YORK COUNTY PLANNING FACILITY
HVAC UPGRADES

18 W LIBERTY ST
YORK, SC 29745

GENERAL NOTES

A. THE TERM "WORK" AS USED IN THESE NOTES SHALL INCLUDE ALL PROVISIONS AS DRAWN OR SPECIFIED IN THESE DOCUMENTS AS WELL AS ALL OTHER PROVISIONS SPECIFICALLY INCLUDED BY THE OWNER IN THE FORM OF DRAWINGS, SPECIFICATIONS, AND WRITTEN INSTRUCTIONS AND APPROVED BY THE ARCHITECT.

B. THE TERM "CONTRACTOR" AS USED IN THESE NOTES SHALL REFER TO THE GENERAL CONTRACTOR OR TO THE SUB-CONTRACTORS. THE OWNER MAY ELECT TO CONTRACT DIRECTLY WITH A SUB-CONTRACTOR FOR ANY PART OF THE WORK.

C. SCOPE OF WORK: THE CONTRACTOR SHALL INCLUDE AND PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND PAY ALL EXPENSES INCURRED IN THE PROPER COMPLETION OF WORK UNLESS SPECIFICALLY NOTED TO BE THE WORK OF OTHERS. CONTRACTOR SHALL PERFORM ALL WORK NECESSARY FOR PRODUCING A COMPLETE, HABITABLE PROJECT, INCLUDING BUT NOT LIMITED TO SITE WORK, ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION, PLUMBING, HVAC, AND ELECTRICAL.

D. BEFORE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND SHALL NOTIFY THE ARCHITECT, IN WRITING, OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK AND SHALL BE RESPONSIBLE FOR SAME.

E. IF THE CONTRACT DOCUMENTS ARE FOUND TO BE UNCLEAR, AMBIGUOUS OR CONTRADICTORY, THE CONTRACTOR MUST REQUEST CLARIFICATION FROM THE ARCHITECT IN WRITING BEFORE PROCEEDING WITH THAT PART OF THE WORK.

F. IF A CONDITION EXISTS THAT REQUIRES OBSERVATION OR ACTION BY THE ARCHITECT, OR OTHER DESIGN PROFESSIONAL, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT.

G. CONTRACTOR SHALL BE FAMILIAR WITH PROVISIONS OF ALL APPLICABLE CODES AND SHALL ENSURE THE COMPLIANCE OF THE WORK WITH ALL LOCAL, STATE AND FEDERAL CODES, TRADE STANDARDS AND MANUFACTURER'S RECOMMENDATIONS. IN THE EVENT OF CONFLICT BETWEEN LOCAL, STATE AND NATIONAL CODES, THE MORE STRINGENT SHALL GOVERN. BEFORE COMMENCING WORK NOT SHOWN IN DOCUMENTS, BUT REQUIRED TO ACHIEVE FULL COMPLIANCE WITH CODES, CONTRACTOR SHALL NOTIFY ARCHITECT.

H. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SAFETY AND COMPLIANCE WITH REQUIREMENTS SPECIFIED IN THE OWNER/CONTRACTOR CONTRACT IS, AND SHALL BE, THE CONTRACTOR'S RESPONSIBILITY.

I. CONTRACTOR SHALL PAY ALL TAXES, SECURE ALL PERMITS AND PAY ALL FEES INCURRED IN THE COMPLETION OF THE PROJECT.

J. THE CONTRACTOR SHALL UNCONDITIONALLY WARRANTY ALL MATERIALS, AND WORKMANSHIP FURNISHED OR INSTALLED BY HIM OR HIS SUBCONTRACTORS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND SHALL REPLACE ANY DEFECTIVE WORK WITHIN THAT PERIOD WITHOUT EXPENSE TO THE OWNER AND PAY FOR ALL DAMAGES TO OTHER PARTS OF THE BUILDING RESULTING FROM DEFECTIVE WORK OR ITS REPAIR. THE CONTRACTOR SHALL REPLACE DEFECTIVE WORK WITHIN A REASONABLE, AGREED UPON TIME FRAME, AFTER IT IS BROUGHT TO HIS ATTENTION.

K. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS AND RUBBISH AND AT THE COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE ALL RUBBISH, IMPLEMENTS, AND SURPLUS MATERIALS AND LEAVE THE BUILDING IN NEW AND CLEAN CONDITION.

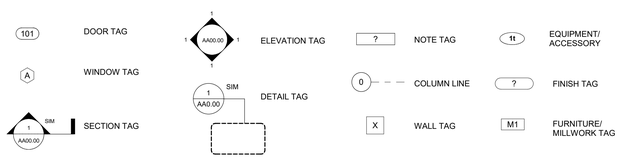
L. CONTRACTOR IS TO PROVIDE TO THE OWNER A LIST OF ALL SUBCONTRACTORS USED, COMPLETE WITH ADDRESSES, PHONE NUMBERS AND COPIES OF ALL WARRANTIES AND OPERATIONS AND MAINTENANCE MANUALS.

COORDINATION OF WORK

ALL NOTES APPLY TO ALL DRAWINGS AND ALL TRADES. IT IS THE RESPONSIBILITY OF ALL CONTRACTORS AND SUB-CONTRACTORS TO COORDINATE THE INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY ALL OTHER CONTRACTORS AND SUB-CONTRACTORS. THE REQUIREMENTS OF THE DRAWINGS, GENERAL REQUIREMENTS, AND ALL ITEMS OF THE CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS AND SUB-CONTRACTORS. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS OF THE CONTRACT DOCUMENTS FOR HIS EMPLOYEE'S USE ON THE PROJECT AND ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLED WITH THE WORK OF OTHER CONTRACTORS AND SUB-CONTRACTORS.

CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK.

DRAWING SYMBOL LEGEND



VICINITY MAP

PROJECT SCOPE

THE PROJECT SCOPE OUTLINED IN THIS SET OF DOCUMENTS INCLUDES THE MODERNIZATION OF THE FACILITY HVAC SYSTEMS WITH ASSOCIATED CEILING AND ELECTRICAL WORK.

ALLOWANCES

- ALLOWANCE FOR 10% OF CEILING TILES TO BE REPLACED

DRAWING INDEX

NUMBER	SHEET NAME	CURRENT REVISION DATE
TITLE		
T001	TITLE SHEET	11 JUNE 2024
ARCHITECTURE		
A100	DEMOLITION REFLECTED CEILING PLANS	11 JUNE 2024
A101	DEMOLITION FLOOR PLANS	11 JUNE 2024
A102	DEMOLITION FLOOR PLANS	11 JUNE 2024
A103	ENLARGED FLOOR PLANS - MECHANICAL CHASE	11 JUNE 2024
A201	REFLECTED CEILING PLAN	11 JUNE 2024
MECHANICAL		
M001	MECHANICAL LEGEND AND NOTES	11 JUNE 2024
M002	MECHANICAL SCHEDULES	11 JUNE 2024
M003	MECHANICAL DETAILS	11 JUNE 2024
M004	MECHANICAL EQUIPMENT DIAGRAMS	11 JUNE 2024
M005	MECHANICAL CONTROLS	11 JUNE 2024
M006	MECHANICAL CONTROLS	11 JUNE 2024
M100	MECHANICAL DEMOLITION PLAN - BASEMENT	11 JUNE 2024
M101	MECHANICAL DEMOLITION PLAN - 1ST FLOOR	11 JUNE 2024
M102	MECHANICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC	11 JUNE 2024
M200	MECHANICAL PLAN - BASEMENT	11 JUNE 2024
M201	MECHANICAL PLAN - 1ST FLOOR	11 JUNE 2024
M202	MECHANICAL PLAN - 2ND FLOOR & ATTIC	11 JUNE 2024
ELECTRICAL		
E001	ELECTRICAL LEGEND AND NOTES	11 JUNE 2024
E002	ELECTRICAL DIAGRAMS	11 JUNE 2024
E100	ELECTRICAL DEMOLITION PLAN - BASEMENT	11 JUNE 2024
E101	ELECTRICAL DEMOLITION PLAN -1ST FLOOR	11 JUNE 2024
E102	ELECTRICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC	11 JUNE 2024
E200	ELECTRICAL POWER PLAN - BASEMENT	11 JUNE 2024
E201	ELECTRICAL POWER PLAN -1ST FLOOR	11 JUNE 2024
E202	ELECTRICAL POWER PLAN - 2ND FLOOR & ATTIC	11 JUNE 2024
E300	ELECTRICAL CEILING PLAN - BASEMENT	11 JUNE 2024
E301	ELECTRICAL CEILING PLAN - 1ST FLOOR	11 JUNE 2024
E302	ELECTRICAL CEILING PLAN - 2ND FLOOR & ATTIC	11 JUNE 2024
E900	ELECTRICAL SCHEDULES	11 JUNE 2024
E901	ELECTRICAL PANEL SCHEDULES	11 JUNE 2024

PROJECT CONTACTS

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864.720.2819

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CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W LIBERTY ST, YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

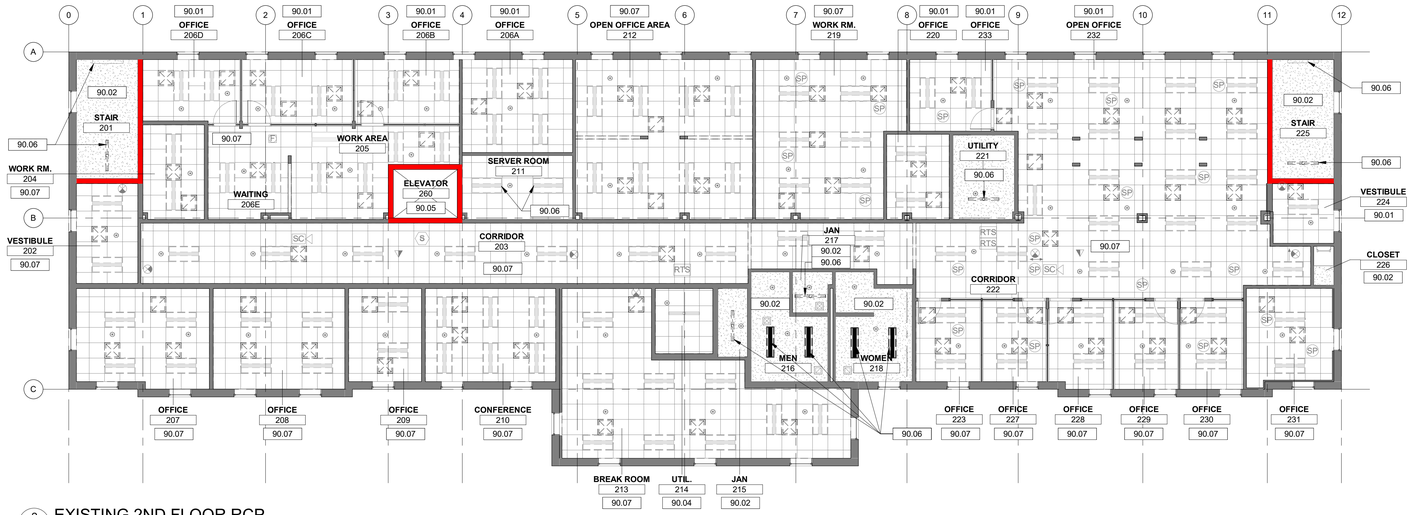
DRAWING NAME

TITLE SHEET

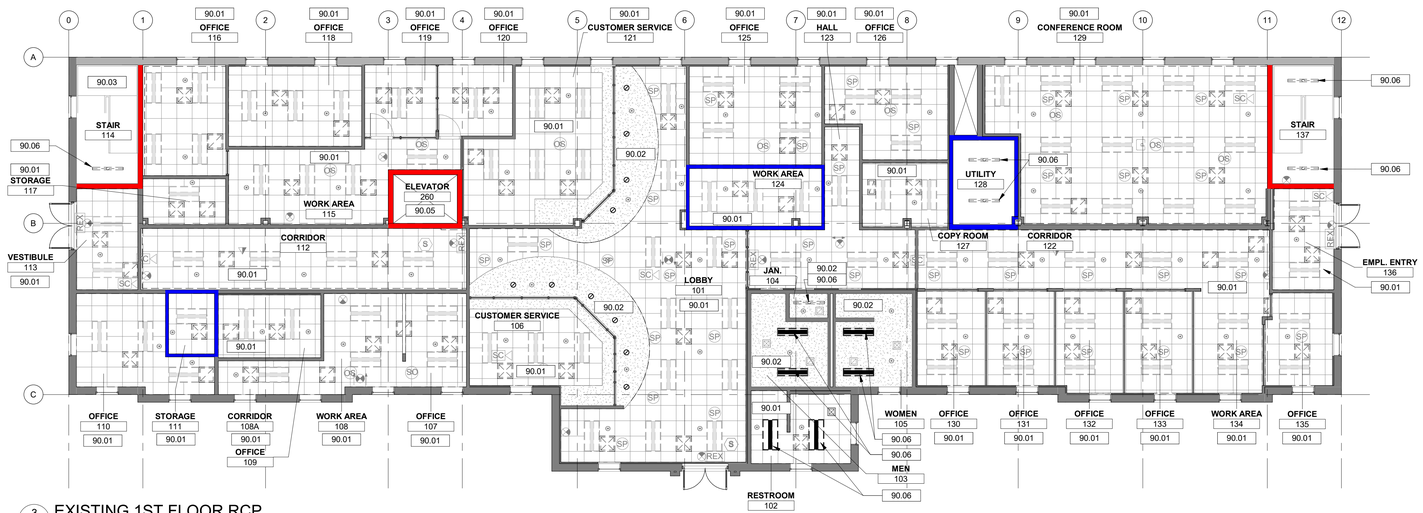
DRAWING NO.

T001

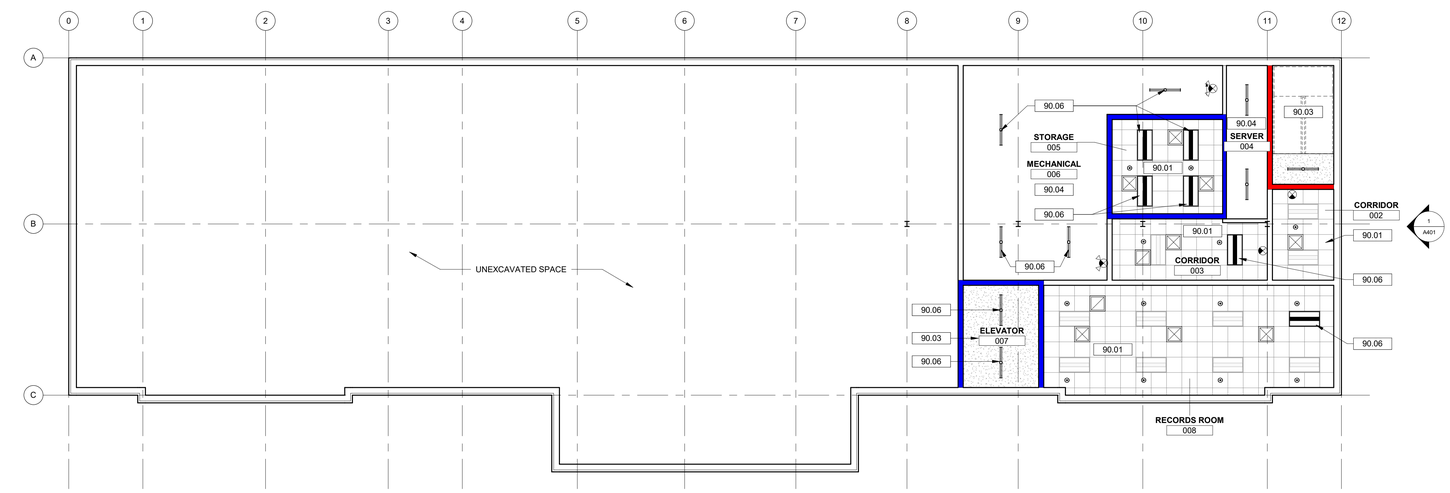
Drawn By: LMG Checked By: MTP



2 A100 EXISTING 2ND FLOOR RCP
1/8" = 1'-0"



3 A100 EXISTING 1ST FLOOR RCP
1/8" = 1'-0"



1 A100 EXISTING BASEMENT RCP
1/8" = 1'-0"

GENERAL DEMOLITION NOTES

A. ALL HAZARDOUS MATERIALS SHALL BE REMOVED PRIOR TO START OF CONSTRUCTION UNDER SEPARATE CONTRACT.

B. ALL MATERIALS THAT HAVE BEEN DEMOLISHED SHALL BE REMOVED IMMEDIATELY AND DISPOSED OF PROPERLY. NO DEMOLISHED MATERIALS SHALL BE STOCKPILED ON SITE.

