ▪ Fax 540.343.6925
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DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

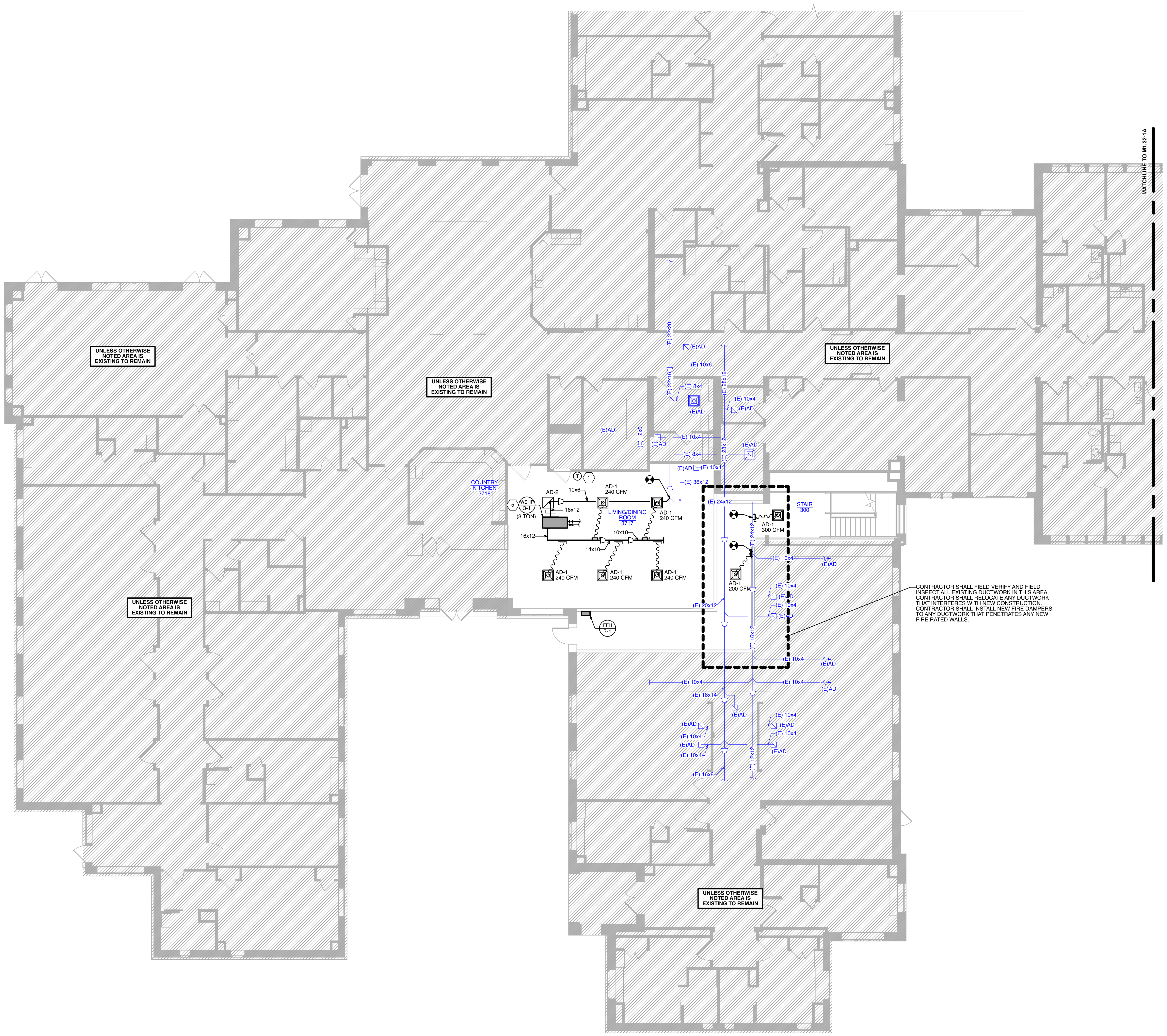
THIRD FLOOR MECHANICAL PLAN - AREA 'C'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING M1.32-1A

APPROVAL STAMPS



1 THIRD FLOOR MECHANICAL PLAN - AREA 'D'
SCALE: 1/8" = 1' - 0"

SHEET NOTES

1. PROVIDE NEW WALL MOUNTED CONTROLLER/ SENSOR. FINAL CONTROLLER TO BE DETERMINED.
2. CONTRACTOR SHALL ENSURE A MINIMUM 10'-0" HORIZONTAL SEPARATION IS MAINTAINED BETWEEN ALL EXHAUST AIR OUTLETS AND INTAKE AIR INLETS. LOCATION OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH ARCHITECT. REFER TO ARCHITECTURAL ELEVATIONS FOR FURTHER INFORMATION.
3. PROVIDE X-VENT, SINGLE, DOUBLE, OR TRIPLE TO TERMINATE EXAUST DUCT WITH INTEGRAL BACKDRAFT DAMPER, COORDINATE FINAL LOCATION, COLOR, AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO TYPICAL UNIT (M1.80 THRU M1.84) PLANS FOR CONTINUATION.
4. 4"Ø DRYER VENT FROM DRYER TO WALL TERMINATION. COORDINATE EXACT LOCATION OF DRYER VENT CONNECTION WITH ARCHITECTURAL PLANS. SIZE AND INSTALL RIGID DUCT DRYER VENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS COORDINATE FINAL ROUTING OF EXHAUST DUCTWORK WITH ALL TRADES PRIOR TO INSTALLATION. PROVIDE FLUSH MOUNTED DRYER BOX AS MANUFACTURED BY "GUY GREY" (MODEL NO.:DB425). PROVIDE BOOSTER FAN IF VENT LENGTH EXCEEDS MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING ITEMS FOR ALL WATER SOURCE HEAT PUMPS.
   - PROVIDE A WATER SENSING SWITCH LOCATED IN THE PAN OR UNIT. THE SWITCH SHALL DE-ENERGIZE THE HEAT PUMP AND SIGNAL AN ALARM SHOULD THE WATER BE SENSED.
   - ENSURE ALL MANUFACTURES REQUIRED MAINTENANCE CLEARANCES ARE MET.
   - UNIT DESIGNATION SHALL MATCH EACH SPECIFIC ROOM NUMBER.
   - BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.
   - PROVIDE NEW SELF-BALANCING HOSE KIT, EXTEND AND CONNECT CWS & CWR TO MAINS IN CORRIDOR. REFER TO MECHANICAL FLOOR PLANS FOR CONTINUATION. REFER TO DETAIL 4/ M5.0 FOR FURTHER INFORMATION. SHUT OFF VALVES SHALL BE LOCATED BELOW THE FIRE RATED FLOOR/ CEILING ASSEMBLY. PROVIDE ACCESS PANEL (MIN 24"x24") COORDINATE EXACT LOCATION WITH ARCHITECT.
6. REFER TO THE FOLLOWING NOTES FOR EACH AHU:
   - RUN REFRIGERANT PIPING FROM INDOOR AHU TO CORRESPONDING OUTDOOR UNIT ON ROOF. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL RUNS WITH ARCHITECT.
   - CONDENSATE SHALL TIE INTO NEAREST CONDENSATE LINE. REFER TO DRAWINGS FOR LOCATION OF CONDENSATE LINES. PROVIDE CONDENSATE PUMP IF REQUIRED. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
   - COORDINATE THE FINAL LOCATION OF AHU W/ ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE CLEARANCES.
7. REFER TO THE NOTES BELOW FOR EACH HP:
   - RUN REFRIGERANT PIPING FROM OUTDOOR UNIT TO CORRESPONDING INDOOR UNIT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
   - PROVIDE EQUIPMENT SUPPORT RAILS FOR EACH HP SECURE TO ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   - COORDINATE FINAL LOCATION OF OUTDOOR UNITS WITH ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE AND SERVICE CLEARANCES.