C. PROTECT OWNER'S PROPERTY AND PERSONS AT ALL TIMES.

D. ANY ITEMS NOT SHOWN TO BE DEMOLISHED THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.

E. COORDINATE ANY SYSTEMS SHUTDOWNS WHICH MAY BE REQUIRED WITH THE OWNER.

F. PRIOR TO COMMENCING WITH THE DEMOLITION, THE CONTRACTOR SHALL ASCERTAIN FROM THE OWNER WHETHER OR NOT THE OWNER WISHES TO RETAIN ANY ITEMS. ANY SUCH ITEMS SHALL BE REMOVED WITH CARE SO AS TO PREVENT UNNECESSARY DAMAGE AND TURNED OVER TO THE OWNER.

G. THE CONTRACTOR SHALL CONTROL AND LIMIT DUST RESULTING FROM DEMOLITION AND PREVENT THE SPREAD OF DUST TO THE REMAINING BUILDING.

H. WHERE DAMPERS, CONDUIT, PIPING, ETC. ARE REMOVED FROM RATED WALLS, WALLS SHALL BE PATCHED AND SEALED TO MAINTAIN FIRE AND SMOKE RATING INTEGRITY OF WALLS.

I. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

J. REMOVE ALL WIRING, CONDUIT, WIRING SYSTEMS AND EQUIPMENT MADE OBSOLETE BY DEMOLITION. ANY EXISTING CONDUIT SYSTEM THAT CAN BE REUSED IN PLACE IN THE NEW WORK MAY BE REUSED PROVIDED IT IS IN A CONDITION ACCEPTABLE TO THE ARCHITECT.

K. DEMOLITION INCLUDES REMOVAL OF ALL ITEMS NECESSARY TO FACILITATE THE NEW CONSTRUCTION, WHETHER SPECIFICALLY INDICATED OR NOT, UNLESS NOTED OTHERWISE.

L. ALL UTILITIES DEMOLISHED SHALL BE COMPLETELY REMOVED AND/OR CAPPED. ALL FINISHES TO REMAIN THAT ARE DISTURBED SHALL BE REPAIRED TO MATCH EXISTING.

M. THE CONTRACTOR SHALL SURVEY AND DETERMINE THE REMOVAL OF EXISTING CONSTRUCTION, EITHER WHOLE OR IN PART, AS REQUIRED FOR THE INSTALLATION OF THE NEW MECHANICAL, PLUMBING AND ELECTRICAL WORK.

N. THE CONTRACTOR SHALL PROVIDE PROTECTIVE COVERING FOR FINISHES, FURNITURE, AND FIXTURES IN EXISTING AREAS NOT DESIGNATED FOR DEMOLITION OR NEW CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED BY HIS WORK OR ANY SUBCONTRACTORS.

O. AS APPLICABLE, PROVIDE TEMPORARY ENCLOSURE, BARRIERS AND COVERS TO PROTECT EXISTING FURNITURE, FIXTURES AND EQUIPMENT REMAINING IN PROJECT AREA DURING CONSTRUCTION.

P. REMOVE MECHANICAL AND ELECTRICAL FIXTURES AND CAP OR REMOVE EXISTING BRANCH LINES AS INDICATED IN MECHANICAL AND ELECTRICAL DRAWINGS.

Q. COORDINATE PLANS FOR NEW CONSTRUCTION WITH DEMOLITION PLANS WITH EXTENT FOR REMOVAL. REMOVE ONLY THOSE PORTIONS OF WALLS, FLOORS, CEILINGS, ETC. NECESSARY TO ACCOMMODATE NEW CONSTRUCTION.

R. SHOW EXISTING CONDITIONS IN SUFFICIENT DETAIL OF ADJOINING CONSTRUCTION, INCLUDING FINISH SURFACES THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY SELECTIVE DEMOLITION OPERATIONS. SUBMIT BEFORE WORK BEGINS.

S. REMOVE BATT INSULATION LAYING ON 2ND FLOOR TOP OF TILES AND DISPOSE OF OFF-SITE. WHILE CEILING SYSTEM IS REMOVED, INSTALL NEW CLOSED-CELL SPRAY FOAM INSULATION (R-30 MINIMUM) AT UNDERSIDE OF EXISTING ROOF DECK THROUGHOUT ENTIRE ATTIC.

DRAWING NOTES

90.01 ALL EXISTING SUSPENDED ACOUSTIC CEILING SYSTEM TO BE TEMPORARILY REMOVED AND REINSTALLED FOR INSTALLATION OF NEW DUCTWORK. ALL EXISTING CEILING GRID TO BE DEMOLISHED EXCEPT FOR PERIMETER WALL MOLDING TO REMAIN. ANY ACOUSTIC CEILING TILES DAMAGED DURING DEMOLITION TO BE REPLACED WITH NEW ACOUSTIC CEILING TILES TO MATCH EXISTING AS PART OF AN ALLOWANCE. ALL DIFFUSERS AND RETURNS TO BE REMOVED AND REPLACED WITH NEW, REFER TO MECHANICAL DRAWINGS. ALL LIGHTS TO REMAIN UNLESS NOTED OTHERWISE, REFER TO ELECTRICAL DRAWINGS. LIGHTS AND OTHER MISCELLANEOUS DEVICES MOUNTED TO THE EXISTING ACOUSTICAL CEILING SYSTEM SHALL BE TEMPORARILY HUNG FROM THE STRUCTURE ABOVE AND PROTECTED DURING DEMOLITION. ALL EXIT SIGNS, SMOKE AND FIRE DETECTORS, AND SPRINKLERS TO REMAIN AND BE PROTECTED DURING DEMOLITION.

90.02 DRYWALL CEILINGS AND SOFFITS TO REMAIN. LIGHTS TO REMAIN UNLESS NOTED OTHERWISE. REMOVE EXISTING BATT INSULATION LAYING ON TOP OF DRYWALL AND DISPOSE OF OFF-SITE. PROTECT DURING DEMOLITION.

90.03 CEILING TO REMAIN. NO SCOPE.

90.04 REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LIGHTING AND HVAC DEMOLITION.

90.05 NO SCOPE.

90.06 LIGHT TO BE REMOVED AND DISPOSED. SEE ELECTRICAL DRAWINGS FOR NEW LIGHT FIXTURE TYPES.

90.07 ALL EXISTING SUSPENDED ACOUSTIC CEILING SYSTEM TO BE TEMPORARILY REMOVED AND REINSTALLED FOR INSTALLATION OF NEW DUCTWORK. ALL EXISTING CEILING GRID TO BE DEMOLISHED EXCEPT FOR PERIMETER WALL MOLDING TO REMAIN. ANY ACOUSTIC CEILING TILES DAMAGED DURING DEMOLITION TO BE REPLACED WITH NEW ACOUSTIC CEILING TILES TO MATCH EXISTING AS PART OF AN ALLOWANCE. REMOVE BATT INSULATION LAYING ON TOP OF TILES AND DISPOSE OF OFF-SITE. WHILE CEILING SYSTEM IS REMOVED, INSTALL NEW CLOSED-CELL SPRAY FOAM INSULATION (R-30 MINIMUM) AT UNDERSIDE OF EXISTING ROOF DECK THROUGHOUT ENTIRE ATTIC. ALL DIFFUSERS AND RETURNS TO BE REMOVED AND REPLACED WITH NEW, REFER TO MECHANICAL DRAWINGS. ALL LIGHTS TO REMAIN UNLESS NOTED OTHERWISE, REFER TO ELECTRICAL DRAWINGS. ALL LIGHTS TO REMAIN UNLESS NOTED OTHERWISE, REFER TO ELECTRICAL DRAWINGS. LIGHTS TO BE TEMPORARILY HUNG FROM THE STRUCTURE ABOVE AND PROTECTED DURING DEMOLITION. ALL EXIT SIGNS, SMOKE AND FIRE DETECTORS, SPRINKLERS TO REMAIN AND BE PROTECTED DURING DEMOLITION.

EXISTING REFLECTED CEILING PLAN LEGEND

- EXISTING 2'x2' ACT CEILING
- EXISTING DRYWALL CEILING
- LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- DIFFUSER
- RETURN
- RTS SMOKE DETECTOR TEST STATION
- EXISTING SMOKE PARTITION
- EXIT SIGN
- FIRE SPRINKLER
- SC CAMERA
- SP SPEAKER
- S SMOKE DETECTOR
- OS OCCUPANCY SENSOR
- REX REX DEVICE
- EXISTING 1-HOUR RATED WALL

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18 W LIBERTY ST,
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ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

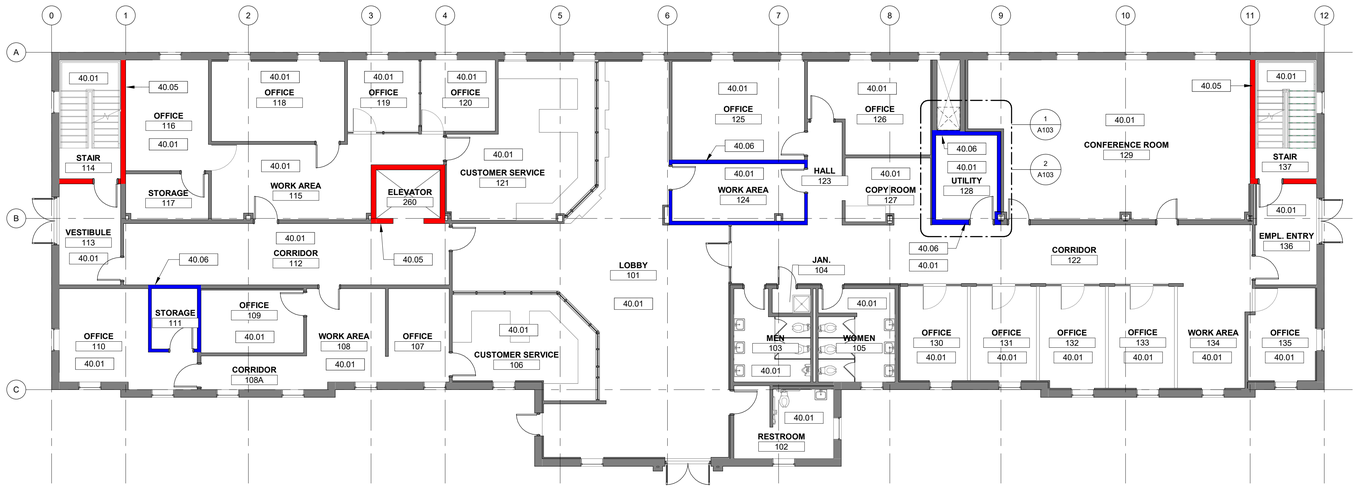
DRAWING NAME

DEMOLITION REFLECTED CEILING PLANS

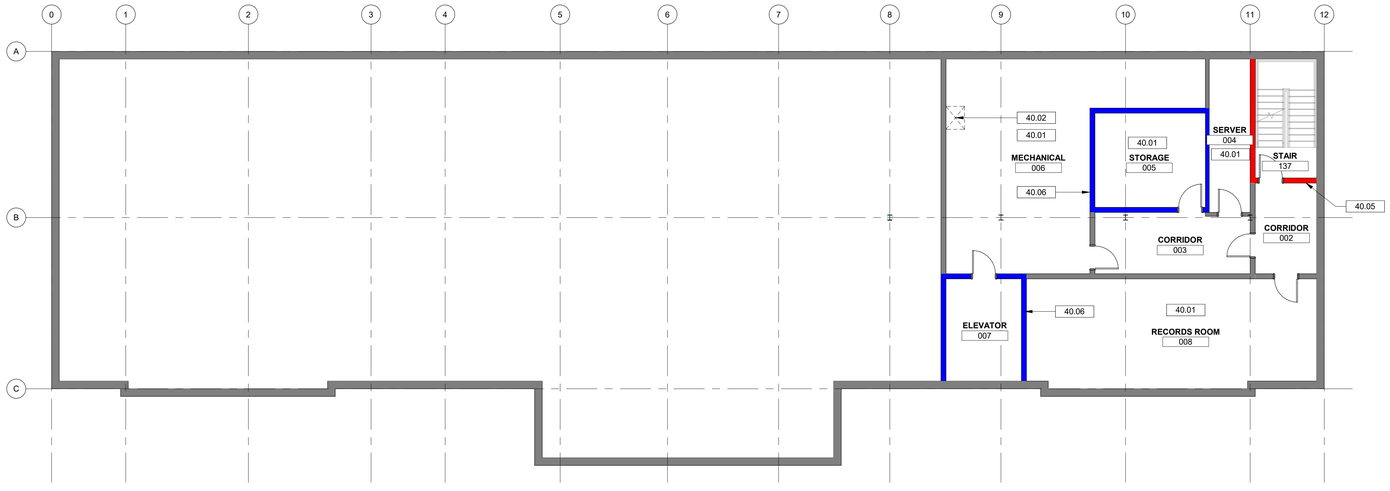
DRAWING NO.

A100

Drawn By: LMG Checked By: MTP



1 A101 1ST FLOOR
1/8" = 1'-0"



3 A101 BASEMENT
1/8" = 1'-0"

DRAWING NOTES

40.01 ALL EXISTING WALLS, FLOORS, AND FURNITURE TO BE PROTECTED DURING CEILING FOR DURATION OF CONSTRUCTION. ALL PROTECTED ITEMS TO BE INSPECTED BEFORE WORK WITH PHOTOGRAPHIC DOCUMENTATION OF THEIR CONDITION.

40.02 EXISTING CHASE. NEW VRF LINESETS TO RUN FROM BASEMENT TO 1ST FLOOR. REFER TO MECHANICAL DRAWINGS.

40.05 EXISTING ONE HOUR FIRE RATED PARTITION EXTENDED TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE TO REMAIN. PROTECT ALL NEW PENETRATIONS AND CLOSE UP ANY ABANDONED OPENINGS TO MAINTAIN FIRE RATING OF WALL ASSEMBLY.