GENERAL NOTES

1. ALL EXHAUST AIR AND INTAKE AIR TERMINATIONS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, 2018 INTERNATIONAL MECHANICAL CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. FINAL LOCATION OF ALL TERMINATIONS SHALL BE FIELD COORDINATED AND SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS AND 10 FEET FROM MECHANICAL AIR INTAKES UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PROVIDE A FIRE DAMPER AND ACCESS PANEL AT ALL FIRE RATED CEILING AND WALL PENETRATIONS. ALL REQUIRED CEILING RADIATION DAMPERS SHALL BE WITH APPROVED UL RATING. COORDINATE ALL LOCATIONS WITH ARCHITECT.
3. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ALL MECHANICAL EQUIPMENT TO ENSURE THAT THE EQUIPMENT IS FULLY ACCESSIBLE FOR SERVICE AND EVENTUAL REPLACEMENT. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND INSTALLATION MANUALS FOR ALL MECHANICAL EQUIPMENT EARLY IN THE PROJECT FOR ENGINEER AND ARCHITECT'S REVIEW.
5. CONTRACTOR SHALL PROVIDE A SET OF FULLY COORDINATED SHOP DRAWINGS, INCLUDING ALL DUCTWORK AND HVAC PIPING (I.E. CONDENSATE, REFRIGERANT PIPING, ETC.), FOR REVIEW AND APPROVAL. COORDINATE ALL MECHANICAL WORK WITH PLUMBING WORK, ELECTRICAL WORK, STRUCTURE, FIRE SUPPRESSION WORK AND ALL OTHER TRADES PRIOR TO SUBMITTAL FOR REVIEW.
6. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM.
7. ALL DUCTWORK SIZES ARE SHOWN WITH CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED AS INDICATED IN THE "MATERIAL AND INSULATION SCHEDULE".
8. FINAL LOCATION, ELEVATION, COLOR AND FINISH OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR FINAL LOCATIONS, ELEVATIONS AND ALIGNMENT OF ALL VENTS ON EXTERIOR WALLS.
9. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD #8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
10. ALL SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL RETURN AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK THAT IS INSTALLED IN JOIST SPACE ON THE TOP FLOOR IS WITHIN THE THERMAL ENVELOPE AND SHALL BE INSULATED SIMILARLY. INSULATION WORK SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO "MATERIAL AND INSULATION SCHEDULE" FOR FURTHER INFORMATION.
11. ALL BRANCH DUCTWORK IN COMMON AREAS, CORRIDORS AND AMENITY SPACES SHALL HAVE FULLY ACCESSIBLE BALANCING DAMPERS. IF BALANCING DAMPERS ARE LOCATED ABOVE AN INACCESSIBLE SPACE, CONTRACTOR SHALL PROVIDE ACCESS PANEL (MIN. 24"x24") FOR ACCESS. COORDINATE FINAL LOCATION OF ALL ACCESS PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
12. COORDINATE FINAL LOCATION OF ALL SUPPLY, RETURN AND EXHAUST AIR DEVICES WITH LIGHTING PLANS, FIRE ALARM DEVICE LOCATIONS, SPRINKLER HEAD LOCATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS.
13. ALL DUCTWORK CHASE/SHAFT FINAL LOCATIONS, SIZES AND ALL SHAFT REQUIREMENTS SHALL BE FULLY COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
14. DUCTWORK SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE STRUCTURAL FRAMING AND DECK. THE INTENT IS TO MAINTAIN CEILING HEIGHTS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, WHEN POSSIBLE.
15. DRAWING PLANS, SCHEMATIC AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEMS. INDICATED DUCT LOCATION, CONFIGURATIONS AND ARRANGEMENTS ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO PRODUCE A COMPLETE SET OF COORDINATION DRAWINGS INCLUDING ALL DUCT ELEVATIONS, CHANGES IN DIRECTION, TRANSITIONS AND ELEVATION CHANGES REQUIRED FOR A COMPLETELY COORDINATED INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
16. ALL INDICATED DOOR UNDERCUTS SHALL BE MINIMUM OF 3/4" HIGH. COORDINATE ALL DOOR UNDERCUTS WITH ARCHITECT.
17. CONTRACTOR SHALL PROVIDED REQUIRED DUCT FLANGES AND TRANSITION SO THAT ALL TERMINATIONS TO GRILLES, REGISTERS, AND DIFFUSERS ARE SEALED. CONTRACTOR SHALL ENSURE THAT ALL AIR DEVICES ARE NOT SCEWED OR FASTENED DIRECTLY TO THE DRYWALL. ALL TRANSITIONS SHALL BE SEALED PER ENERGY STAR REQUIREMENTS.

DRAWING SYMBOLS

(E)	EXISTING MECHANICAL EQUIPMENT TO REMAIN
(R)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
(N)	NEW MECHANICAL EQUIPMENT
(thin line)	EXISTING MECHANICAL EQUIPMENT TO REMAIN
(dashed red line)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
(solid line)	NEW MECHANICAL EQUIPMENT
⊗	POINT OF CONNECTION, EXTEND AND CONNECT TO EXISTING
◆	POINT OF DEMOLITION, CUT AND CAP EXISTING

EXISTING EQUIPMENT NOTES

1. ALL EXISTING HVAC EQUIPMENT TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING LUBRICATION, ADJUSTMENT OR REPLACEMENT OF PARTS, REPLACEMENT OF VALUES AND GAUGES AND CHECKING FOR PROPER OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD MAJOR WORK ON THE EQUIPMENT BE REQUIRED. THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
2. ALL EXISTING CONTROLS TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING CALIBRATION, ADJUSTMENT AND VERIFICATION OF SEQUENCE OF OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD CONTROLS NEED REPLACEMENT OR OTHER SIGNIFICANT REPAIRS THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
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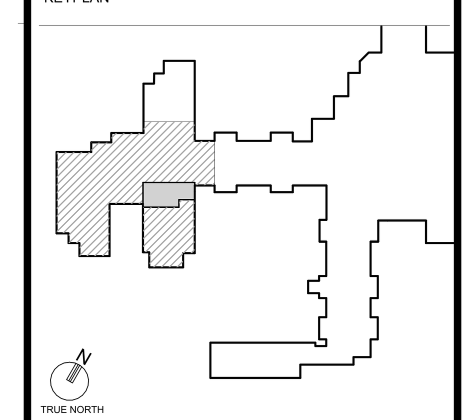
KEYPLAN



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STATE OF MARYLAND · SCOTT A. WHITE · No. 43252 · PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE
Collington
A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 305 South Jefferson Street
Roanoke, Virginia 24011.2003
540.344.6664 ▪ Fax 540.343.6925
www.sfcs.com

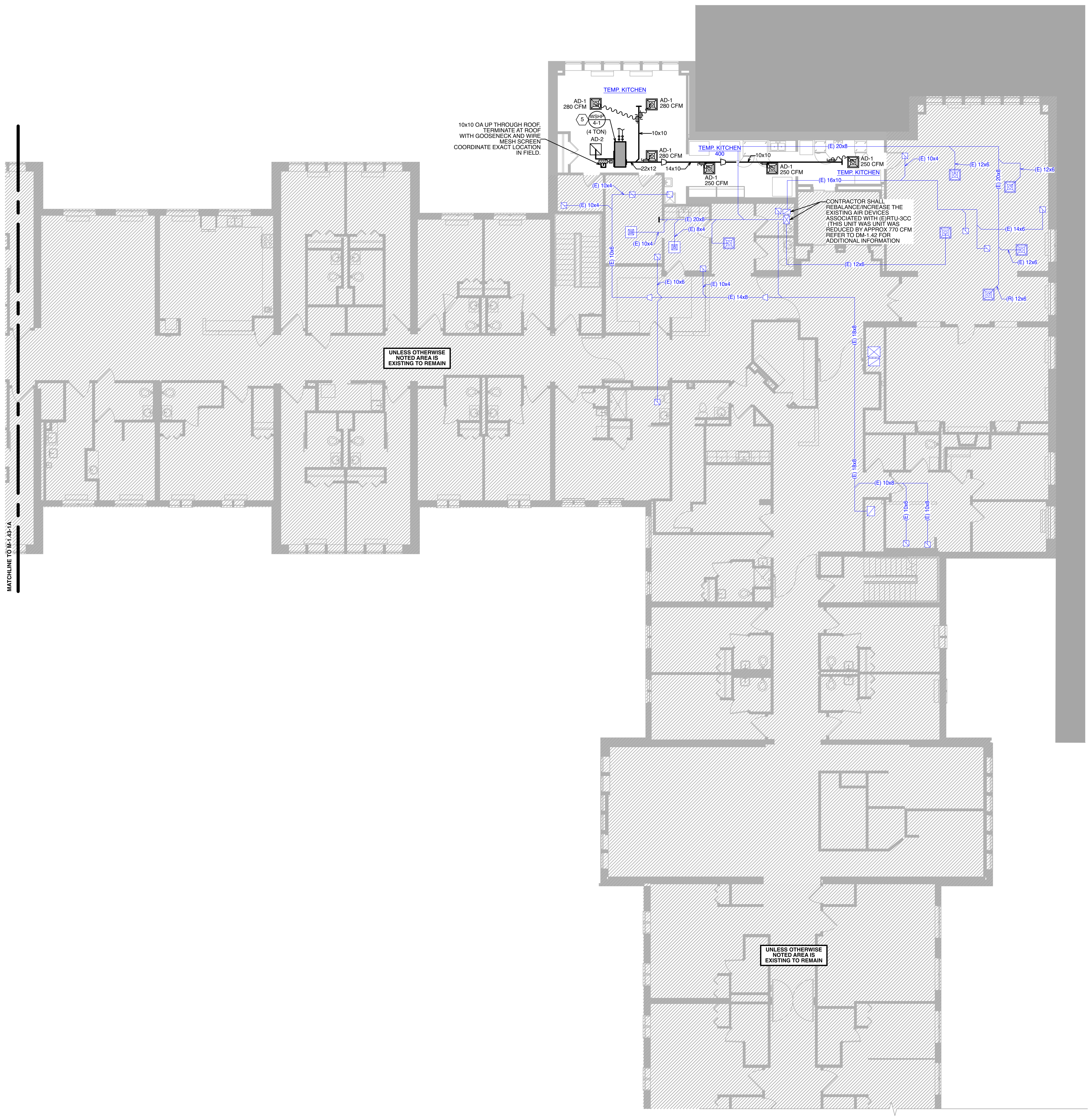
DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
THIRD FLOOR MECHANICAL PLAN - AREA 'D'

DATE: MAY 28, 2026
COMM. NO. 18135.00
DRAWING M1.33-1A

APPROVAL STAMPS



1 FOURTH FLOOR MECHANICAL PLAN - AREA 'C'

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

SHEET NOTES

1. PROVIDE NEW WALL MOUNTED CONTROLLER/ SENSOR. FINAL CONTROLLER TO BE DETERMINED.
2. CONTRACTOR SHALL ENSURE A MINIMUM 10'-0" HORIZONTAL SEPARATION IS MAINTAINED BETWEEN ALL EXHAUST AIR OUTLETS AND INTAKE AIR INLETS. LOCATION OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH ARCHITECT. REFER TO ARCHITECTURAL ELEVATIONS FOR FURTHER INFORMATION.
3. PROVIDE X-VENT, SINGLE, DOUBLE, OR TRIPLE TO TERMINATE EXAUST DUCT WITH INTEGRAL BACKDRAFT DAMPER, COORDINATE FINAL LOCATION, COLOR, AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO TYPICAL UNIT (M1.80 THRU M1.84) PLANS FOR CONTINUATION.
4. 4"Ø DRYER VENT FROM DRYER TO WALL TERMINATION. COORDINATE EXACT LOCATION OF DRYER VENT CONNECTION WITH ARCHITECTURAL PLANS. SIZE AND INSTALL RIGID DUCT DRYER VENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS COORDINATE FINAL ROUTING OF EXHAUST DUCTWORK WITH ALL TRADES PRIOR TO INSTALLATION. PROVIDE FLUSH MOUNTED DRYER BOX AS MANUFACTURED BY "GUY GREY" (MODEL NO.:DB425). PROVIDE BOOSTER FAN IF VENT LENGTH EXCEEDS MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING ITEMS FOR ALL WATER SOURCE HEAT PUMPS.
   - PROVIDE A WATER SENSING SWITCH LOCATED IN THE PAN OR UNIT. THE SWITCH SHALL DE-ENERGIZE THE HEAT PUMP AND SIGNAL AN ALARM SHOULD THE WATER BE SENSED.
   - ENSURE ALL MANUFACTURES REQUIRED MAINTENANCE CLEARANCES ARE MET.
   - UNIT DESIGNATION SHALL MATCH EACH SPECIFIC ROOM NUMBER.
   - BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.
   - PROVIDE NEW SELF-BALANCING HOSE KIT, EXTEND AND CONNECT CWS & CWR TO MAINS IN CORRIDOR. REFER TO MECHANICAL FLOOR PLANS FOR CONTINUATION. REFER TO DETAIL 4/ M5.0 FOR FURTHER INFORMATION. SHUT OFF VALVES SHALL BE LOCATED BELOW THE FIRE RATED FLOOR/ CEILING ASSEMBLY. PROVIDE ACCESS PANEL (MIN 24"x24") COORDINATE EXACT LOCATION WITH ARCHITECT.
6. REFER TO THE FOLLOWING NOTES FOR EACH AHU:
   - RUN REFRIGERANT PIPING FROM INDOOR AHU TO CORRESPONDING OUTDOOR UNIT ON ROOF. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL RUNS WITH ARCHITECT.
   - CONDENSATE SHALL TIE INTO NEAREST CONDENSATE LINE. REFER TO DRAWINGS FOR LOCATION OF CONDENSATE LINES. PROVIDE CONDENSATE PUMP IF REQUIRED. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
   - COORDINATE THE FINAL LOCATION OF AHU W/ ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE CLEARANCES.
7. REFER TO THE NOTES BELOW FOR EACH HP:
   - RUN REFRIGERANT PIPING FROM OUTDOOR UNIT TO CORRESPONDING INDOOR UNIT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
   - PROVIDE EQUIPMENT SUPPORT RAILS FOR EACH HP SECURE TO ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   - COORDINATE FINAL LOCATION OF OUTDOOR UNITS WITH ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE AND SERVICE CLEARANCES.

GENERAL NOTES

1. ALL EXHAUST AIR AND INTAKE AIR TERMINATIONS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, 2018 INTERNATIONAL MECHANICAL CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. FINAL LOCATION OF ALL TERMINATIONS SHALL BE FIELD COORDINATED AND SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS AND 10 FEET FROM MECHANICAL AIR INTAKES UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PROVIDE A FIRE DAMPER AND ACCESS PANEL AT ALL FIRE RATED CEILING AND WALL PENETRATIONS. ALL REQUIRED CEILING RADIATION DAMPERS SHALL BE WITH APPROVED UL RATING. COORDINATE ALL LOCATIONS WITH ARCHITECT.
3. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ALL MECHANICAL EQUIPMENT TO ENSURE THAT THE EQUIPMENT IS FULLY ACCESSIBLE FOR SERVICE AND EVENTUAL REPLACEMENT. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
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5. CONTRACTOR SHALL PROVIDE A SET OF FULLY COORDINATED SHOP DRAWINGS, INCLUDING ALL DUCTWORK AND HVAC PIPING (I.E. CONDENSATE, REFRIGERANT PIPING, ETC.), FOR REVIEW AND APPROVAL. COORDINATE ALL MECHANICAL WORK WITH PLUMBING WORK, ELECTRICAL WORK, STRUCTURE, FIRE SUPPRESSION WORK AND ALL OTHER TRADES PRIOR TO SUBMITTAL FOR REVIEW.
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7. ALL DUCTWORK SIZES ARE SHOWN WITH CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED AS INDICATED IN THE "MATERIAL AND INSULATION SCHEDULE".
8. FINAL LOCATION, ELEVATION, COLOR AND FINISH OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR FINAL LOCATIONS, ELEVATIONS AND ALIGNMENT OF ALL VENTS ON EXTERIOR WALLS.
9. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD #8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
10. ALL SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL RETURN AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK THAT IS INSTALLED IN JOIST SPACE ON THE TOP FLOOR IS WITHIN THE THERMAL ENVELOPE AND SHALL BE INSULATED SIMILARLY. INSULATION WORK SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO "MATERIAL AND INSULATION SCHEDULE" FOR FURTHER INFORMATION.
11. ALL BRANCH DUCTWORK IN COMMON AREAS, CORRIDORS AND AMENITY SPACES SHALL HAVE FULLY ACCESSIBLE BALANCING DAMPERS. IF BALANCING DAMPERS ARE LOCATED ABOVE AN INACCESSIBLE SPACE, CONTRACTOR SHALL PROVIDE ACCESS PANEL (MIN. 24"x24") FOR ACCESS. COORDINATE FINAL LOCATION OF ALL ACCESS PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
12. COORDINATE FINAL LOCATION OF ALL SUPPLY, RETURN AND EXHAUST AIR DEVICES WITH LIGHTING PLANS, FIRE ALARM DEVICE LOCATIONS, SPRINKLER HEAD LOCATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS.
13. ALL DUCTWORK CHASE/SHAFT FINAL LOCATIONS, SIZES AND ALL SHAFT REQUIREMENTS SHALL BE FULLY COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
14. DUCTWORK SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE STRUCTURAL FRAMING AND DECK. THE INTENT IS TO MAINTAIN CEILING HEIGHTS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, WHEN POSSIBLE.
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DRAWING SYMBOLS

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(R)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
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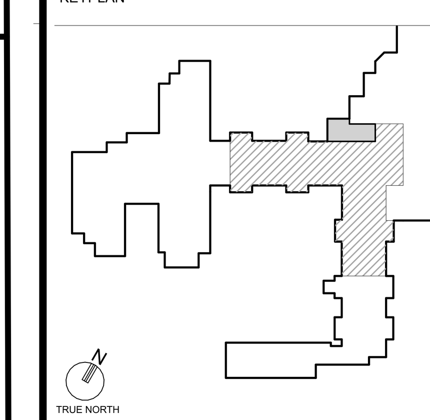
⊗	POINT OF CONNECTION, EXTEND AND CONNECT TO EXISTING
◆	POINT OF DEMOLITION, CUT AND CAP EXISTING

EXISTING EQUIPMENT NOTES

1. ALL EXISTING HVAC EQUIPMENT TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING LUBRICATION, ADJUSTMENT OR REPLACEMENT OF PARTS, REPLACEMENT OF VALUES AND GAUGES AND CHECKING FOR PROPER OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD MAJOR WORK ON THE EQUIPMENT BE REQUIRED. THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
2. ALL EXISTING CONTROLS TO BE REUSED SHALL BE REFURBISHED WHERE APPLICABLE AND HAVE FULL MAINTENANCE ROUTINES PERFORMED INCLUDING CALIBRATION, ADJUSTMENT AND VERIFICATION OF SEQUENCE OF OPERATION. ALL MINOR REPAIRS SHALL BE INCLUDED AS PART OF THIS CONTRACT. SHOULD CONTROLS NEED REPLACEMENT OR OTHER SIGNIFICANT REPAIRS THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT TO OWNER AND ENGINEER, INDICATING THE NATURE OF THE WORK ALONG WITH A COST ESTIMATE TO PERFORM SAID REPAIRS.
3. CONTRACTOR SHALL CARRY A CONTINGENCY IN THEIR PRICE TO PERFORM THESE REPAIRS. IF REPAIR WORK IS APPROVED, THE CONTRACTOR SHALL DRAW AGAINST CONTINGENCY. IF REPAIR WORK IS NOT APPROVED / REQUIRED, CONTINGENCY SHALL BE CREDITED BACK TO OWNER.