40.06 EXISTING SMOKE RATED PARTITION EXTENDED TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE TO REMAIN. PROTECT ALL NEW PENETRATIONS AND CLOSE UP ANY ABANDONED OPENINGS TO MAINTAIN SMOKE RATING OF WALL ASSEMBLY.

FLOOR PLAN LEGEND

EXISTING SMOKE PARTITION

EXISTING 1-HOUR RATED WALL

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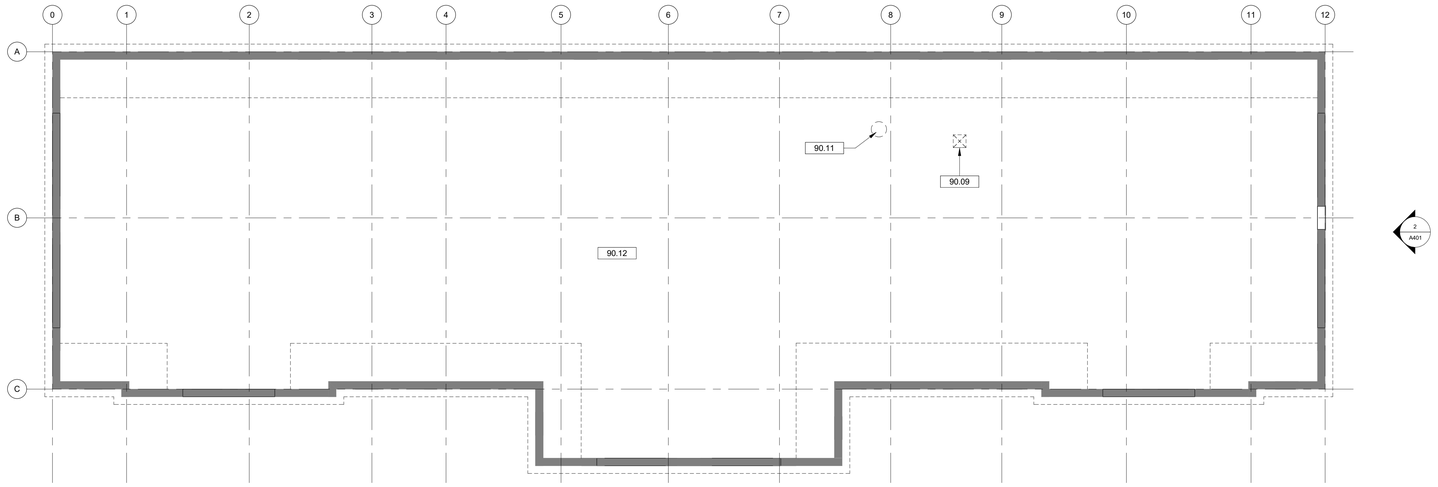
DRAWING NAME

DEMOLITION FLOOR PLANS

DRAWING NO.

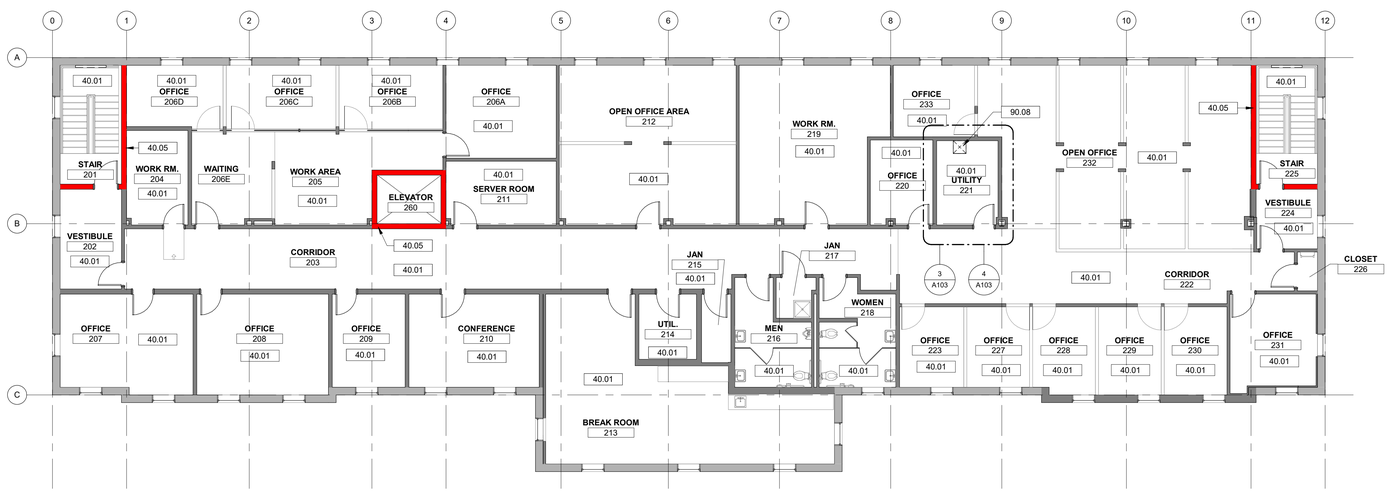
A101

Drawn By: LMG Checked By: MTP



1 A102 ATTIC PLAN

1/8" = 1'-0"



2 A102 2ND FLOOR

1/8" = 1'-0"

FLOOR PLAN LEGEND

EXISTING SMOKE PARTITION

EXISTING 1-HOUR RATED WALL

DRAWING NOTES

40.01 ALL EXISTING WALLS, FLOORS, AND FURNITURE TO BE PROTECTED DURING CEILING FOR DURATION OF CONSTRUCTION. ALL PROTECTED ITEMS TO BE INSPECTED BEFORE WORK WITH PHOTOGRAPHIC DOCUMENTATION OF THEIR CONDITION.

40.05 EXISTING ONE HOUR FIRE RATED PARTITION EXTENDED TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE TO REMAIN. PROTECT ALL NEW PENETRATIONS AND CLOSE UP ANY ABANDONED OPENINGS TO MAINTAIN FIRE RATING OF WALL ASSEMBLY.

90.08 DEMOLISH PORTION OF EXISTING 2ND FLOOR SLAB TO ACCOMMODATE VRF LINESETS. PROVIDE MINIMUM 20" X 20" OPENING. REFER TO MECHANICAL DRAWINGS.

90.09 DEMOLISH PORTION OF 2ND FLOOR CEILING TO ACCOMMODATE VRF LINESETS. PROVIDE MINIMUM 20" X 20" OPENING. REFER TO MECHANICAL DRAWINGS.

90.11 EXISTING INTAKE FAN TO BE REMOVED. PATCH ROOF WITH ARCHITECTURAL SHINGLES TO MATCH EXISTING.

90.12 REMOVE BATT INSULATION LAYING ON TOP OF TILES AND DRYWALL CEILING AND DISPOSE OF OFF-SITE. WHILE CEILING SYSTEM IS REMOVED, INSTALL NEW CLOSED-CELL SPRAY FOAM INSULATION (R-30 MINIMUM) AT UNDERSIDE OF EXISTING ROOF DECK THROUGHOUT ENTIRE ATTIC.

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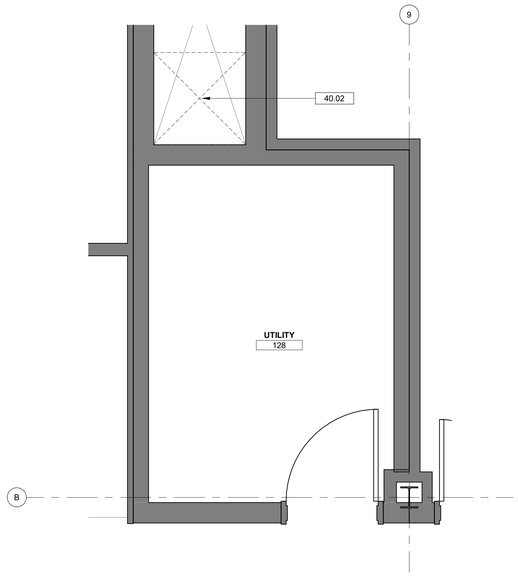
DEMOLITION FLOOR PLANS

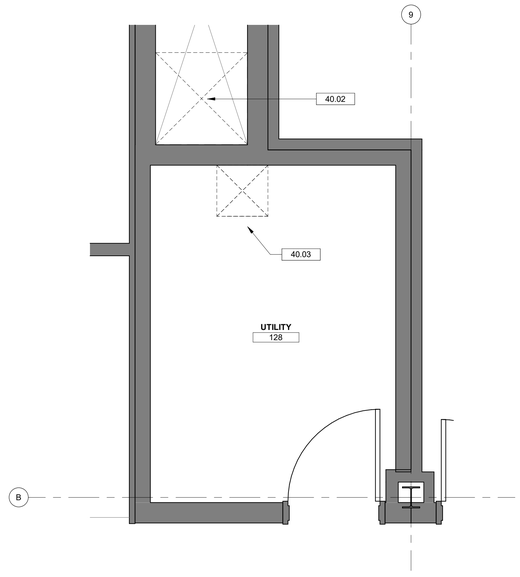
DRAWING NO.

A102

Drawn By: LMG Checked By: MTP

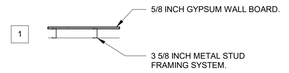


1 A103 MECHANICAL CHASE - 1ST FLOOR ENLARGED DEMO PLAN
1/2" = 1'-0"



2 A103 MECHANICAL CHASE -1ST FLOOR ENLARGED PLAN
1/2" = 1'-0"

WALL TYPE LEGEND



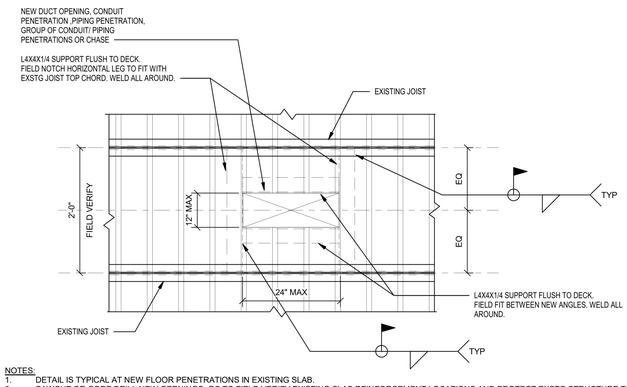
DRAWING NOTES

40.02 EXISTING CHASE. NEW VRF LINESETS TO RUN FROM BASEMENT TO 1ST FLOOR. REFER TO MECHANICAL DRAWINGS.

40.03 NEW OPENING IN FLOOR ABOVE FOR VRF LINESETS TO RUN FROM 1ST FLOOR TO 2ND FLOOR. REFER TO MECHANCIAL DRAWINGS.

40.27

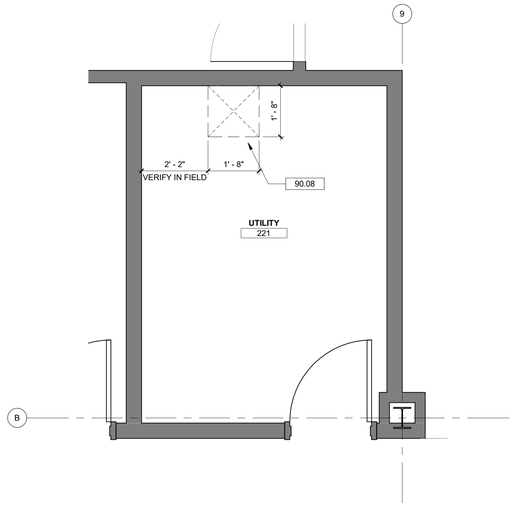
90.08 DEMOLISH PORTION OF EXISTING 2ND FLOOR SLAB TO ACCOMMODATE VRF LINESETS. PROVIDE MINIMUM 20" X 20" OPENING. REFER TO MECHANICAL DRAWINGS.



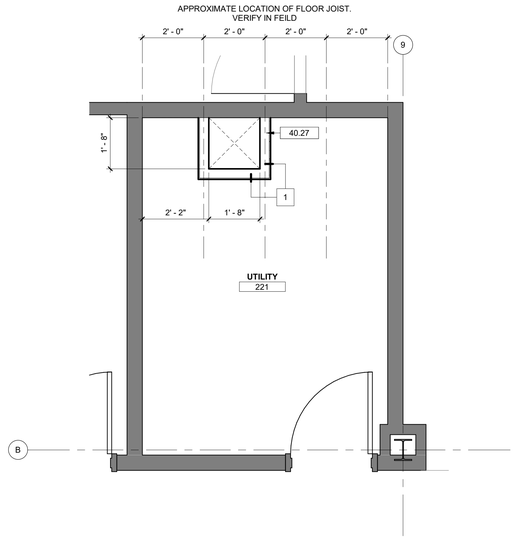
NOTES:
1. DETAIL IS TYPICAL AT NEW FLOOR PENETRATIONS IN EXISTING SLAB.
2. SAWCUT OR CORE DRILL NEW OPENINGS. GC TO FIELD VERIFY EXISTING SLAB REINFORCEMENT LOCATIONS AND PROTECT EXSTG STRUCTURE TO REMAIN.
3. DETAIL APPLIES TO SINGLE PENETRATIONS OR A "GROUP" OF PENETRATIONS THAT HAS A DIMENSION PERPENDICULAR TO DECK SPAN GREATER THAN 6"
4. A GROUP OF PENETRATIONS FITTING WITHIN THE MAX DIMENSION INDICATED SHALL CONSTITUTE A SINGLE PENETRATION.
5. PROVIDE MIN. 1.5" DECK BEARING AT NEW SUPPORT AN

ENGINEERING NOTE: THIS DETAIL IS PROVIDED FOR PRICING PURPOSES ONLY. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FINAL ENGINEERED DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER BASED ON ACTUAL FIELD CONDITIONS AS A DELEGATED DESIGN.

5 A103 TYPCIAL FLOOR OPENING DETAIL
12" = 1'-0"



3 A103 MECHANICAL CHASE - 2ND FLOOR ENLARGED DEMO PLAN
1/2" = 1'-0"



4 A103 MECHANICAL CHASE - 2ND FLOOR ENLARGED PLAN
1/2" = 1'-0"

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PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W LIBERTY ST,
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NO.	DATE	DESCRIPTION

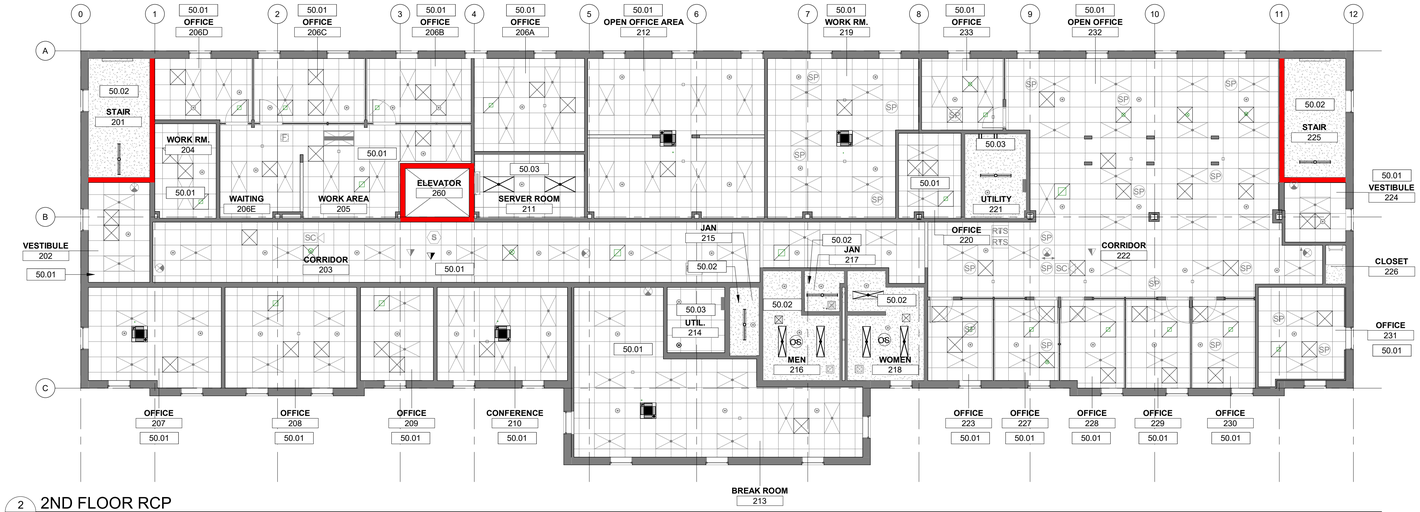
DRAWING NAME

ENLARGED FLOOR PLANS - MECHANICAL CHASE

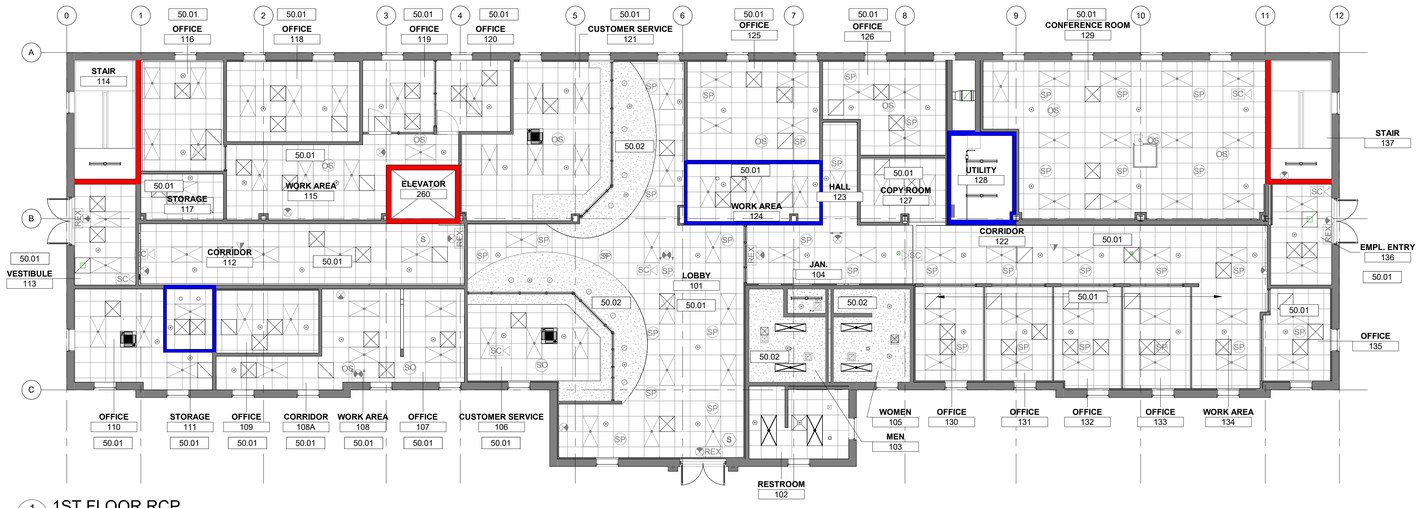
DRAWING NO.

A103

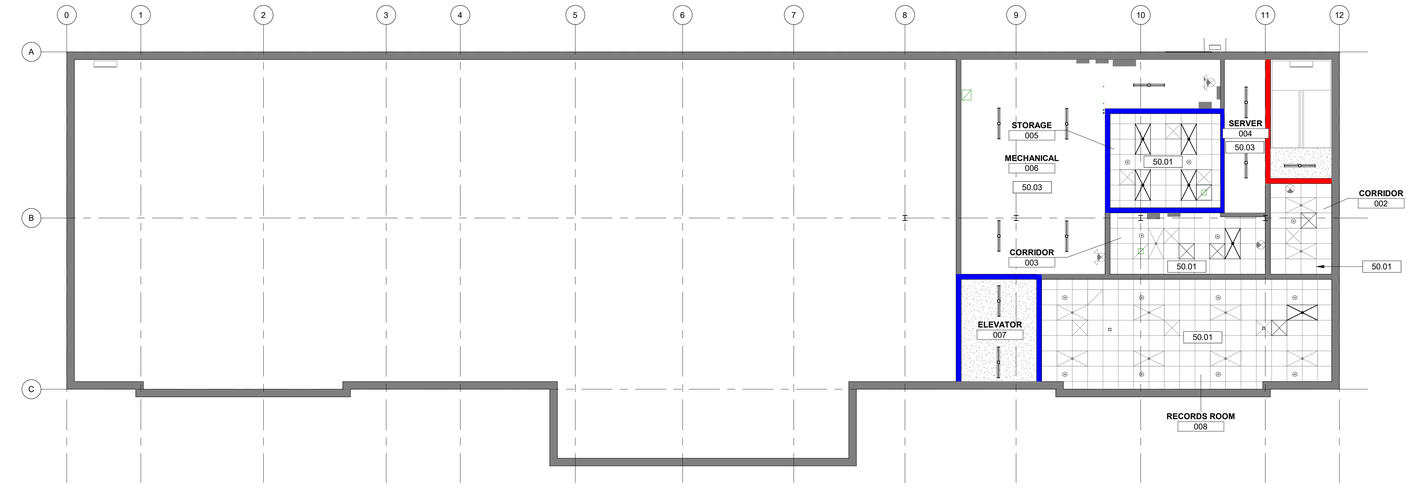
Drawn By: LMG Checked By: MTP



2 A201 2ND FLOOR RCP
1/8" = 1'-0"



1 A201 1ST FLOOR RCP
1/8" = 1'-0"



3 A201 BASEMENT RCP
1/8" = 1'-0"

REFLECTED CEILING PLAN NOTES

A. COORDINATE ALL LIGHTING TYPES WITH ELECTRICAL DRAWINGS.

B. REFER TO ELECTRICAL DRAWINGS FOR ALL CEILING MOUNTED EXIT LIGHTS, SMOKE DETECTORS, SPEAKERS, FIRE ALARM DEVICES, ETC. FOR ITEMS NOT INDICATED ON THE REFLECTED CEILING PLAN, COORDINATE LOCATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION.

C. INSTALL ACCESS PANELS IN GYPSUM BOARD CEILINGS AND SOFFITS AND IN OTHER NON-ACCESSIBLE TYPE CEILINGS AND SOFFITS WHERE ACCESS, SERVICE OR ADJUSTMENT TO MECHANICAL, PLUMBING OR ELECTRICAL ITEMS MAY BE REQUIRED. COORDINATE LOCATIONS AND SIZES WITH ARCHITECT.

D. COORDINATE ALL HVAC MECHANICAL DEVICES WITH MECHANICAL DRAWINGS.

E. IF AS-BUILT CONDITIONS DEMAND THAT A CEILING BOARD LARGER THAN 2'-0" IN ANY DIMENSION BE USED IN THE PERIMETER BOARDS OF A TYPICAL 2'X2' GRID, THEN THAT BOARD SHALL BE CUT FROM A 2'X4' BOARD. A DOUBLE WALL ANGLE SHALL NOT BE USED IN THE CEILING GRID SYSTEM.

F. CEILING SUSPENSION SYSTEM TO MEET SEISMIC REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE CURRENT EDITION.

G. LOCATE ALL TRACK & RECESSED FIXTURES AT THE CENTERLINE OF TILE UNLESS NOTED OTHERWISE. INSTALL ALL ELECTRICAL SYSTEM COMPONENTS WITHOUT INTERFERING WITH DUCTS, PIPES, BEAMS, ETC. LOCATE LIGHT FIXTURES SYMMETRICALLY, AS DIMENSIONED, OR AS INDICATED ON THE REFLECTED CEILING PLANS. IN THE EVENT OF CONFLICT, THE ARCHITECT WILL DECIDE WHICH ITEM TO RELOCATE WITHOUT REGARD TO WHICH WAS INSTALLED FIRST.

H. COORDINATE ALL EXPOSED CEILING WORK WITH ALL TRADES, AND PROVIDE SKETCH (FOR PRE-INSTALLATION MEETING) OF ALL CONDUIT RUNS, JUNCTION BOXES, DUCTWORK AND SUPPORTS, PLUMBING (OVERHEAD) AND FIRE PROTECTION PIPING, IN EXPOSED CEILING AREAS. CONTRACTOR SHALL SCHEDULE A PRE-INSTALLATION COORDINATION MEETING WITH ALL TRADES REPRESENTED, INCLUDING ARCHITECT, WHERE FINAL APPROVAL FOR ALL ROUTING WILL BE GRANTED. ALL EQUIPMENT, PIPING OR ACCESSORIES INSTALLED IN THESE AREAS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

I. ALL ACOUSTIC CEILING TILES TO BE REMOVED AND STORED DURING CONSTRUCTION AND TO BE REINSTALLED AFTER MECHANICAL CONSTRUCTION IS COMPLETE. ALL NEW CEILING GRID TO BE INSTALLED

J. LIGHTS AND OTHER MISCELLANEOUS DEVICES MOUNTED TO THE EXISTING ACOUSTICAL CEILING SYSTEM SHALL BE TEMPORARILY HUNG FROM THE STRUCTURE ABOVE AND PROTECTED DURING DEMOLITION UNLESS NOTED OTHERWISE.

K. ALL CEILING HOSTED LIFE SAFETY ELEMENTS, INCLUDING BUT NOT LIMITED TO EXIT SIGNS, FIRE ALARMS, SPRINKLERS AND SMOKE AND FIRE DETECTORS, TO BE FASTENED TO CEILING AND PROTECTED DURING CONSTRUCTION.

L. ALL SUPPLY AND RETURN DIFFUSERS AND GRILLES TO BE REMOVED AND REINSTALLED AS PART OF THE HVAC UPGRADES. REFER TO MECHANICAL DRAWINGS FOR NEW LOCATIONS.

DRAWING NOTES

50.01 INSTALL NEW CEILING GRID AND REUSED AND NEW ACOUSTIC CEILING TILE. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR NEW LIGHTING AND HVAC LOCATIONS.

50.02 EXISTING DRYWALL CEILING, LIGHTING, AND MECHANICAL TO REMAIN.

50.03 REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LIGHTING AND HVAC REWORK.

REFLECTED CEILING PLAN LEGEND

- EXISTING 2'x2' ACT CEILING
- EXISTING DRYWALL CEILING
- LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- DIFFUSER
- RETURN
- RTS SMOKE DETECTOR TEST STATION
- EXISTING SMOKE PARTITION
- EXIT SIGN
- FIRE SPRINKLER
- SC CAMERA
- SP SPEAKER
- S SMOKE DETECTOR
- OS OCCUPANCY SENSOR
- REX REX DEVICE
- EXISTING 1-HOUR RATED WALL

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NO.	DATE	DESCRIPTION

DRAWING NAME

REFLECTED CEILING PLAN

DRAWING NO.

A201

Drawn By: LMG Checked By: MTP

GENERAL MECHANICAL NOTES

1. WORK SHALL CONFORM WITH TO ALL CURRENT CODES AND AUTHORITY HAVING JURISDICTION.
2. DRAWINGS ARE SCHEMATIC, NOT ALL RISES AND DROPS ARE SHOWN. TRADES ARE TO COORDINATE THEIR WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS. GENERALLY, DUCTWORK SHALL BE KEPT AS HIGH AS POSSIBLE.
3. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS AND FURNISH EQUIPMENT WIRED FOR VOLTAGES SHOWN THEREIN.
4. COORDINATE THE INSTALLATION OF MECHANICAL EQUIPMENT, DUCTWORK, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER OF RECORD.
5. KEEP A SET OF MARKED UP PRINTS WITH ANY FIELD CHANGES MADE DURING CONSTRUCTION TO CREATE AN "AS-BUILT" SET OF PRINTS TO BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT.
6. PROVIDE ACCESS PANELS IN CEILINGS AND WALLS TO ALLOW ACCESS TO VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. MINIMUM ACCESS SIZE SHALL BE 12"X12", UNLESS LIMITED BY PHYSICAL CONSTRAINTS.
7. MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. DUCT MOUNTED SMOKE DETECTORS ARE FURNISHED, WIRED, AND PROGRAMMED BY THE ELECTRICAL CONTRACTOR AND INSTALLED IN DUCTWORK BY THE MECHANICAL CONTRACTOR. UNITS SHALL SHUT DOWN UPON ACTIVATION.
9. OUTSIDE AIR INTAKES FOR AIR CONDITIONING UNITS SHALL BE A MINIMUM OF 10 FEET FROM EXHAUST FANS, EXHAUST OPENINGS AND PLUMBING VENTS.
10. ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
11. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.
12. SUPPORT DUCTWORK FROM BUILDING STRUCTURE IN ACCORDANCE WITH SMACNA STANDARDS.
13. ANY ADDITIONAL/SUPPLEMENTAL STEEL MEMBERS REQUIRED TO SUPPORT DUCTWORK OR EQUIPMENT FROM MAIN STRUCTURE SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
14. TRANSFER DUCTS SHALL BE INTERNALLY LINED TO AID IN CANCELING NOISE TRANSFER.
15. COORDINATE LOCATIONS OF GRILLES, REGISTERS AND DIFFUSERS WITH ARCHITECTURAL REFLECTED CEILING PLAN. LOCATIONS SHOWN ARE APPROXIMATE, ADJUST LOCATIONS IN THE FIELD AS REQUIRED BY CONSTRUCTION CONSTRAINTS.
16. PROVIDE EACH SUPPLY AIR OUTLET OR DIFFUSER WITH ITS OWN BALANCING DEVICE. DEVICES CAN BE LOCATED IN DUCTWORK OR SUPPLY AIR DEVICE ITSELF.
17. INSTALL TOP OF THERMOSTATS AT 4'-0" ABOVE FINISHED FLOOR (AFF) UNLESS NOTED OTHERWISE. THERMOSTAT LOCATIONS SHALL BE COORDINATED WITH FINAL LOCATIONS OF WALL-MOUNTED ARCHITECTURAL AND ELECTRICAL EQUIPMENT. FINAL LOCATIONS MUST BE APPROVED BY THE ARCHITECT AND OWNER. THERMOSTATS SHALL NOT BE INSTALLED ON EXTERIOR WALLS IF INTERIOR WALLS ARE AVAILABLE WITHIN SPACE SERVED BY THERMOSTAT. SHOULD THE THERMOSTAT REQUIRE INSTALLATION ON AN EXTERIOR WALL AN INSULATED BACKING PLATE MUST BE PROVIDED TO PREVENT FALSE READINGS BY THE THERMOSTAT.