KEYPLAN



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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE

Collington

A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

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Architecture
Engineering
Planning
Interiors
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ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

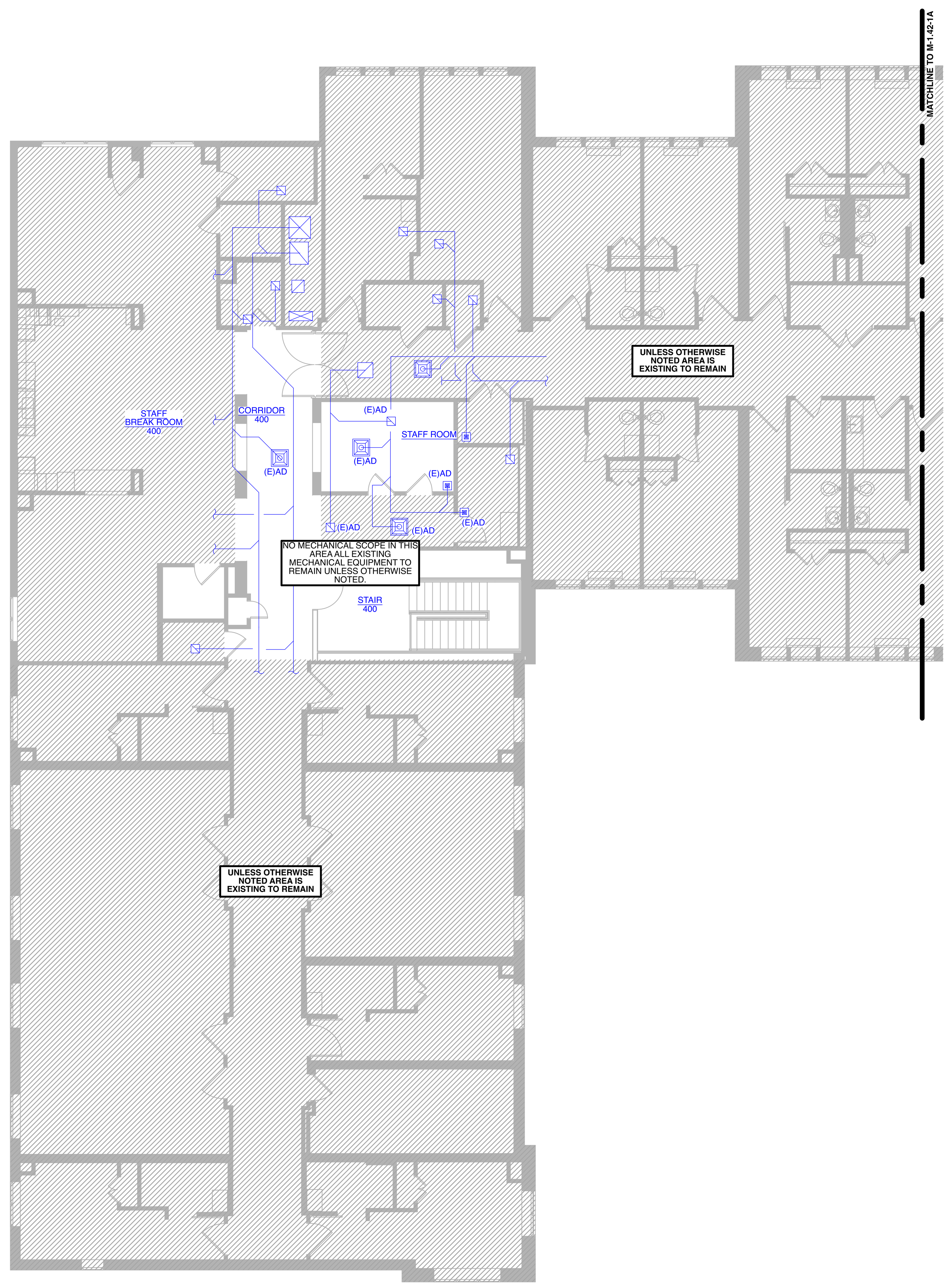
FOURTH FLOOR MECHANICAL PLAN - AREA 'C'

DATE: MAY 28, 2026

COMM. NO. 18135.00

DRAWING M1.42-1A

APPROVAL STAMPS



1 FOURTH FLOOR MECHANICAL PLAN - AREA 'D'

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

SHEET NOTES

1. PROVIDE NEW WALL MOUNTED CONTROLLER/ SENSOR. FINAL CONTROLLER TO BE DETERMINED.
2. CONTRACTOR SHALL ENSURE A MINIMUM 10'-0" HORIZONTAL SEPARATION IS MAINTAINED BETWEEN ALL EXHAUST AIR OUTLETS AND INTAKE AIR INLETS. LOCATION OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH ARCHITECT. REFER TO ARCHITECTURAL ELEVATIONS FOR FURTHER INFORMATION.
3. PROVIDE X-VENT, SINGLE, DOUBLE, OR TRIPLE TO TERMINATE EXAUST DUCT WITH INTEGRAL BACKDRAFT DAMPER, COORDINATE FINAL LOCATION, COLOR, AND FINISH WITH ARCHITECT PRIOR TO INSTALLATION. REFER TO TYPICAL UNIT (M1.80 THRU M1.84) PLANS FOR CONTINUATION.
4. 4"Ø DRYER VENT FROM DRYER TO WALL TERMINATION. COORDINATE EXACT LOCATION OF DRYER VENT CONNECTION WITH ARCHITECTURAL PLANS. SIZE AND INSTALL RIGID DUCT DRYER VENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS COORDINATE FINAL ROUTING OF EXHAUST DUCTWORK WITH ALL TRADES PRIOR TO INSTALLATION. PROVIDE FLUSH MOUNTED DRYER BOX AS MANUFACTURED BY "GUY GREY" (MODEL NO.:DB425). PROVIDE BOOSTER FAN IF VENT LENGTH EXCEEDS MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED FOR THE FOLLOWING ITEMS FOR ALL WATER SOURCE HEAT PUMPS.
   - PROVIDE A WATER SENSING SWITCH LOCATED IN THE PAN OR UNIT. THE SWITCH SHALL DE-ENERGIZE THE HEAT PUMP AND SIGNAL AN ALARM SHOULD THE WATER BE SENSED.
   - ENSURE ALL MANUFACTURES REQUIRED MAINTENANCE CLEARANCES ARE MET.
   - UNIT DESIGNATION SHALL MATCH EACH SPECIFIC ROOM NUMBER.
   - BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.
   - PROVIDE NEW SELF-BALANCING HOSE KIT, EXTEND AND CONNECT CWS & CWR TO MAINS IN CORRIDOR. REFER TO MECHANICAL FLOOR PLANS FOR CONTINUATION. REFER TO DETAIL 4/ M5.0 FOR FURTHER INFORMATION. SHUT OFF VALVES SHALL BE LOCATED BELOW THE FIRE RATED FLOOR/ CEILING ASSEMBLY. PROVIDE ACCESS PANEL (MIN 24"x24") COORDINATE EXACT LOCATION WITH ARCHITECT.
6. REFER TO THE FOLLOWING NOTES FOR EACH AHU:
   - RUN REFRIGERANT PIPING FROM INDOOR AHU TO CORRESPONDING OUTDOOR UNIT ON ROOF. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ALL RUNS WITH ARCHITECT.
   - CONDENSATE SHALL TIE INTO NEAREST CONDENSATE LINE. REFER TO DRAWINGS FOR LOCATION OF CONDENSATE LINES. PROVIDE CONDENSATE PUMP IF REQUIRED. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
   - COORDINATE THE FINAL LOCATION OF AHU W/ ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE CLEARANCES.
7. REFER TO THE NOTES BELOW FOR EACH HP:
   - RUN REFRIGERANT PIPING FROM OUTDOOR UNIT TO CORRESPONDING INDOOR UNIT. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
   - PROVIDE EQUIPMENT SUPPORT RAILS FOR EACH HP SECURE TO ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   - COORDINATE FINAL LOCATION OF OUTDOOR UNITS WITH ARCHITECT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REQUIRED MAINTENANCE AND SERVICE CLEARANCES.

GENERAL NOTES

1. ALL EXHAUST AIR AND INTAKE AIR TERMINATIONS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, 2018 INTERNATIONAL MECHANICAL CODE AND LOCAL AUTHORITIES HAVING JURISDICTION. FINAL LOCATION OF ALL TERMINATIONS SHALL BE FIELD COORDINATED AND SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS INTO BUILDINGS AND 10 FEET FROM MECHANICAL AIR INTAKES UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PROVIDE A FIRE DAMPER AND ACCESS PANEL AT ALL FIRE RATED CEILING AND WALL PENETRATIONS. ALL REQUIRED CEILING RADIATION DAMPERS SHALL BE WITH APPROVED UL RATING. COORDINATE ALL LOCATIONS WITH ARCHITECT.
3. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF ALL MECHANICAL EQUIPMENT TO ENSURE THAT THE EQUIPMENT IS FULLY ACCESSIBLE FOR SERVICE AND EVENTUAL REPLACEMENT. INSTALL ALL MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND INSTALLATION MANUALS FOR ALL MECHANICAL EQUIPMENT EARLY IN THE PROJECT FOR ENGINEER AND ARCHITECT'S REVIEW.
5. CONTRACTOR SHALL PROVIDE A SET OF FULLY COORDINATED SHOP DRAWINGS, INCLUDING ALL DUCTWORK AND HVAC PIPING (I.E. CONDENSATE, REFRIGERANT PIPING, ETC.), FOR REVIEW AND APPROVAL. COORDINATE ALL MECHANICAL WORK WITH PLUMBING WORK, ELECTRICAL WORK, STRUCTURE, FIRE SUPPRESSION WORK AND ALL OTHER TRADES PRIOR TO SUBMITTAL FOR REVIEW.
6. CONTRACTOR SHALL PROVIDE ALL REQUIRED COMPONENTS FOR A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM.
7. ALL DUCTWORK SIZES ARE SHOWN WITH CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED AS INDICATED IN THE "MATERIAL AND INSULATION SCHEDULE".
8. FINAL LOCATION, ELEVATION, COLOR AND FINISH OF ALL LOUVERS SHALL BE FULLY COORDINATED WITH THE ARCHITECT PRIOR TO INSTALLATION. REFER TO ARCHITECTURAL ELEVATIONS FOR FINAL LOCATIONS, ELEVATIONS AND ALIGNMENT OF ALL VENTS ON EXTERIOR WALLS.
9. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD #8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
10. ALL SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL RETURN AIR DUCTWORK SHALL BE WRAPPED WITH A MINIMUM OF R-6 INSULATION. ALL SUPPLY AIR AND RETURN AIR DUCTWORK THAT IS INSTALLED IN JOIST SPACE ON THE TOP FLOOR IS WITHIN THE THERMAL ENVELOPE AND SHALL BE INSULATED SIMILARLY. INSULATION WORK SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REFER TO "MATERIAL AND INSULATION SCHEDULE" FOR FURTHER INFORMATION.
11. ALL BRANCH DUCTWORK IN COMMON AREAS, CORRIDORS AND AMENITY SPACES SHALL HAVE FULLY ACCESSIBLE BALANCING DAMPERS. IF BALANCING DAMPERS ARE LOCATED ABOVE AN INACCESSIBLE SPACE, CONTRACTOR SHALL PROVIDE ACCESS PANEL (MIN. 24"x24") FOR ACCESS. COORDINATE FINAL LOCATION OF ALL ACCESS PANELS WITH ARCHITECT PRIOR TO INSTALLATION.
12. COORDINATE FINAL LOCATION OF ALL SUPPLY, RETURN AND EXHAUST AIR DEVICES WITH LIGHTING PLANS, FIRE ALARM DEVICE LOCATIONS, SPRINKLER HEAD LOCATIONS AND ARCHITECTURAL REFLECTED CEILING PLANS.
13. ALL DUCTWORK CHASE/SHAFT FINAL LOCATIONS, SIZES AND ALL SHAFT REQUIREMENTS SHALL BE FULLY COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
14. DUCTWORK SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE STRUCTURAL FRAMING AND DECK. THE INTENT IS TO MAINTAIN CEILING HEIGHTS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS, WHEN POSSIBLE.
15. DRAWING PLANS, SCHEMATIC AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEMS. INDICATED DUCT LOCATION, CONFIGURATIONS AND ARRANGEMENTS ARE FOR REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE TO PRODUCE A COMPLETE SET OF COORDINATION DRAWINGS INCLUDING ALL DUCT ELEVATIONS, CHANGES IN DIRECTION, TRANSITIONS AND ELEVATION CHANGES REQUIRED FOR A COMPLETELY COORDINATED INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
16. ALL INDICATED DOOR UNDERCUTS SHALL BE MINIMUM OF 3/4" HIGH. COORDINATE ALL DOOR UNDERCUTS WITH ARCHITECT.
17. CONTRACTOR SHALL PROVIDED REQUIRED DUCT FLANGES AND TRANSITION SO THAT ALL TERMINATIONS TO GRILLES, REGISTERS, AND DIFFUSERS ARE SEALED. CONTRACTOR SHALL ENSURE THAT ALL AIR DEVICES ARE NOT SCEWED OR FASTENED DIRECTLY TO THE DRYWALL. ALL TRANSITIONS SHALL BE SEALED PER ENERGY STAR REQUIREMENTS.

DRAWING SYMBOLS

Symbol	Description
(E)	EXISTING MECHANICAL EQUIPMENT TO REMAIN
(R)	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
(N)	NEW MECHANICAL EQUIPMENT
thin line	EXISTING MECHANICAL EQUIPMENT TO REMAIN
dashed line	EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED AND REMOVED
heavy line	NEW MECHANICAL EQUIPMENT
⊗	POINT OF CONNECTION, EXTEND AND CONNECT TO EXISTING
◆	POINT OF DEMOLITION, CUT AND CAP EXISTING

EXISTING EQUIPMENT NOTES

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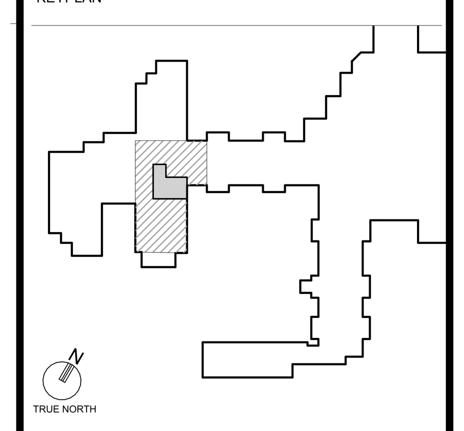
KEYPLAN



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STATE OF MARYLAND SCOTT A. WHITE No. 43252 PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE

Collington
A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 305 South Jefferson Street
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DESIGNER :		DRAWN :	LB/EP
ARCHITECT :		CHECKED :	JB
ENGINEER :	LB/EP	APPROVED :	SW

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FOURTH FLOOR MECHANICAL PLAN - AREA 'D'

DATE:	DRAWING
MAY 28, 2026	M1.43-1A
COMM. NO. 18135.00	

APPROVAL STAMPS

MECHANICAL DRAWING NOTES

1. Contractor shall provide all labor, materials, tools, apparatus and equipment required to complete his work in accordance with the contract documents, codes, laws and ordinances and accepted trade procedures.
2. The Contractor shall review all of the contract documents including those of the other trades in order to acquaint himself with the existing and related conditions that may, will or could affect his work. He shall be experienced, skilled and knowledgeable with this type of construction and shall be expert and proficient in the preparation of estimates and the comprehension, implementation and interpretation of contract documents such as those prepared for this project.
3. The Contractor shall visit the site before he submits his proposal. He shall examine all existing conditions which affect the work. Submission of the proposal shall be considered evidence that this requirement has been fulfilled. No extra payment will be allowed for additional work made necessary by the failure to visit the site.
4. The Contractor by his acceptance of the contract guarantees that all work installed shall be free from all defects in workmanship and materials and that all apparatus furnished by him shall develop the capacities and characteristics specified. He further guarantees that if, during a period of one (1) year from the date of the certificate of completion and acceptance of the work, any such defects in workmanship, material or performance appear, such defects shall be remedied by him without cost to the Owner. If the Contractor fails to remedy the defects as outlined within a reasonable length of time, to be specified in a notice from the Owner's authorized representative to the Contractor, the Owner will have such work done and he will charge the cost to the Contractor.
5. Mechanical equipment shall be installed in a neat and workmanlike manner in accordance with the latest and best practices of the trade. Only mechanics skilled in this type of work shall be employed and utilized by the Contractor for this division in the execution of this work.
6. The contract drawings are diagrammatic and indicate the general arrangement of systems. The Contractor shall provide all work required for a complete installation. The contract drawings are not to be scaled. The Architectural contract drawings and details together with the other contract documents shall be examined for all dimensional information.
7. The Contractor shall follow the contract drawings in laying out his work and he shall also check the contract drawings of the other trades to verify spaces in which his work shall be provided. Equipment locations shall be coordinated with the Architect and the General Contractor. Contractor shall follow approved shop drawings in laying out HVAC rough-in.
8. The Contractor shall, without additional costs to the Owner, make reasonable modifications in the layout of his work in order to prevent conflicts with the work of other trades or for the proper execution of his work.
9. The Contractor shall provide and maintain in good order a complete set of blueline prints of the contract drawings. As the work progresses, the actual location of all work shall be clearly recorded, including all changes to the contract and equipment size and type. These prints shall be available at the site for inspection at all times. At the conclusion of the work, the Contractor shall, at his own expense, obtain a set of reproducibles of the original contract drawings, and utilizing the symbols on the contract drawings, shall incorporate all "as-built" data in a clearly legible and reproducible manner. All schedules shall be corrected to indicate "as-built" conditions. All revisions shall be incorporated on these reproducibles including all sketches and written directives. All concealed equipment, mainfeeders, pull and junction boxes, etc. shall be dimensionally located from the building structure. As a condition for acceptance of the work, the "as-built" reproducibles and one (1) set of prints shall be signed, dated and delivered to the Engineer.
10. The Contractor shall supply all labor required to perform all work which may be claimed by trade organizations within his jurisdiction. All work shall be performed without any additional cost to the Owner irregardless of which section of the contract documents the work is described. The Contractor shall be responsible to verify with all local organizations the extent of any collective bargaining agreements and/or any jurisdictional decisions rendered regarding disputes between the respective trades and provide and install his work in accordance with the accepted trade practice in the area.
11. The entire installation shall conform with all pertinent codes and regulations of the local, municipal, county, state, and federal authorities, the National Board of Fire Underwriters, the codes of the International Code Council, the National Fire Protective Association and all other regulatory bodies having jurisdiction. All materials and equipment shall bear the stamps or seals of the NFPA, ASME, NEMA, IEEE, UL and other recognized industry regulatory groups. In case of conflict or requirements, the most stringent shall apply.
12. The Contractor shall give all necessary notices, obtain all permits, pay all governmental taxes, fees and other costs in connection with his work. He shall file all necessary plans, and prepare all other documents including additional detailed plans that are required for compliance with all applicable laws, ordinances, rules and regulations.
13. The Contractor shall be responsible for all working conditions and shall maintain a safe working environment at the job site for all employees.
14. All work shall be installed in strict accordance with the equipment manufacturer's recommendations and requirements.
15. Openings around ductwork and piping passing through the construction shall be sealed with fire barrier caulking.
16. Coordinate to assure that all work of all trades will be concealed within the wall and ceiling construction and without the need to reduce ceiling heights. Report exceptions to the Architect prior to construction and erection of the work.
17. All work shall be supported from the building structural system. Work shall not be supported from the ceiling suspension system, from electrical work, nor from other mechanical work.
18. The HVAC and plumbing trades shall coordinate with the General Contractor, locate all required cutting and patching of existing work required by the installation of the mechanical work and arrange for his compensation.
19. All work shall be located to avoid conflicts with other work and provide adequate clearances for Architectural design, proper operation, adjustments, filter replacement, component service and provide a minimum 2" clearance between all piping ductwork, conduit and other work.
20. The Contractor shall maintain "as-built" drawings and deliver them to the Owner upon completion of the project.
21. Provide supports, hangers, flexible pipe connections, vibration isolation, supplementary supports, controls and wiring, cleaning, painting, specialties and all other labor, materials, devices and services required for a complete, quality installation. Unless otherwise indicated, run all piping, ductwork and conduit as high as possible. Provide starters for all motor driven equipment.
22. The HVAC trades shall coordinate all electrical loads with the Electrical Contractor.
23. All HVAC equipment shall be rated in excess of the available fault current, and shall be permanently labeled in accordance with the National Electric Code Sections 110.24, 430.98, 430.99, 440.10, 700.5 and all applicable local codes. Coordinate exact available fault current and labeling with Electrical Contractor. The Electrical contractor shall provide all fault current labels.
24. Contractor shall perform a manufacturer's startup report for all systems once start up is completed.
25. Contractor shall include in their scope of work to have manufacture's starts up as well as completing the Energy Star for Multifamily New Construction Functional Testing Checklist for the all HVAC system with the manufacture's representative.
26. Contractor shall include in their scope of work all testing and balancing of HVAC heating, cooling, and ventilation systems as well as all condenser loop piping in all dwellings and common areas, and provide a testing and Balancing Report to the Owner.