HVAC SYMBOLS AND CONVENTIONS

SYMBOL	DESCRIPTION
	TURNING VANES
	VOLUME DAMPER
FD	FIRE DAMPER
SMD	SMOKE DAMPER
FSD	FIRE/SMOKE DAMPER
SD	SMOKE DETECTOR (BY EC)
M	MOTOR OPERATED DAMPER
T	DUCTWORK TEMPERATURE SENSOR
H	DUCTWORK HUMIDITY SENSOR
SP	DUCTWORK STATIC PRESSURE SENSOR
	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
	FLEX DUCT
H	HUMIDISTAT/HUMIDITY SENSOR
T	THERMOSTAT
S	SPACE TEMPERATURE SENSOR
C	CARBON DIOXIDE SENSOR
UCD	UNDERCUT DOOR
	RETURN / EXHAUST AIRFLOW DIRECTION
	SUPPLY AIRFLOW DIRECTION
DP	PIPING DIFFERENTIAL PRESSURE SENSOR
	POINT OF CONNECTION NEW TO EXISTING
	SUPPLY DIFFUSER
	RETURN DIFFUSER
	EXHAUST DIFFUSER
	LINEAR SLOT DIFFUSER
	REMOVE TO POINT AND CAP
	REMOVE TO POINT FOR RECONNECTION
	UNION
	PIPE BRANCH TAKE-OFF FROM BOTTOM
	PIPE BRANCH TAKE-OFF FROM TOP
	PIPE DROP
	PIPE RISE
CD	AC CONDENSATE DRAIN PIPING

EQUIPMENT TAGGING LEGEND

EQUIPMENT DESIGNATION	TAGGING DESCRIPTION
AIR DEVICES - S,R,E,T	EQUIPMENT DESIGNATION TYPE X-X XXX CFM
EQUIPMENT DESIGNATION - AHU, AC, GF, RTU, VAV, EDH, EUH, GUH, PTAC	EQUIPMENT DESIGNATION XXX-X PLAN DESIGNATION
VFD	SERVICING EQUIPMENT MARK VFD-XX-XXXX SPECIFIC COMPONENT DESIGNATION

AIR SYSTEM SPECIFIC ABBREVIATIONS

AC	AIR CONDITIONING	IH	INTAKE HOOD
ACC	AIR COOLED CONDENSER	LAT	LEAVING AIR TEMPERATURE
ACCU	AIR COOLED CONDENSING UNIT	LUVR	LOUVER
ACD	AUTOMATIC CONTROL DAMPER	LUVD	LOUVERED DOOR
ACU	AIR CONDITIONING UNIT	OA	OUTSIDE AIR
AHU	AIR HANDLING UNIT	OAI	OUTSIDE AIR INTAKE
ALD	ACOUSTICALLY LINED DUCT	OBD	OPPOSED BLADE DAMPER
ATD	AIR TERMINAL DEVICE	OED	OPENED END DUCT
BDD	BACKDRAFT DAMPER	(R)	RELOCATED
CC	COOLING COIL	RA	RETURN AIR
CD	CEILING DIFFUSER	RD	REFRIGERANT DISCHARGE
CFM	CUBIC FEET PER MINUTE	RF	RETURN FAN
CG	CEILING GRILLE	RG	RETURN GRILLE
DIFF	DIFFUSER	RL	REFRIGERANT LIQUID
DX	DIRECT EXPANSION	RLF	RELIEF
(E)	EXISTING	RR	RETURN REGISTER
EDH	ELECTRIC DUCT HEATER	RS	REFRIGERANT SUCTION
EF	EXHAUST FAN	RTU	ROOFTOP UNIT
EG	EXHAUST GRILLE	SA	SUPPLY AIR
ER	EXHAUST REGISTER	SD	SMOKE DETECTOR
ERHC	ELECTRIC REHEAT COIL	SMD	SMOKE DAMPER
ESP	EXTERNAL STATIC PRESSURE	FSD	SMOKE/FIRE DAMPER
EUH	ELECTRIC UNIT HEATER	SF	SUPPLY FAN
F	FAN	SG	SUPPLY GRILLE
FA	FREE AREA	SGD	SLIDE GATE DAMPER
FC	FORWARD CURVE	SM	SHEET METAL
FCU	FAN COIL UNIT	SP	STATIC PRESSURE
FD	FIRE DAMPER (W/ACCESS DOOR)	SR	SUPPLY REGISTER
FLTR	FILTER	TE	TOILET EXHAUST
FO	FLAT OVAL	TF	TRANSFER FAN
FPI	FINS PER INCH	TG	TRANSFER GRILLE
GDH	GAS DUCT HEATER	TR	TRANSFER
GE	GENERAL EXHAUST	TSP	TOTAL STATIC PRESSURE
GF	GAS FURNACE	UC	UNDERCUT DOOR
GH	GRAVITY HOOD	VAV	VARIABLE AIR VOLUME
GUH	GAS UNIT HEATER	VD	VOLUME DAMPER
HC	HEATING COIL	WMS	WIRE MESH SCREEN
HV	HEATING AND VENTILATING UNIT		

MECHANICAL SHEET LIST

SHEET NUMBER	SHEET NAME
M001	MECHANICAL LEGEND AND NOTES
M002	MECHANICAL SCHEDULES
M003	MECHANICAL DETAILS
M004	MECHANICAL EQUIPMENT DIAGRAMS
M005	MECHANICAL CONTROLS
M006	MECHANICAL CONTROLS
M100	MECHANICAL DEMOLITION PLAN - BASEMENT
M101	MECHANICAL DEMOLITION PLAN - 1ST FLOOR
M102	MECHANICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC
M200	MECHANICAL PLAN - BASEMENT
M201	MECHANICAL PLAN - 1ST FLOOR
M202	MECHANICAL PLAN - 2ND FLOOR & ATTIC

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PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

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DRAWING NAME

MECHANICAL LEGEND AND NOTES

DRAWING NO.

M001

Drawn By: WJS Checked By: DTL

VARIABLE REFRIGERANT FLOW SCHEDULE (MULTI-SPLIT)

VRF SYSTEM - OUTDOOR UNIT

MARK	DESIGN BASIS MANUFACTURER MODEL	TONNAGE	TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	ELECTRICAL		EER	IEER
						VOLTAGE	PHASE		
HP-1	TRANE-MITSUBISHI TURYE1443AN40AN SINGLE P144 MODULE	12 TON NOMINAL	AIR COOLED; HEAT RECOVERY	144.0	160	208	3	12.3	26.9
HP-2	TRANE-MITSUBISHI TURYE2403BN40AN TWINNED DUAL P120 MODULES	20 TON NOMINAL	AIR COOLED; HEAT RECOVERY	240.0	270	208	3	11.95	23.6

VRF SYSTEM - INDOOR UNITS

MARK	DESIGN BASIS MANUFACTURER MODEL	TYPE	TONS	CFM	ESP (IN. WG)	COOLING CAPACITY		HEATING CAPACITY (MBH)	ELECTRICAL		REMARKS
						TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)		VOLTAGE	PHASE	
AC-1A	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING CONCEALED (DUCTED)	1	371	0.6	10.008	7.850	7.673	208	1	1 THRU 14
AC-1B	TRANE-MITSUBISHI TPLFYP005FM140A	CEILING CASSETTE (FOUR WAY)	0.42	280	N/A	4.170	4.169	3.183	208	1	1 THRU 14
AC-1C	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING CONCEALED (DUCTED)	1	371	0.6	10.008	7.850	7.673	208	1	1 THRU 14
AC-1D	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING CONCEALED (DUCTED)	1.5	600	0.6	15.012	12.958	11.367	208	1	1 THRU 14
AC-1E	TRANE-MITSUBISHI TPLFYP005FM140A	CEILING CASSETTE (FOUR-WAY)	0.42	280	N/A	4.170	4.169	3.183	208	1	1 THRU 14
AC-1F	TRANE-MITSUBISHI TPLFYP005FM140A	CEILING CASSETTE (FOUR-WAY)	0.42	280	N/A	4.170	4.169	3.183	208	1	1 THRU 14
AC-1G	TRANE-MITSUBISHI TPLFYP024EM140B	CEILING CASSETTE (FOUR-WAY)	2	812	N/A	20.017	15.846	15.346	208	1	1 THRU 14
AC-1H	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING CONCEALED (DUCTED)	1.5	600	0.6	15.012	12.958	11.367	208	1	1 THRU 14
AC-1I	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING CONCEALED (DUCTED)	1.5	600	0.6	15.012	12.958	11.367	208	1	1 THRU 14
AC-1J	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING CONCEALED (DUCTED)	1	371	0.6	10.008	7.850	7.673	208	1	1 THRU 14
AC-1K	TRANE-MITSUBISHI TPLFYP005FM140A	CEILING CASSETTE (FOUR-WAY)	0.42	280	N/A	4.170	4.169	3.183	208	1	1 THRU 14
AC-1L	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING-CONCEALED (DUCTED)	1.5	600	0.6	15.012	12.958	11.367	208	1	1 THRU 14
AC-1M	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING-CONCEALED (DUCTED)	1	371	0.6	10.008	7.850	7.673	208	1	1 THRU 14
AC-2A	TRANE-MITSUBISHI TPLFYP018EM141B	CEILING CASSETTE (FOUR-WAY)	1.5	812	N/A	16.570	14.364	14.685	208	1	1 THRU 14
AC-2B	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING CONCEALED (DUCTED)	1	371	0.6	11.046	8.314	9.912	208	1	1 THRU 14
AC-2C	TRANE-MITSUBISHI TPLFYP012EM140A	CEILING CASSETTE (FOUR-WAY)	1	600	N/A	11.046	9.643	9.912	208	1	1 THRU 14
AC-2D	TRANE-MITSUBISHI TPLFYP008FM140A	CEILING CASSETTE (FOUR-WAY)	0.67	315	N/A	7.364	6.173	6.608	208	1	1 THRU 14
AC-2E	TRANE-MITSUBISHI TPEFYP024MA144A	CEILING CONCEALED (DUCTED)	2	883	0.6	22.093	19.070	19.824	208	1	1 THRU 14
AC-2F	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING CONCEALED (DUCTED)	1.5	600	0.6	16.570	13.623	14.685	208	1	1 THRU 14
AC-2G	TRANE-MITSUBISHI TPEFYP018MA144A	CEILING CONCEALED (DUCTED)	1.5	600	0.6	16.570	13.623	14.685	208	1	1 THRU 14
AC-2H	TRANE-MITSUBISHI TPLFYP005FM140A	CEILING CASSETTE (FOUR-WAY)	0.42	280	N/A	4.603	4.345	4.112	208	1	1 THRU 14
AC-2I	TRANE-MITSUBISHI TPEFYP006MA144A	CEILING CONCEALED (DUCTED)	0.5	300	0.6	5.523	5.523	4.919	208	1	1 THRU 14
AC-2J	TRANE-MITSUBISHI TPLFYP008FM140A	CEILING CASSETTE (FOUR-WAY)	0.67	315	N/A	7.364	6.173	6.608	208	1	1 THRU 14
AC-2K	TRANE-MITSUBISHI TPEFYP012MA144A	CEILING CONCEALED (DUCTED)	1	371	0.6	11.046	8.314	9.912	208	1	1 THRU 14
DOAS-2	TRANE-MITSUBISHI TPEFYP072OA140A	100% OUTDOOR AIR UNIT	6.0	800	1.0	61.068	50.944	37.432	208	1	1 THRU 14

NOTES:
1. MANUFACTURER'S SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME. SUBSTITUTE MANUFACTURER SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT. CONTRACTOR TO VERIFY PIPING DIMENSIONS.
2. OUTSIDE CONDITIONS FOR THIS LOCATION IS 92.5°F DB AT 74.3°F WET BULB IN SUMMER AND 24.1°F IN WINTER.
3. MANUFACTURER MUST BE CERTIFIED, LISTED, AND LABELED PER AHRI 1230.
4. SYSTEM MUST PROVIDE CONTINUOUS HEATING DURING DEFROST AND OIL RETURN.
5. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER DRIVEN SCROLL HERMETIC COMPRESSORS. NON-VFD COMPRESSORS WILL NOT BE PERMITTED.
6. CONDENSING UNITS MUST HAVE AUTO CHANGEOVER FUNCTIONS.
7. CONDENSING UNITS MUST HAVE PUBLISHED PERFORMANCE DATA WITH 125% INDOOR CONNECTED CAPACITY.
8. INDOOR UNIT THERMOSTATS MUST PROVIDE +/- 2° DEAD-BAND SET-POINT AND CONTROL CAPACITY.
9. ALL UNITS SHALL BE PROVIDED WITH CONDENSATE PUMP AS SPECIFIED ON PLANS.
10. PROVIDE WITH CONTROLS AS SPECIFIED ON THE CONTROL DRAWINGS AND WITHIN THE PROJECT MANUAL.
11. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURERS CERTIFIED INSTALLATION CLASS WITHIN PAST 24 MONTHS.
12. PROVIDE 10 YEAR PARTS WARRANTY FOR ALL VRF COMPONENTS.
13. PROVIDE MANUAL SHUTOFF VALVE ON REFRIGERANT LINES FOR EACH VRF UNIT.
14. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE CARRIER AND DAIKIN.

100% OUTDOOR AIR SPLIT SYSTEM VRF HEAT PUMP SCHEDULE

MARK		AREA SERVED	NOMINAL TONS	DESIGN BASIS MANUF.	HEAT PUMP (OUTSIDE UNIT)						AIR HANDLING UNIT (INSIDE UNIT)										NOTES
						COOLING		HEATING	EST. WEIGHT (LBS)	ELECTRICAL DATA							REHEAT		WEIGHT	ELECTRICAL DATA		
OUTSIDE UNIT	INSIDE UNIT				MODEL NUMBER	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	TOTAL (BTUH)		VOLTAGE	PHASE	MODEL NUMBER	SUPPLY AIR	OUTSIDE AIR	ESP	FAN HP	COOLING L.A.T. DB	HEATING L.A.T. DB		VOLTAGE	PHASE	
HP-3	DOAS-1	BASEMENT / FIRST FLOOR	10.0	MITSUBISHI	TURYP1203AN40AN	124,937	47,499	102,286	600	208	3	TPEFYP120AR140A	1200	1200	0.80	1.0	70°F	70°F	350	208	1	1 THRU 13

NOTES:
1. MANUFACTURER'S SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME. SUBSTITUTE MANUFACTURER SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT. CONTRACTOR TO VERIFY PIPING DIMENSIONS.
2. OUTSIDE CONDITIONS FOR THIS LOCATION IS 92.5°F DB AT 74.3°F WET BULB IN SUMMER AND 24.1°F IN WINTER.
3. MANUFACTURER MUST BE CERTIFIED, LISTED, AND LABELED PER AHRI 1230.
4. SYSTEM MUST PROVIDE CONTINUOUS HEATING DURING DEFROST AND OIL RETURN.
5. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER DRIVEN SCROLL HERMETIC COMPRESSORS. NON-VFD COMPRESSORS WILL NOT BE PERMITTED.
6. CONDENSING UNITS MUST HAVE AUTO CHANGEOVER FUNCTIONS.
7. CONDENSING UNITS MUST HAVE PUBLISHED PERFORMANCE DATA WITH 125% INDOOR CONNECTED CAPACITY.
8. ALL UNITS SHALL BE PROVIDED WITH CONDENSATE PUMP AS SPECIFIED ON PLANS.
9. PROVIDE WITH CONTROLS AS SPECIFIED ON THE CONTROL DRAWINGS AND WITHIN THE PROJECT MANUAL.
10. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURERS CERTIFIED INSTALLATION CLASS WITHIN PAST 24 MONTHS.
11. PROVIDE 10 YEAR PARTS WARRANTY FOR ALL VRF COMPONENTS.
12. PROVIDE MANUAL SHUTOFF VALVE ON REFRIGERANT LINES FOR EACH VRF UNIT.
13. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE CARRIER AND DAIKIN.