HVAC Notes:

1. The Contractor shall coordinate with the General Contractor and provide all required cutting and patching and the like required by the installation of the mechanical work.
2. Provide all specialties, accessories, controls and the like to provide a complete, quiet, properly operating automatically controlled systems.
3. The HVAC trade shall provide all safety and operating controls, transformers, motor starters, devices and control wiring required for the systems to operate in a safe and satisfactory manner.
4. Do not operate the air conditioning systems during construction except for testing, and provide new filters for all units and immediately prior to substantial completion.
5. Ductwork shall be constructed of galvanized sheet metal fabricated and erected in accordance with ASHRAE and SMACNA standards. Provide turning vanes in all elbows, manual volume dampers in all branches, air equalizers, and similar devices as required to properly balance the systems and produce quiet, draftless operation. Ductwork sizes shown on the plans are sheet metal I.D. free area.
6. All HVAC ducts, plenums, and trunks shall be located in condition space. All HVAC ductwork shall be insulated with a minimum of R4 insulation.
7. Provide UL labeled and inspected fire dampers for all ducts and openings passing through floors, fire rated walls and ceilings, where shown on the drawings, and in locations required by codes.
8. Provide written operating and maintenance instructions and warranty certificates, in duplicate, to the Architect.
9. All transverse joints and longitudinal seams shall be sealed with RCD #8 low-voc mastic. All ductwork shall be in accordance with SMACNA's seal class "B". Duct sealing and duct leakage shall meet all requirements of Energy Star checklist.
10. Mount all thermostats/sensors 48" to center A.F.F. or mount higher.
11. Provide all fire caulking and fire wrapping in areas as required.
All ductwork shall be closely coordinated prior to fabrication. The architectural contract drawings and details together with the other contract documents shall be examined for all dimensiona information. Full sheet metal shop drawings shall be developed with all special requirements worked out and shown on drawings. These drawings must show: locations of openings to be cut through existing construction and any problems. These drawings shall be submitted for review by the architect and engineer prior to fabrication.
12. Balance all air quantities within 5% of the CFM shown on the drawings. Finally balancve individual outlets to the occupants' satisfaction. Install all devices required for balancing in the system during construction. Provide balancing reports for review by the Engineer.
13. Balance all water quantities to within 5% of the GPM's shown on the drawings. Provide balancing reports for review by the Engineer.
14. Provide four copies in binders of written operating and maintenance instructions and warranty certificates, to the Architect.

ELECTRICAL COORDINATION

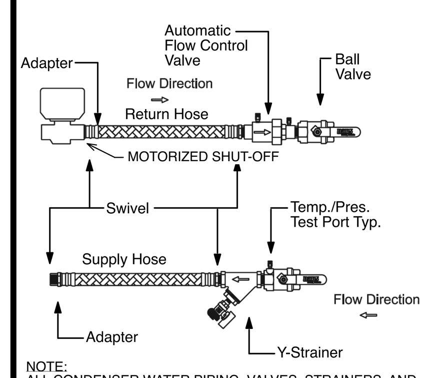
1. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE LOCATIONS OF SYSTEM PIPING AND DUCTWORK WITH THE ELECTRICAL CONTRACTOR. DUCTWORK SHALL NOT BE INSTALLED WITHIN THE DEDICATED EQUIPMENT SPACE REQUIRED FOR EXISTING OR NEW ELECTRICAL EQUIPMENT.
2. COORDINATION OF DUCTWORK LOCATIONS SHALL BE SOLEY THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. APPROVAL OF SHEET METAL SUBMITTAL DRAWINGS DOES NOT RELEASE THE CONTRACTOR FROM COORDINATION RESPONSIBILITY. FINAL COORDINATION SHALL OCCUR IN FIELD WITH ELECTRICAL CONTRACTOR. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN RELOCATION OF MECHANICAL SYSTEM PIPING AT CONTRACTOR'S EXPENSE.
3. PER NFPA 70, ARTICLE 110.26(F); DEDICATED EQUIPMENT SPACE SHALL APPLY TO SWITCHBOARDS, DISTRIBUTION PANELS, AND MOTOR CONTROL CENTERS. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE.

PIPING AND DUCT CRITERIA

1. ALL DUCTWORK SHALL BE SIZED USING A STANDARD DUCTULATOR. THE FOLLOWING CRITERIA SHALL BE USED TO CALCULATE DUCT SIZES:
   a. SUPPLY DUCTS SHALL BE NO MORE THAN 0.10 IN. PER 100 FEET OF PRESSURE DROP.
   b. RETURN AND EXHAUST DUCTS SHALL BE NO MORE THAN 0.05 IN. PER 100 FEET OF PRESSURE DROP.
   c. VENTILATION DUCTS SHALL BE NO MORE THAN 0.075 IN. PER 100 FEET OF PRESSURE DROP.
2. CONDENSATE SHALL BE COLLECTED AND RUN WITH ADEQUATE PITCH TO THE CLOSEST SAFE-WASTE. PROVIDE CONDENSATE PUMPS IF PITCH CAN NOT BE ACHIEVED. CONDENSATE PIPING SHALL BE SIZED AS FOLLOWS:

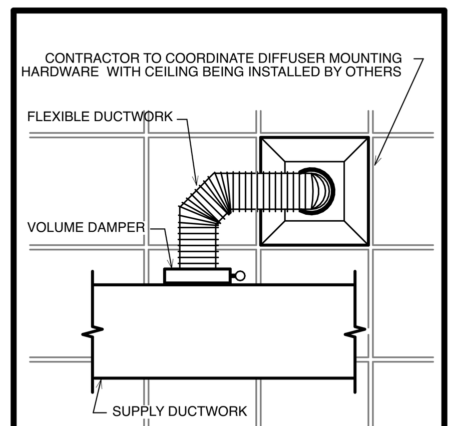
CONDENSATE PIPE SIZING CHART

TONS	SIZE
0-20	3/4"
20-40	1"
40-90	1-1/4"
90-125	1-1/2"

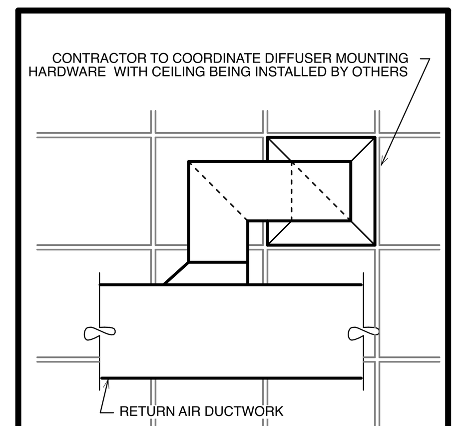


NOTE:
ALL CONDENSER WATER PIPING, VALVES, STRAINERS, AND ALL ACCESSORIES SHALL BE FULLY INSULATED.

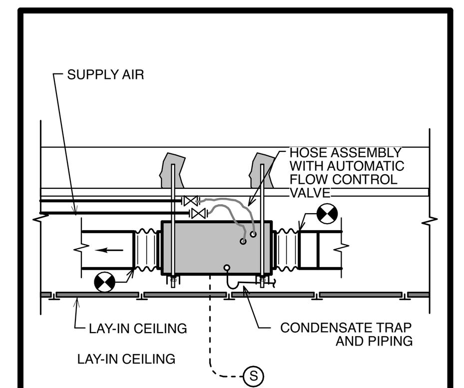
1 SELF-BALANCING HOSE KIT DETAIL
NOT TO SCALE



2 SQUARE SUPPLY AIR DIFFUSER DETAIL
NOT TO SCALE



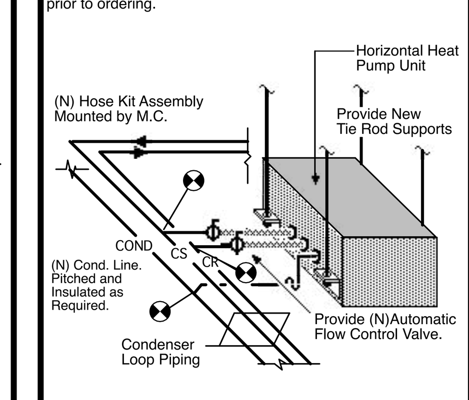
2 SQUARE RETURN AIR DIFFUSER DETAIL
NOT TO SCALE



BELOW EACH WATER SOURCE HEAT PUMP UNIT, CONTRACTOR SHALL FURNISH AND INSTALL A NEW BAUCO PLUS II ARCHITECTURAL ACCESS PANEL, IF INSTALLED IN A DRYWALL CEILING.

3 TYPICAL WSHP DETAIL
NOT TO SCALE

Note: Contractor shall field verify orientation of condenser water connection location for each existing Water Source Heat Pump prior to ordering.