BRANCH CIRCUIT CONTROLLER SCHEDULE

MARK	SYSTEM SERVED	DESIGN BASIS MANUFACTURER MODEL	TYPE	NUMBER OF PORTS	ELECTRICAL		NOTES
					VOLTAGE	PHASE	
BCC-1-1	HP-1	TRANE-MITSUBISHI TCMBM0108JA11N4	MAIN	8	208	1	1 THRU 4
BCC-1-2	HP-1	TRANE-MITSUBISHI TCMBS0108KB11N4	SUB	8	208	1	1 THRU 4
BCC-2-1	HP-2	TRANE-MITSUBISHI TCMBM0108JA11N4	MAIN	8	208	1	1 THRU 4
BCC-2-2	HP-2	TRANE-MITSUBISHI TCMBS0108KB11N4	SUB	8	208	1	1 THRU 4
BCC-3	HP-3	TRANE-MITSUBISHI TCMBG0106SJ11N4	SINGLE	6	208	1	1 THRU 4

NOTES:
1. PROVIDE WITH FULL PORT BALL VALVE WITH 700PSIG WORKING PRESSURE AND R410A RATED.
2. PROVIDE FULL PORT BALL VALVES AT EACH BRANCH PORT.
3. PROVIDE WITH CONDENSATE PUMP AS SPECIFIED ON PLANS.
4. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE CARRIER AND DAIKIN.

BI-POLAR IONIZATION SCHEDULE

TAG	SERVES	DESIGN BASIS MANUFACTURER MODEL	TYPE	VOLTAGE	NOTES
BPI-1 & BPI-2	DOAS-1 & DOAS-2	NU-CALGON NUSHIELD-CI	NEEDLEPOINT IONIZATION	24	1 THRU 6

NOTES:
1. UNIT TO BE UL 2998 LISTED FOR ZERO OZONE EMISSION
2. PROVIDE WITH SELF.CLEANING CYCLE.
3. PROVIDE WITH DUCT MOUNTING ACCESSORIES. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. PROVIDE CONNECTION TO BMS FOR MONITORING.
5. INTERLOCK UNIT WITH ASSOCIATED AIR HANDLER. UNIT TO BE ENERGIZED WHEN AIR HANDLER FAN IS ON.
6. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE GPS AIR AND PLASMA AIR.

CONDENSATE PUMP SCHEDULE

TAG	SERVICE	DESIGN BASIS MANUFACTURER MODEL	TYPE	MAX GPH	MAX HEAD	MAX LIFT	MOTOR		NOTES
							VOLTAGE	PHASE	
CP-1	INDOOR VRF TERMINAL UNITS	BLUE DIAMOND PUMP MAXIBLUE X87-711	INLINE	3.7	23 FT	16.5 FT	110	1	1 THRU 4
CP-2	BCC & DOAS	BLUE DIAMOND PUMP MEGABLUE X87-835	INLINE	13.2	66.5 FT	23 FT	110	1	1 THRU 4

NOTES:
1. PROVIDE PUMP WITH CONDENSATE RESERVOIR.
2. PUMP SHALL BE PLENUM RATED.
3. PUMP TO BE POWERED FROM THE INDOOR UNIT.
4. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE ARMSTRONG AND LIBERTY.

FAN SCHEDULE

MARK	DESIGN BASIS MANUFACTURER MODEL	AREA SERVED	SERVICE	TYPE	CFM	STATIC PRESSURE (IN WG)	NOMINAL RPM	DRIVE TYPE	ELECTRICAL		MOTOR HP (WATTS)	CONTROL	SONES	WEIGHT	NOTES
									VOLTAGE	PHASE					
EF-1	GREENHECK CSP-A1410	RESTROOMS	EXHAUST	INLINE	1000	0.5	1148	DIRECT	120	1	(312)	NOTE 9	2.1	60	1 THRU 9

NOTES:
1. PROVIDE UNIT WITH GRAVITY BACKDRAFT DAMPER.
2. PROVIDE VIBRATION ISOLATION.
3. UNIT SHALL BE UL LISTED AND AMCA CERTIFIED.
4. PROVIDE PLUG TYPE DISCONNECT.
5. PROVIDE SPEED CONTROL.
6. PROVIDE MOTOR WITH THERMAL OVERLOAD PROTECTION.
7. PROVIDE INSULATED HOUSING FOR SOUND ATTENUATION.
8. ACCEPTABLE EQUALS SHALL BE ACME, BREIDERT, CARNES, COOK, AND PENN.
9. FAN TO BE STARTED/STOPPED BY BMS ON A TIME OF DAY SCHEDULE.

ELECTRIC DUCT HEATER SCHEDULE

MARK	DESIGN BASIS MANUFACTURER	DUCT COIL SIZE	CFM	HEAT		UNIT SERVED	ELECTRICAL DATA		NOTES
				KW	MBH		VOLTAGE	PHASE	
DH-1	THERMOLEC	20x16	1200	9.0	30.71	DOAS-1	208	3	1 THRU 3

NOTES:
1. UNIT SHALL BE U.L. LISTED
2. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE GREENHECK AND MARKEL.
3. PROVIDE WITH:
   A. ZERO CLEARANCE RATING
   B. MAGNETIC CONTRACTOR FULL BREAK
   C. AUTOMATIC AND MANUAL CUT-OUT
   D. 24V TRANSFORMER WITH FUSIBLE LINK
   E. BUILT-IN AIR FLOW SENSOR
   F. S.C.R. BY THERMOLEC OR EQUAL
   G. 0-10V CONTROL INPUT
   H. DOOR INTERLOCK DISCONNECT SWITCH
   I. INTERLOCK TERMINAL STRIP
   J. SLIP-IN DUCT HEATER
   K. DUCT MOUNTED TEMPERATURE SENSOR

DAMPER SCHEDULE

BASIS OF DESIGN:

ROUND SMOKE DAMPER: GREENHECK SMDR-501

RECTANGULAR SMOKE DAMPER: GREENHECK SMD-201

- CLASS I LEAKAGE RATED
- UL 555S LISTED
- PROVIDE WITH EXTERNAL MOUNTED, 2-POSITION, 120 VAC, SPRING RETURN ACTUATOR.
- SMOKE DETECTION DEVICES REQUIRED FOR SMOKE DAMPER OPERATION AND AIR HANDLER SHUTDOWN SHALL BE FURNISHED, WIRED, AND PROGRAMMED BY ELECTRICAL/FIRE ALARM CONTRACTOR AND INSTALLED IN DUCTWORK BY MECHANICAL CONTRACTOR. SMOKE DETECTION DEVICES SHALL BE INTERLOCKED WITH AIR HANDLERS TO SHUTDOWN AIR HANDLERS AND TO CLOSE SMOKE DAMPERS UPON ACTIVATION.
- ALTERNATE MANUFACTURERS INCLUDE POTTORFF AND RUSKIN.
- REFER TO PROJECT MANUAL FOR FURTHER SPECIFICATIONS.

AIR DISTRIBUTION SCHEDULE

MARK	TYPE	DESCRIPTION	DESIGN BASIS		FACE SIZE	NECK SIZE	MATERIAL	NOTES
			MANUF.	MODEL				
S-1	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	12"x12"	6"Ø	ALUMINUM	1 - 4
S-2	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	24"x24"	6"Ø	ALUMINUM	1 - 4
S-3	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	24"x24"	8"Ø	ALUMINUM	1 - 4
S-4	SUPPLY	LOUVER FACE, DOUBLE DEFLECTION, SIDEWALL MOUNT	PRICE	520	6"x6"	---	ALUMINUM	1, 2, 4
R-1	RETURN	PERFORATED FACE, CEILING MOUNT	PRICE	APDDR	24"x24"	14"x14"	ALUMINUM	2, 3, 4
R-2	RETURN	PERFORATED FACE, CEILING MOUNT	PRICE	APDDR	24"x24"	6"x6"	ALUMINUM	1 - 4
R-3	RETURN	PERFORATED FACE, CEILING MOUNT	PRICE	APDDR	24"x24"	8"x8"	ALUMINUM	1 - 4
R-4	RETURN	PERFORATED FACE, CEILING MOUNT	PRICE	APDDR	24"x24"	10"x10"	ALUMINUM	1 - 4
R-5	RETURN	PERFORATED FACE, CEILING MOUNT	PRICE	APDDR	24"x24"	12"x12"	ALUMINUM	1 - 4
T-1	TRANSFER	EGGCRATE GRILLE, WALL MOUNT	PRICE	80	8"x8"	---	ALUMINUM	2, 4

NOTES:
1. PROVIDE OPPOSED BLADE DAMPERS IN NECK OF DIFFUSER OR REGISTER, WITH ACCESS TO DAMPER THROUGH FACE OF DIFFUSER OR REGISTER.
2. FINISH SHALL BE COORDINATED DURING THE SUBMITTAL PROCESS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR MOUNTING TYPE.
4. ACCEPTABLE EQUALS INCLUDE METALAIRE AND TITUS.

VENTILATION COMPLIANCE SCHEDULE DOAS-1

UNIT MARK	AREA SERVED	AREA (FT²)	PEOPLE PER 1000 FT²	NUMBER OF PEOPLE	AIRFLOW PER PERSON	AIRFLOW PER FT²	OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR PROVIDED (CFM)
DOAS-1	002 CORRIDOR	95	---	---	---	0.06	10	1145	1200
	003 CORRIDOR	159	---	---	---	0.06	10		
	005 STORAGE	123	---	---	---	0.12	15		
	006 MECHANICAL	621	---	---	---	0.12	100		
	008 RECORDS ROOM	531	---	---	---	0.12	75		
	101 ENTRY/LOBBY	958	10	10	5	0.06	125		
	106 CUSTOMER SERVICE	216	5	2	5	0.06	30		
	107 OFFICE	96	5	1	5	0.06	15		
	108 WORK AREA	130	5	1	5	0.06	15		
	108A CORRIDOR	58	---	---	---	0.06	10		
	109 OFFICE	110	5	1	5	0.06	20		
	110 OFFICE	175	5	1	5	0.06	20		
	111 STORAGE	48	---	---	---	0.12	10		
	112 CORRIDOR	338	---	---	---	0.06	25		
	113 VESTIBULE	100	---	--	---	0.06	10		
	115 WORK AREA	245	5	2	5	0.06	25		
	116 OFFICE	156	5	1	5	0.06	20		
	117 STORAGE	63	---	---	---	0.12	10		
	118 OFFICE	182	5	1	5	0.06	20		
	119 OFFICE	86	5	1	5	0.06	20		
	120 OFFICE	89	5	1	5	0.06	20		
	121 CUSTOMER SERVICE	325	5	2	5	0.06	30		
	122 CORRIDOR	522	---	---	---	0.06	35		
	123 HALL	60	---	---	---	0.06	5		
	124 WORK AREA	133	5	1	5	0.06	20		
	125 OFFICE	220	5	2	5	0.06	25		
	126 OFFICE	174	5	1	5	0.06	20		
	127 COPY ROOM	94	4	1	5	0.06	15		
	129 CONFERENCE	712	50	36	5	0.06	250		
	130 OFFICE	109	5	1	5	0.06	20		
	131 OFFICE	107	5	1	5	0.06	20		
	132 OFFICE	115	5	1	5	0.06	20		
	133 OFFICE	116	5	1	5	0.06	20		
	134 WORK AREA	117	5	1	5	0.06	20		
	135 OFFICE	106	5	1	5	0.06	20		
	136 EMPL. ENTRY	111	10	2	5	0.06	20		
							TOTAL	1145	1200

NOTES:
1. PEOPLE DENSITY, CFM PER PERSON, AND CFM PER SQUARE FOOT ARE BASED ON THE MECHANICAL CODE DEFAULT VALUES UNLESS NOTED OTHERWISE.
2. WHERE NOTED PEOPLE COUNT IS BASED ON SEAT COUNT OR ACTUAL NUMBER OF PEOPLE.

VENTILATION COMPLIANCE SCHEDULE DOAS-2

UNIT MARK	AREA SERVED	AREA (FT²)	PEOPLE PER 1000 FT²	NUMBER OF PEOPLE	AIRFLOW PER PERSON	AIRFLOW PER FT²	OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR PROVIDED (CFM)
DOAS-2	202 VESTIBULE	105	---	---	---	0.06	15	800	800
	203 CORRIDOR	635	---	---	---	0.06	50		
	204 WORK ROOM	94	5	1	5	0.06	20		
	205 WORK AREA	205	5	2	5	0.06	25		
	206A OFFICE	170	5	1	5	0.06	20		
	206B OFFICE	111	5	1	5	0.06	20		
	206C OFFICE	119	5	1	5	0.06	20		
	206D OFFICE	98	5	1	5	0.06	20		
	206E WAITING	123	10	2	5	0.06	25		
	207 OFFICE	212	5	2	5	0.06	25		
	208 OFFICE	219	5	2	5	0.06	25		
	209 OFFICE	110	5	1	5	0.06	20		
	210 CONFERENCE	200	50	10	5	0.06	75		
	212 OPEN OFFICE	471	5	3	5	0.06	50		
	213 BREAK ROOM	527	5	3	5	0.06	50		
	219 WORK ROOM	375	5	2	5	0.06	40		
	220 OFFICE	87	5	1	5	0.06	20		
	222 CORRIDOR	728	---	---	---	0.06	50		
	223 OFFICE	85	5	1	5	0.06	20		
	224 VESTIBULE	62	---	---	---	0.06	15		
	227 OFFICE	86	5	1	5	0.06	20		
	228 OFFICE	93	5	1	5	0.06	20		
	229 OFFICE	93	5	1	5	0.06	20		
	230 OFFICE	93	5	1	5	0.06	20		
	231 OFFICE	136	5	1	5	0.06	20		
	232 OPEN OFFICE	600	5	3	5	0.06	75		
	233 OFFICE	95	5	1	5	0.06	20		
							TOTAL	800	800

NOTES:
1. PEOPLE DENSITY, CFM PER PERSON, AND CFM PER SQUARE FOOT ARE BASED ON THE MECHANICAL CODE DEFAULT VALUES UNLESS NOTED OTHERWISE.
2. WHERE NOTED PEOPLE COUNT IS BASED ON SEAT COUNT OR ACTUAL NUMBER OF PEOPLE.