4 TYPICAL HEAT PUMP LOOP PIPING ARRANGEMENT
Not To Scale.

MECHANICAL SYMBOLS, INDICATIONS & ABBREVIATIONS

Symbol	Description
XX / X	EQUIPMENT DESIGNATION TAG
	POINT OF CONNECTION
	SUPPLY/MAKE-UP AIR DIFFUSER (CEILING)
	SUPPLY/MAKE-UP AIR DIFFUSER (SIDEWALL)
	SUPPLY/MAKE-UP AIR DIFFUSER (LINEAR, CEILING)
	SUPPLY/MAKE-UP AIR DIFFUSER (LINEAR, WALL)
	RETURN/EXHAUST AIR DIFFUSER (CEILING)
	RETURN/EXHAUST AIR DIFFUSER (SIDEWALL)
	RETURN/EXHAUST AIR DIFFUSER (LINEAR, CEILING)
	RETURN/EXHAUST AIR DIFFUSER (LINEAR, WALL)
	BRANCH DAMPER
	VOLUME DAMPER
UC	2" DOOR UNDERCUT
FD/AP----	FIRE DAMPER W/ ACCESS PANEL
SD/AP----	SMOKE DAMPER W/ ACCESS PANEL
FD/SD/AP----	FIRE/SMOKE DAMPER W/ ACCESS PANEL
T	THERMOSTAT
S	TEMPERATURE SENSOR
H	HUMIDISTAT
S	DUCT MOUNTED SMOKE DETECTOR
	DUCT SIZE TRANSITION
	EXHAUST FAN
	AIR TRANSFER DUCT (CEILING)
	AIR TRANSFER DUCT (WALL)
	FLEXIBLE DUCTWORK
	DUCT W/ ACOUSTICAL LINING
	RETURN/EXHAUST AIR DUCT UP
	RETURN/EXHAUST AIR DUCT DN
	SUPPLY/MAKE-UP AIR DUCT UP
	SUPPLY/MAKE-UP AIR DUCT DN
	DISCONNECT SWITCH, FUSED

Symbol	Description
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CD	CONDENSATE DRAIN
DW	DOMESTIC COLD WATER
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
(E)	EXISTING PIPING
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	BRANCH CONNECTION OUT OF TOP
	DIRECTION OF FLOW
	PIPE TURNING DOWN
	PIPE TURNING UP
	CAPPED FLANGE
	FLANGED CONNECTION

Abbreviation	Meaning
AD	AIR DEVICE
A.F.F.	ABOVE FINISHED FLOOR
A.L.	ACOUSTIC LINING
BDD	BACKDRAFT DAMPER
B.F.F.	BELOW FINISHED FLOOR
CD	CEILING DIFFUSER
CFM	CUBIC FEET OF AIR PER MINUTE
CR	CONDENSATE RETURN PIPING
D	CONDENSATE DRAIN PIPE
DN	DOWN
EA	EXHAUST AIR
EF	EXHAUST FAN
ER	EXHAUST REGISTER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD/AP	FIRE DAMPER W/ ACCESS PANEL
FD/SD/AP	FIRE/SMOKE DAMPER W/ ACCESS PANEL
FFH	FAN FORCED HEATER
GUH	GAS-FIRED UNIT HEATER
HRU	HEAT RECOVERY UNIT
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LDR	LINEAR DIFFUSER (RETURN)
LDS	LINEAR DIFFUSER (SUPPLY)
MAU	MAKE-UP AIR UNIT
M.O.D.	MOTORIZED DAMPER
OA	OUTSIDE AIR
RA	RETURN AIR
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SD	SMOKE DAMPER
UC	UNDERCUT
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX

MATERIAL AND INSULATION SCHEDULE

System	Material	Insulation					Remarks
	Basis of Design	Basis of Design	Type	Wall [in]	Min. R-Value	Vapor Barrier	
Ductwork - Supply Air (SA)	Galvanized Steel	Certainteed	Duct Wrap	2"	R-5	Integral	Pressure Class/Seal Class "B". Construct per SMACNA Standards.
Ductwork - Outside Air (OA)	Galvanized Steel	Certainteed	Duct Wrap	2"	R-5	Integral	Pressure Class/Seal Class "B". Construct per SMACNA Standards.
Ductwork - Return Air (RA)	Galvanized Steel	Certainteed	Duct Liner	1-1/2"	R-5	Integral	Pressure Class/Seal Class "B. Construct per SMACNA Standards.
Ductwork - Roof-Mounted	Galvanized Spiral Wound Steel	Certainteed	See Details	2"	R-8	Integral	Pressure Class/Seal Class "B". Construct per SMACNA Standards.
Ductwork - Exhaust Air (EA)	Galvanized Steel	-	-	-	-	-	Pressure Class/Seal Class "B". Construct per SMACNA Standards.
Ductwork - Flexible Duct	Aluminized Steel Mylar	Certainteed	Certaflex	1-1/2"	-	Yes	UL Listed Flexible Air Duct tested under UL-181.
Ductwork - Flue/Comb. Air	3" PVC	-	-	-	-	-	-
Refrigerant Piping	"ACR" Copper	Armacell	Armatuff	1-1/2"	-	Yes	Insulation shall conform to 2018 IECC minimum R-Value. Provide UV Protection Where Exposed to Sunshine
Condensate Piping	Type "L" Copper	Certainteed	500° Snap On	1	-	Yes	Alt Insulation - 1" Rubatex R-180FS, Provide UV Protection Where Exposed to Sunshine
Condenser Water; S&R	Sch.40 ERW Steel	Owens / Corning	Fiberglass SSIL-II	1	-	Yes	Insulate all Fittings, Valves, etc. w/ Raychem Heat Trace. See Detail, Mechanical Grooved Piping (Opt.)
CT Drain & Overflow Piping	Type "DWV" Copper	Owens / Corning	Fiberglass SSIL-II	1	-	Yes	Insulate all Fittings, Valves, etc. w/ Raychem Heat Trace. See Detail, Mechanical Grooved Piping (Opt.)
CT DW Supply Piping	Type "L" Copper	Owens / Corning	Fiberglass SSIL-II	1	-	Yes	Insulate all Fittings, Valves, etc. w/ Raychem Heat Trace. See Detail, Mechanical Grooved Piping (Opt.)

General Notes
1. Entire installation shall conform to manufacturer's recommendations.
2. All components including pipe, valves, fittings, insulation, installation practices, etc. shall conform to 2018 IMC standards unless otherwise indicated.
3. All piping shall be labeled, indicating fluid in pipe, in accordance with applicable codes and standards.
4. All insulation shall be installed per manufacturer's recommendations.

AIR DEVICE SCHEDULE (COMMON AREA)

No.	Max Airflow [CFM]	Size [in]	Neck [in]	Manufacturer	Model No.	Finish	Balancing Damper	Mtd. Surface	Material	Remarks
AD-1	0-75	12x12	6"Ø	Krueger	5SHR	White	OBD	Ceiling	Aluminum	Opposed Blade Damper Supply Diffuer Surface Mounted or Lay-in
	76-220	24x24	8"Ø	Krueger	5SHR	White	OBD	Ceiling	Aluminum	Opposed Blade Damper Supply Diffuer Surface Mounted or Lay-in
	221-375	24x24	10"Ø	Krueger	5SHR	White	OBD	Ceiling	Aluminum	Opposed Blade Damper Supply Diffuer Surface Mounted or Lay-in
	376-500	24x24	12"Ø	Krueger	5SHR	White	OBD	Ceiling	Aluminum	Opposed Blade Damper Supply Diffuer Surface Mounted or Lay-in
AD-2	0-150	12x12	-	Krueger	S80	White	No	Ceiling	Aluminum	Surface Mounted or Lay-in Return or Exhaust Grille with Horizontal Blades
	151-1600	24x24	-	Krueger	S80	White	No	Ceiling	Aluminum	Surface Mounted or Lay-in Return or Exhaust Grille with Horizontal Blades
	1601-2500	48x24		Krueger	S80	White	No	Ceiling	Aluminum	Surface Mounted or Lay-in Return or Exhaust Grille with Horizontal Blades
AD-3	50/ft	Refer to Plans		Krueger	1900	Note 4	OBD	Surface	Aluminum	Linear Slot, 2-Slot, 3/4" Width, Provide Plenum and Blank-offs Style and Mount to be Selected by Architect
	75/ft	Refer to Plans		Krueger	1900	Note 4	OBD	Surface	Aluminum	Linear Slot, 2-Slot, 1" Width, Provide Plenum and Blank-offs Style and Mount to be Selected by Architect
	100/ft	Refer to Plans		Krueger	1900	Note 4	OBD	Surface	Aluminum	Linear Slot, 3-Slot, 1" Width, Provide Plenum and Blank-offs Style and Mount to be Selected by Architect
AD-4	125/ft	Refer to Plans		Krueger	1900	Note 4	OBD	Surface	Aluminum	Linear Slot, 3-Slot, 1" Width, Provide Plenum and Blank-offs and Return Hood, Style and Mount to be Selected by Architect

General Notes
1. Entire installation shall conform to manufacturer's recommendations.
2. Unless otherwise indicated, provide duct connection the full size of duct shown on drawing.
3. Provide air device frames to suit wall and ceiling construction.
4. Color and finish of all grilles, registers, and diffusers shall be coordinated with Architect.
5. Paint return air plenums behind/above return and transfer grilles black.