DEVITA & ASSOCIATES, INC. No. C00415 — CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 38093 — DEVIN TATE LAWRENCE — 6/11/2024
SEALS

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

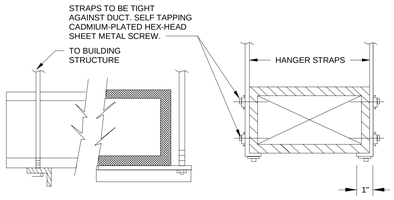
DRAWING NAME

MECHANICAL SCHEDULES

DRAWING NO.

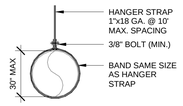
M002

Drawn By: WJS Checked By: DTL

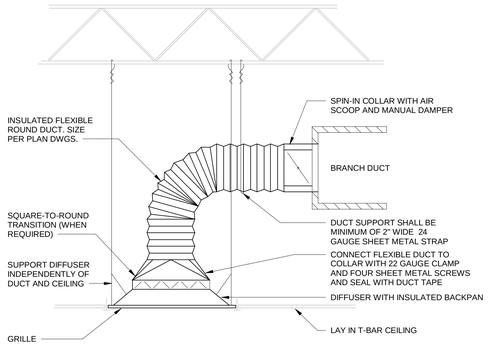


HANGER SIZES FOR RECTANGULAR DUCTS			
MAX. SIDE	HANGER	SUPPORT ANGLE HORIZONTAL	SPACING MAXIMUM
30"	1"x18" GAUGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1-1/2" x 1-1/2" x 1/8"	8'-0"
48"	1/4" ROUND ROD	2" x 2" x 1/8"	8'-0"
60"	5/16" ROUND ROD	2" x 2" x 1/8"	8'-0"
84"	3/8" ROUND ROD	2" x 2" x 1/8"	8'-0"

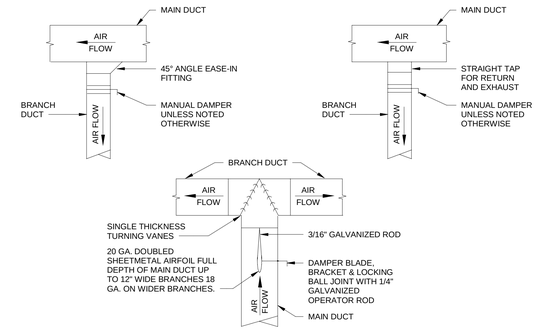
1 M003 DUCT HANGER SIZING FOR RECTANGULAR
NOT TO SCALE



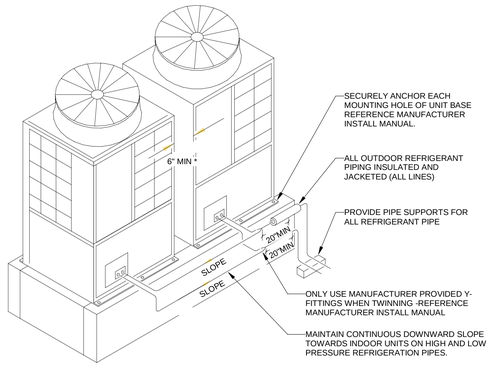
2 M003 DUCT HANGER SIZING FOR ROUND
NOT TO SCALE



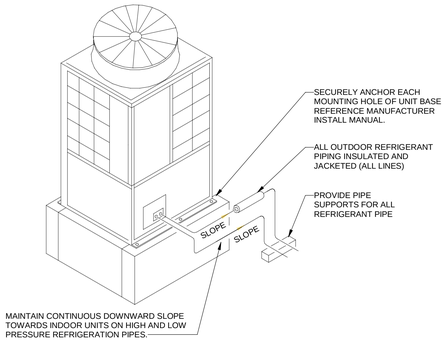
3 M003 SUPPLY DIFFUSER INSTALLATION (FLEX DUCT)
NOT TO SCALE



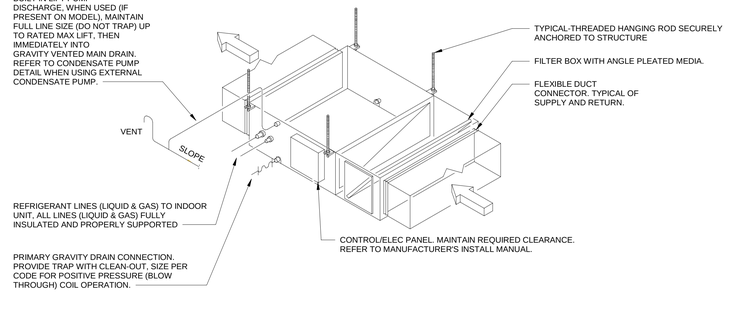
4 M003 TYPICAL RECTANGULAR LOW-PRESSURE BRANCH TAKE-OFFS
NOT TO SCALE



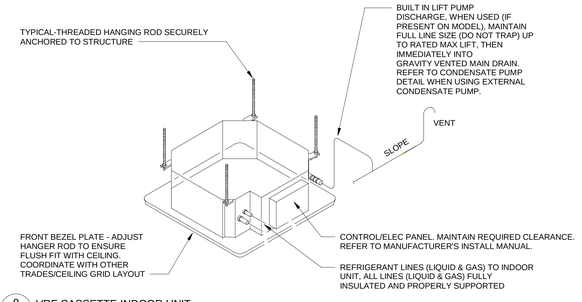
5 M003 VRF OUTDOOR UNIT - TWINNED
NOT TO SCALE



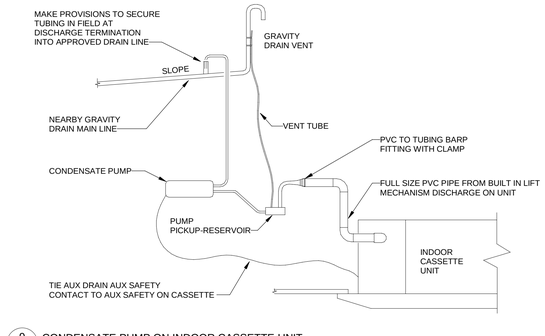
6 M003 VRF OUTDOOR UNIT - SINGLE
NOT TO SCALE



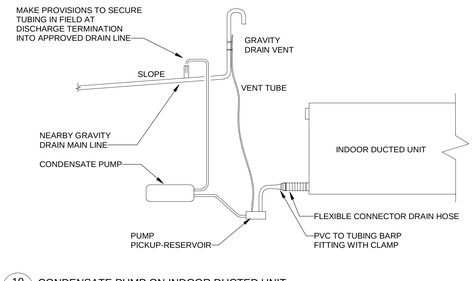
7 M003 VRF DUCTED INDOOR UNIT
NOT TO SCALE



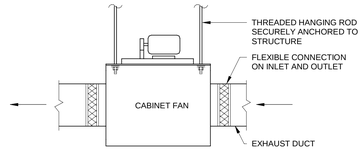
8 M003 VRF CASSETTE INDOOR UNIT
NOT TO SCALE



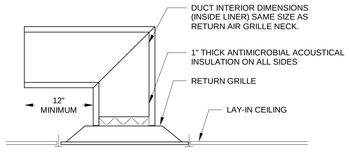
9 M003 CONDENSATE PUMP ON INDOOR CASSETTE UNIT
NOT TO SCALE



10 M003 CONDENSATE PUMP ON INDOOR DUCTED UNIT
NOT TO SCALE



11 M003 INLINE CABINET FAN
NOT TO SCALE



12 M003 PLENUM RETURN GRILLE WITH SOUND ATTENUATION
NOT TO SCALE

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
DEVITA & ASSOCIATES, INC.
No. C00415
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
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DEVIN TATE LAWRENCE
6/11/2024
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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL DETAILS

DRAWING NO.

M003

Drawn By: WJS Checked By: DTL

CITY MULTI
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

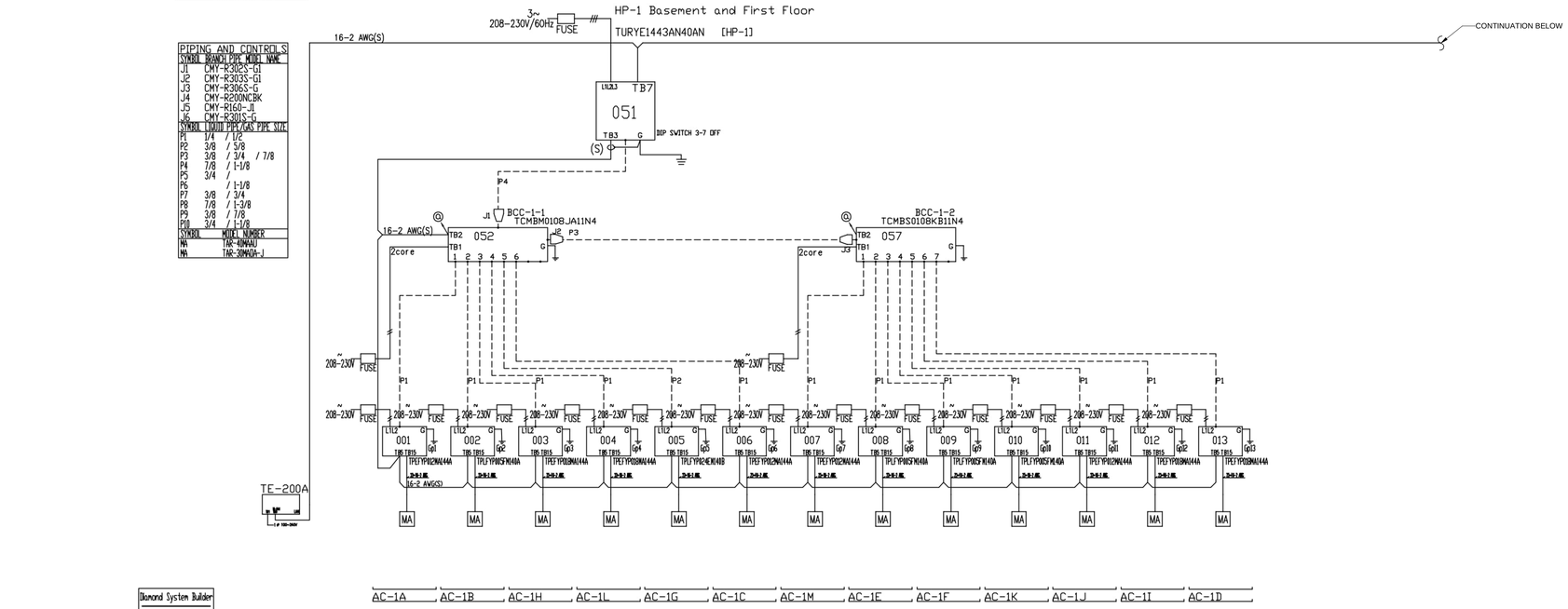
1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

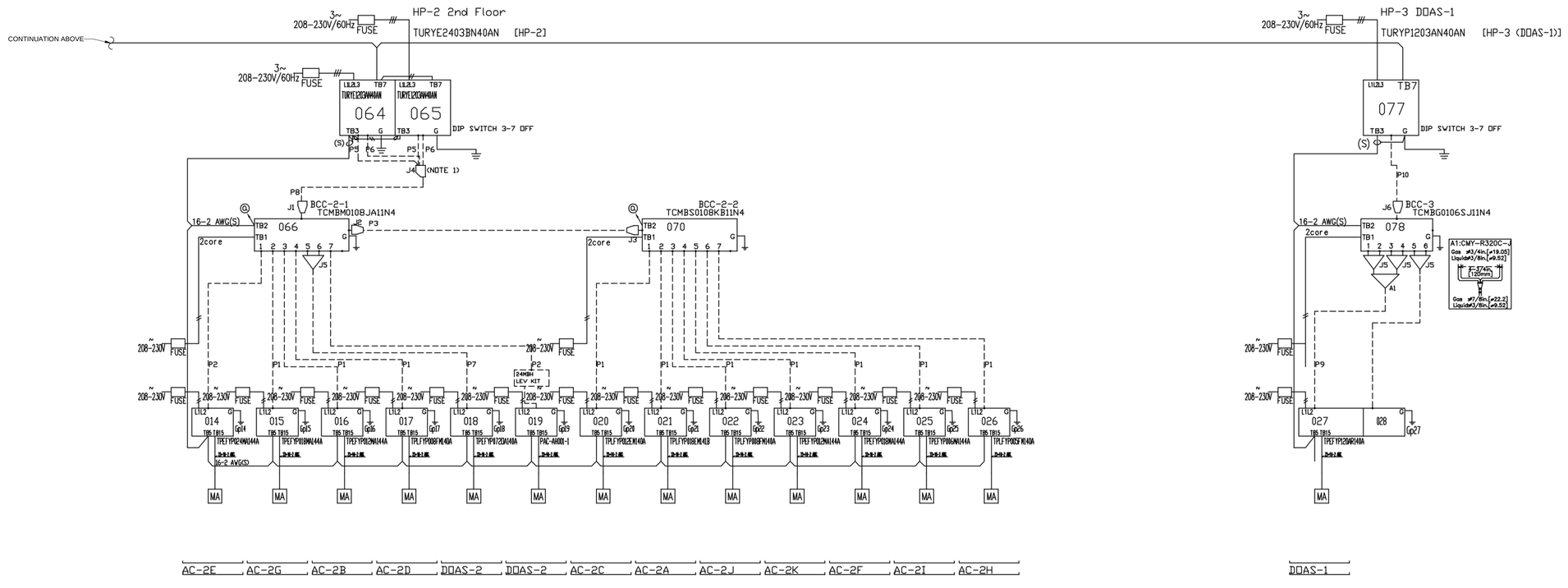
Coded Notes:
NOTE 1: Install twinning Y's within 15 degrees of level and with 20 inches of straight pipe on converging connection - reference installation manual for additional details including but not limited to special trapping requirements when twinning, and pipe slope requirements

DIAGRAM SYMBOL LEGEND	
DISPLAY	DESCRIPTION
-///-	POWER WIRE
———	CONTROL WIRE
———	REF. PIPE

CONT.No | PACE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-R302S-G1
J2	CMY-R303S-G1
J3	CMY-R306S-G
J4	CMY-R200NCBK
J5	CMY-R160-J1
J6	CMY-R301S-G
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4 / 1/2
P2	3/8 / 5/8
P3	3/8 / 3/4 / 7/8
P4	7/8 / 1-1/8
P5	3/4 /
P6	/ 1-1/8
P7	3/8 / 3/4
P8	7/8 / 1-3/8
P9	3/8 / 7/8
P10	3/4 / 1-1/8
SYMBOL	MODEL NUMBER
MA	TAC-40MAAU
MA	TAC-30MAGA-J





Diamond System Builder
sw: 5.2.0.33
clib: 5.2.0.15
1/19/2024 8:13 AM

REMARKS
Originator: Joe Holman
Comments:

SEALS

DEVITA Engineering Great Ideas

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NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL
EQUIPMENT
DIAGRAMS

DRAWING NO.

M004

Drawn By: WJS Checked By: DTL

GENERAL NOTE REGARDING UNIT DIAGRAMS:

THESE DIAGRAMS ARE BY THE BASIS OF DESIGN MANUFACTURER AND ARE REPRODUCED HEREIN FOR REFERENCE ONLY. REFER TO THE LATEST EDITION OF THE SELECTED SYSTEM MANUFACTURER'S INSTALLATION AND OPERATING DOCUMENTATION FOR EXACT REQUIREMENTS. THE CONTRACTOR SHALL HAVE A WORKING KNOWLEDGE OF THIS SYSTEM, AND WHERE A DISCREPANCY REGARDING SPECIFIC EQUIPMENT OPERATING OR CONNECTION REQUIREMENTS EXISTS BETWEEN THE DETAILS REPRODUCED HEREIN AND THE SELECTED MANUFACTURER'S LATEST DOCUMENTATION, THE LATTER SHALL TAKE PRECEDENCE.