WATER SOURCE HEAT PUMP SCHEDULE (COMMON AREA)

Unit Designation	WSHP 2-1	WSHP 2-2	WSHP 3-1	WSHP 4-1
Basis of Design	BOSCH	BOSCH	BOSCH	BOSCH
Model Number	CL018	CL036	CL048	CL048
Total Airflow [CFM]	600	1,200	1,400	1,400
ESP [in. W.C.]	-	-	-	-
Cabinet Configuration	Horizontal	Horizontal	Horizontal	Horizontal
Water Flowrate [GPM]	4.5	9	12	12
Dimensions (L x W x H)[in]	44 x 21.5 x 17	47 x 21.5 x 19	54 x 24 x 21	54 x 24 x 21
Approximate Weight [lbs]	100	210	100	100
Location	Gym 2117A	Corridor 4028	Living/Dining Room 3717	Temp Kitchen 400
Cooling Performance				
Nominal Tonnage	1.5	3	4	4
Total Capacity [MBH]				
Sensible Capacity [MBH]				
EAT (db / wb)[°F]				
LAT (db / wb)[°F]				
EWT [°F]				
LWT [°F]				
Water Flowrate [GPM]				
Unit Pressure Drop [Ft. Hd.]				
EER				
Unit Power Input [kW]				
Heat of Rejection [MBH]				
Heating Performance				
Capacity [MBH]				
EAT (db)[°F]				
LAT (db)[°F]				
EWT [°F]				
LWT [°F]				
COP				
Water Flowrate [GPM]				
Unit Pressure Drop [Ft. Hd.]				
Unit Power Input [kW]				
Heat of Absorption [MBH]				
Hot Gas Reheat				
Reheat Capacity [MBH]				
LAT (db)[°F]				
Electrical	265V / 1Ph / 60Hz	265V / 1Ph / 60Hz	460V / 3Ph / 60Hz	460V / 3Ph / 60Hz
Compressor RLA/LRA [A]	5.8/31	5.8/44.3	6.4/48.5	6.4/48.5
Fan Power [hp]	0.17	0.5	0.75	0.75
Fan Motor FLA [A]	0.9	1.8	2.8	2.8
Unit Amperage [A]	6.7	7.6	9.2	9.2
MCA [A]	8.1	9.0	10.8	10.8
MOCP [A]	15	15	15	15
Options/Accessories				
Unit Disconnect	Yes	Yes	Yes	Yes
5 Year Compressor Warranty	Yes	Yes	Yes	Yes
Supply Air Discharge Sensor	Yes	Yes	Yes	Yes
Condensate Overflow Switch	Yes	Yes	Yes	Yes
Manufacture's Standard DDC Controller	Yes	Yes	Yes	Yes
Thermostat	Yes	Yes	Yes	Yes
Flexible Duct Connections	Yes	Yes	Yes	Yes
Factory Sound Attenuation Options	Yes	Yes	Yes	Yes
Connection to Building DDC System	Yes	Yes	Yes	Yes
Auto-Flow Balancing Valve	Yes	Yes	Yes	Yes
Slow-Acting Motorized 2-Way Valve	Yes	Yes	Yes	Yes
Hosekit	Yes	Yes	Yes	Yes
Manufacturer Start-Up	Yes	Yes	Yes	Yes
MERV-8 Filter	Yes	Yes	Yes	Yes
Drain Pan	Yes	Yes	Yes	Yes
ECM Fan Motor	Yes	Yes	Yes	Yes
Water Connection	Verify	Verify	Verify	Verify

General Notes
1. Entire installation shall conform to manufacturer's recommendations.
2. Provide spring vibration isolation hangers with uni-strut supports.
3. Contractor shall verify and coordinate all unit hand connections for water source heat pumps prior to ordering.
3. Provide emergency drain pan with a water sensing device to shut down unit if water is detected in the pan.
3. Provide thermostat capable of operating unit at occupied and unoccupied cycle to control outside air motorized damper.
5. Mechanical Contractor shall furnish all disconnect switches and Electrical Contractor shall install all disconnect switches.
6. Contractor shall mark and label unit with unit designation, date, and company who installed equipment.
7. Heat Pumps shall be provided with Manufacture's Standard DDC Controller, mounted wire and programmed prior to leaving the factory. Controller shall be BACKNET compatible, including any required any required interface card. Controller shall be ready for integration by building standard ATC vendor. Coordination shall be included by heat pump manufacture.
8. Cooling performances are based on a 95°F ambient temperature.

VRF HEAT PUMP SCHEDULE

Unit Designation	AHU 2-1	AHU 3-2
Basis of Design	Carrier	Carrier
Model Number	45MAHAQ09XA3	45MAHAQ06XA3
Total CFM L/M/H	324	324
Unit Location	2042A FACP	406 Secority
Air Handler Type	High Wall Type	High Wall Type
Unit Dimensions (H x W x D) (in.)	11.61 x 31.3 x 8.86	11.61 x 31.3 x 8.86
Unit Weight (lbs.)	25	25
Cooling / Heating Capacity	**80F DB / 67F WB**	**80F DB / 67F WB**
Rated Cooling Capacity (MBH)	6.0	9.0
Total Cooling Capacity (MBH)	5.894	8.841
Sensible Cooling Capacity (MBH)	4.244	6.365
Rated Heating Capacity (MBH)	7.0	12.0
Corrected Heating Capacity (MBH)	6.602	9.902
Air Handling Unit Electrical Requirements	**208-230 / 1 / 60**	**208-230 / 1 / 60**
Minimum Circuit Ampacity (A)	Powered by Outdoor	Powered by Outdoor
Outdoor Unit Designation	**HP 2-1**	
Basis of Design	Carrier	
Model Number	37MGHAQ18CA3	
Nominal Tonnage	1.5	
Nominal Cooling Capacity (MBH)	19	
Corrected Cooling Capacity (MBH)	14.736	
Nominal Heating Capacity (MBH)	20	
Corrected Heating Capacity (MBH)	16.505	
EER2 Value	15	
SEER2 Value	25	
Heating COP/HSPF2	4/10.5	
Unit Dimensions (H x W x D) (in.)	31.89 x 37.24 x 16.14	
Unit Weight (lbs.)	140	
Outdoor Unit Electrical Requirements	**208-230 / 1 / 60**	
Minimum Circuit Ampacity (A)	17.5	
MOCP	20	
Options & Accessories		
Refrigerant	R454B	R454B
Refrigerant Sensor/Monitor	Yes	Yes
Compressor Warranty	7 Years	7 Years
24/7 Programmable Thermostat	Yes	Yes
Unit Disconnect Switches	Yes	Yes
Low Ambient	Yes	Yes
Filter Rack	Yes	Yes
MERV 8 Filter	yes	yes
Polymer Drain Pan	Yes	Yes
Vibration Isolators	Yes, By M.C.	Yes, By M.C.
Discharge Air Sensor	Yes	Yes

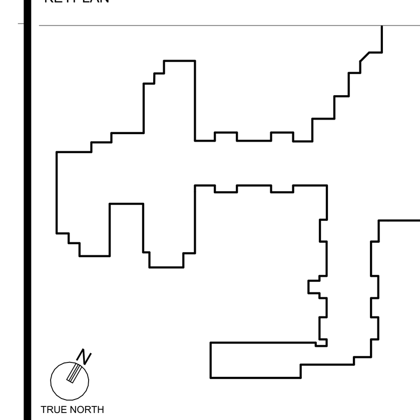
General Notes
1.) All refrigerant piping shall be sized, designed and installed per all manufacturer's recommendations and requirements.
2.) Mechanical Contractor shall furnish all equipment disconnect switches and Electrical Contractor shall install all equipment disconnect switches.
3.) Contractor shall Mark and Label Unit with Unit Designation, Date, and Company Who Installed Equipment
4.) Provide Spring Vibration Isolation Hangers With Uni-strut Supports.
5.) Provide Emergency Drain Pan with a Water Sensing Device to Shut Down Unit if Water is Detected in the Pan.
6.) Provide PATE equipment supports, Insulated 16" High w/ 2x6 wood nailer for HP. Coordinate final location w/ architect. install per manufacturer's requirements and ensure that all service and maintenance clearances are provide.
7.) Provide Pipe Supports for Refrigerant Piping and Conduit Serving Outdoor Unit.
8.) Provide Thermostat Capable of Operating Unit at Occupied and Unoccupied Cycle to Control Outdoor Air Motorized Damper
9.) Coordinate refrigerant Lineset Lengths, Provide Long Line Kit As Necessary.
10.) Mechanical Contractor Shall Furnish All Equipment Disconnect Switches and Electrical Contractor Shall Install all Equipment Disconnect Switches.
11.) All refrigerant piping between the air handler and the assoicated outdoor heat pump shall contain "no joints." All piping runs shall be "continuous linesets."
12.) Equipment shall be Energy Star Certified.

FAN FORCE HEATER SCHEDULE

Unit Designation	FFH 3-1
Basis of Design	Q-Mark
Model Number	AWH44004F
Mount	Wall
Dimensions (L x W x H)[in]	16x19-1/2x6
Approximate Weight [lbs]	25
Service	Basement Corridor
Electrical	**208 / 1Ø /60**
Capacity [kW]	3
Number of Elements	1
Amperage [A]	14.4
Options/Accessories	
Finish	Selected by Architect
Mounting Kit	Yes
Disconnect Switch	Yes
Overcurrent Protection	Yes
Automatic Reset Thermal Limint	Yes
Fan Guard	Yes
Control	
Unit Mounted Thermostat	Yes Tamperproof

General Notes
1. Entire installation shall conform to manufacturer's recommendations.
2. Final finish shall be coordinated with architect.
3. Mechanical Contractor shall furnish all disconnect switches and Electrical Contractor shall install all disconnect switches.
4. Contractor shall mark and label unit with unit designation, date, and company who installed equipment.

KEYPLAN



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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 43252, Expiration Date: 01/13/2027

PROJECT TITLE
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A KENDAL AFFILIATE

ENABLING RENOVATION CONSTRUCTION DOCUMENTS

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NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
MECHANICAL SCHEDULES AND DETAILS

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