Sequence of Operation: VRF System

Variable Refrigerant Flow (VRF) System Sequence of Operation:
This sequence of operations describes the "system-level" control functions of a variable refrigerant flow (VRF) system, which includes coordinating the operation of the outdoor unit with terminal units during the various operating modes. The "equipment-level" control functions of the outdoor unit and the terminal units are contained in their respective sequence of operations documents.

Variable Refrigerant Flow (VRF) Heat Recovery System:
A Heat Recovery System shall provide synchronous/simultaneous heating and cooling to individual zones served by the VRF system. The state of the VRF system is Off when the outdoor unit is off and all terminal units are off. When any terminal unit transitions to the On state, the outdoor unit shall transition to the On state and the VRF system shall transition to the On state.
While the VRF system is in the On state, the outdoor unit supplies subcooled liquid and super-heated gas refrigerant to the refrigerant manifold device(s). The refrigerant manifold device shall simultaneously distribute liquid refrigerant to terminal units requesting cooling, and gas refrigerant to terminal units requesting heat. Each terminal unit shall communicate to the outdoor unit the need for heating or cooling. While the outdoor unit is in the On state, if all of the terminal units transition to the Off state, the outdoor unit shall transition to the Shutdown state. Entering this state shall cause the outdoor unit to perform the necessary functions required to prepare the refrigerant system to stop operation. Once the refrigerant system has stopped operation, the outdoor unit shall transition to the Off state and the VRF System state shall transition to the Off state.

Building Automation System Control:
The Building Automation System (BAS) is a computer based, application that provides a method for a building operator to monitor and control the operation of a building. The BAS coordinates the actions of one or more building sub-systems (HVAC, lighting, etc.). The purpose of the system is to provide a safe and comfortable occupant environment using advanced control strategies to minimize the environmental footprint of the building.
The BAS shall have the ability to monitor and display data emanating from any piece of equipment connected to the system in human readable form. The BAS shall have the ability to perform building level control functions such as, but not limited to, time schedule based system operation, recording of operating parameter data values as a time or sample series, collection and annunciation for alarms generated by equipment, and control of equipment within the building.
The BAS shall monitor the status of the zone(s) in the building served by the Variable Refrigerant Flow (VRF) system and send commands to the VRF terminal unit(s) to maintain the environment in the zone.

Optimal Start Functionality:
Optimal start is a comfort strategy. The BAS shall monitor the time schedule controlling the operation of each zone, occupied zone air temperature setpoint(s), zone air temperature, and other parameters as needed. Using these inputs, the optimal start algorithm shall calculate the time of day when each zone should transition from Off (Unoccupied) to On (Occupied) mode. The system shall transition the terminal units serving the zone from Off to On at this time. The desired result is to have the air temperature of each zone equal the occupied zone air temperature setpoint currently in control, at the moment in time when the time schedule transitions from Off (unoccupied) to On (Occupied).
If there is a delta in time (time error) between when the time the schedule transitions from Off to On and the time when the zone air temperature is equal to the occupied zone temperature setpoint in control, the optimal start algorithm shall adjust the time calculation such that the time error is minimized for the next optimal start iteration.

Optimal Stop Functionality:
Optimal stop is an energy minimization strategy. The BAS shall monitor the time schedule controlling the operation of each zone, zone unoccupied air temperature setpoint(s), zone air temperature, and other parameters as needed. Using these inputs, the optimal stop algorithm shall calculate the time of day when each zone should transition from On (Occupied) to Off (Unoccupied) mode. The system shall transition the terminal units serving the zone from On to Off at this time. The desired result is to have the air temperature of each zone equal the unoccupied zone air temperature setpoint currently in control, at the moment in time when the time schedule transitions from On (Occupied) to Off (Unoccupied).
If there is a delta in time (time error) between when the time the schedule transitions from On to Off and the time when the zone air temperature is equal to the unoccupied zone temperature setpoint in control, the stop start algorithm shall adjust the time calculation such that the time error is minimized for the next optimal stop iteration.

OA Temperature Control:
When the VRF system transitions to a dedicated outdoor air system (DOAS), the DOAS system shall condition intake air by adding or removing heat so that the temperature of the air discharged from the unit is equal to the DOAS discharge temperature setpoint.

Sequence of Operation: VRF Indoor Units

Building Automation System Interface:
The Building Automation System (BAS) will allow the user to monitor the status of Variable Refrigerant Flow (VRF) terminal units, outdoor units, and secondary VRF equipment, and modify control parameters of terminal units and secondary VRF equipment as necessary to maintain the desired space conditions.
If communication between the VRF equipment and the BAS is lost, the VRF system will continue to operate using the current control parameters stored within the equipment to maintain the desired space conditions.

External Control Device:
In this specification the term 'external control device' is used to denote one or more user interface control devices that may be present in the system. The control devices that may be present are a Local Control device, VRF System Control device, or a Building Automation System. When more than one external control device is present in the control system, the last command or configuration value received by the indoor unit governs indoor unit operation.
There may be other means to provide commands and configuration parameters to the VRF system, such as hardwired control inputs. However, these are not considered the typical system control use case and the specification does not address them as written.

Zone Temperature Setpoint Control:
Dual Setpoint. Two zone air temperature setpoints are present. When the terminal unit is in a cooling mode, it will control the zone air temperature value to the Cooling Temperature Setpoint value. When the terminal unit is in a heating mode, it will control the zone air temperature value to the Heating Temperature Setpoint value.

On/Off Mode:
The terminal unit has two modes that drive the overall operation of the unit, On and Off mode.
On. The internal algorithm will control the unit to maintain the desired zone air temperature.
Off. The internal algorithm will NOT control the unit to maintain the desire zone air temperature. The algorithm will control components internal to the unit to minimize energy consumption and isolate it from VRF system refrigerant circuit. The zone air temperature sensor in use will be monitored to allow the Zone Air Temperature Value to be displayed at an External Control Device(s).

Operation Mode:
Operation mode is the primary control parameter of the indoor unit when it is in the On state. The operation mode command provided to the indoor unit from an eternal control device will determine the base HVAC control function the indoor unit is providing. Available modes of operation are Cool, Dry, Fan, Heat, Setback, and Auto.

Cool. When the terminal unit Operation Mode is the Cool state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Cooling Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes less. The algorithm will respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Dry. When the terminal unit Operation Mode is the Dry state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The goal in Dry mode is to remove water vapor from the air, not control the zone air temperature value to a zone temperature setpoint. When the terminal unit is commanded to the Dry state, an algorithm internal to the terminal unit drives the LEV to an open position. It is assumed that the position of the valve allows a sufficient amount of refrigerant to enter the coil, to cause the surface temperature of the coil fins to fall below the dew point temperature. The result is condensation that removes water vapor from the air passing through the coil.

When the zone air temperature value is greater than or equal to the Cooling Temperature Setpoint, Dry state is beneficial from both a humidity and zone temperature perspective because water vapor is being removed from the air in the zone and the difference value between the zone air temperature value and the Cooling Temperature Setpoint value is reduced.

Continued dehumidification will cause the zone air temperature value to become less than the Cooling Temperature Setpoint, which is undesirable. To combat the effect, the algorithm calculates the temperature difference value between the zone air temperature value and Cooling Temperature Setpoint. Based on the difference value, the algorithm uses a sliding time scale method to modulate the LEV between the open position and the fully closed position for a variable length of time. It is assumed that when the LEV is in the fully closed position latent heat within the zone will cause the zone air temperature value to increase. The method allows some dehumidification to take place without significantly lowering the air temperature in the zone below the Cooling Temperature Setpoint.

Fan. When the terminal unit Operation Mode is the Fan state, the LEV is closed and the terminal unit does not attempt regulate the air temperature in the zone. The temperature of the air in the zone may change due to latent heat within the zone. With the use of an external user interface, the speed of the fan may be modulated between the discrete states supported by the terminal unit.

Heat. When the terminal unit Operation Mode is the Heat state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Heating Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes less. The algorithm will respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Setback. Some terminal units may not support the Setback state. When the terminal unit Operation Mode transitions to Setback state, the LEV is driven closed and the zone air temperature is allowed to drift. The amount of drift is bounded by the Setback Cooling Temperature Setpoint and the Setback Heating Temperature Setpoint.

When the zone air temperature value is greater than the Setback Cooling Temperature Setpoint the terminal unit will execute the setback cool algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Cooling Temperature Setpoint.

When the zone air temperature value is less than the Setback Heating Temperature Setpoint the terminal unit will execute the setback heat algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Heating Temperature Setpoint.

Auto. Some manufacturers' terminal units may not support the Auto state of Operation Mode.

Auto mode is beneficial in a heat recovery system because it allows the terminal unit to automatically switch between cooling and heating states based on the current zone air temperature and the zone temperature setpoint in use. When the terminal unit Operation Mode is the Auto state, two sub-states are available, Auto (Cool) and Auto (Heat).

Depending on the setpoint control configuration of the terminal unit, one of three setpoints is used for control. When the unit is configured for single setpoint control, the Auto Zone Temperature Setpoint is used. When the unit is configured for dual setpoint control, the Cooling Temperature Setpoint is used when the unit is in the Auto (Cool) state and Heating Temperature Setpoint is used when the unit is in the Auto (Heat) state.

When the terminal unit Operation Mode is the Auto (Cool) state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the Zone Air Temperature value from the zone temperature setpoint value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position to reduce the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

When the terminal unit Operation Mode is the Auto (Heat) state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the zone temperature setpoint value from the Zone Air Temperature value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

Auto Mode System Changeover. The state of the terminal unit is Auto (Cool). When the absolute value of the difference value is greater than the factory defined changeover delta value, the terminal unit will transition to the Auto (Heat) state.

The state of the terminal unit is Auto (Heat). When the difference value is greater than the factory defined changeover delta setpoint, the terminal unit will transition to the Auto (Cool) state.

Fan Control. When the indoor unit is in the Off state, the fan is controlled to the minimum speed required to measure zone air temperature at the return air temperature sensor. This allows zone air temperature to be accurately measured while the indoor unit is in the Off state.

Upon transition from the Off state to the On state, the RPM of the fan is governed to match a manufacture specified, RPM value assigned to the each discrete fan speed state available in the unit. The number of distinct fan speed states and the fan RPM value for each state varies by manufacture and model of indoor unit. The fan speed state is controlled by one of two methods, automatic fan speed control or manual fan speed control. The choice of control method is made by a user of the system.

Upon indoor unit transition from the On state to the Off state, the fan transitions to the state described when the indoor unit is in the Off state.

Manual Fan Speed Control. A user of the system selects a desired fan speed state. The fan speed RPM will change to match the manufacture specified RPM value and maintain the RMP value until a different fan speed state is selected or a change is made to another control parameter of the indoor unit that causes the fan to change to a different state.

Automatic Fan Speed Control. When a user of the system selects the fan speed state Auto, an algorithm internal to the indoor unit controls the selection of the fan speed state. The algorithm calculates the temperature difference value between the measured zone air temperature value and the zone temperature setpoint value in use. When a large difference value exists, the fan state selected will have a highest fan speed RPM value. As the difference value is reduced, the algorithm will change the fan speed in use to a state with a smaller RPM value.

Vane Direction:
The terminal unit has movable air vanes to change the direction of air flow from the unit. Three air vane control modes are available: Auto, Swing, and Manual. The external user interface is used to select the air vane position in use.

Auto. When the Operation Mode is Cool state, the air vanes modulate to direct airflow parallel to the ceiling. When the Operation Mode is Heat state, the air vanes modulate to direct airflow perpendicular to the ceiling.

Swing. Regardless of Operation Mode state, the air vanes continuously modulate between parallel and perpendicular flow to the ceiling in a periodic manner.

Manual. Regardless of Operation Mode state, the air vanes are fixed at a position. The number of individual positions available varies by manufacturer and model type. Typically, two to five fixed positions are supported.

Sequence of Operation: DOAS-1

Building Automation System Interface:
The Building Automation System (BAS) will allow the user to monitor the status of Variable Refrigerant Flow (VRF) terminal units, outdoor units, and secondary VRF equipment, and modify control parameters of terminal units and secondary VRF equipment as necessary to maintain the desired space conditions.
If communication between the VRF equipment and the BAS is lost, the VRF system will continue to operate using the current control parameters stored within the equipment to maintain the desired space conditions.

External Control Device:
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Operation Mode:
Operation mode is the primary control parameter of the indoor unit when it is in the On state. The operation mode command provided to the indoor unit from an eternal control device will determine the base HVAC control function the indoor unit is providing. Available modes of operation are Cool, Dry, Fan, Heat, Setback, and Auto.

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Fan. When the terminal unit Operation Mode is the Fan state, the LEV is closed and the terminal unit does not attempt regulate the air temperature in the zone. The temperature of the air in the zone may change due to latent heat within the zone. With the use of an external user interface, the speed of the fan may be modulated between the discrete states supported by the terminal unit.

Heat. When the terminal unit Operation Mode is the Heat state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Heating Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes less. The algorithm will respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Setback. Some terminal units may not support the Setback state. When the terminal unit Operation Mode transitions to Setback state, the LEV is driven closed and the zone air temperature is allowed to drift. The amount of drift is bounded by the Setback Cooling Temperature Setpoint and the Setback Heating Temperature Setpoint. When the zone air temperature value is greater than the Setback Cooling Temperature Setpoint the terminal unit will execute the setback cool algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Cooling Temperature Setpoint.

When the zone air temperature value is less than the Setback Heating Temperature Setpoint the terminal unit will execute the setback heat algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Heating Temperature Setpoint.

Auto. Some manufacturers' terminal units may not support the Auto state of Operation Mode.

Auto mode is beneficial in a heat recovery system because it allows the terminal unit to automatically switch between cooling and heating states based on the current zone air temperature and the zone temperature setpoint in use. When the terminal unit Operation Mode is the Auto state, two sub-states are available, Auto (Cool) and Auto (Heat).

Depending on the setpoint control configuration of the terminal unit, one of three setpoints is used for control. When the unit is configured for single setpoint control, the Auto Zone Temperature Setpoint is used. When the unit is configured for dual setpoint control, the Cooling Temperature Setpoint is used when the unit is in the Auto (Cool) state and Heating Temperature Setpoint is used when the unit is in the Auto (Heat) state.

When the terminal unit Operation Mode is the Auto (Cool) state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the Zone Air Temperature value from the zone temperature setpoint value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position to reduce the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

When the terminal unit Operation Mode is the Auto (Heat) state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the zone temperature setpoint value from the Zone Air Temperature value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

Auto Mode System Changeover. The state of the terminal unit is Auto (Cool). When the absolute value of the difference value is greater than the factory defined changeover delta value, the terminal unit will transition to the Auto (Heat) state.

The state of the terminal unit is Auto (Heat). When the difference value is greater than the factory defined changeover delta setpoint, the terminal unit will transition to the Auto (Cool) state.

Fan Control. When the indoor unit is in the Off state, the fan is controlled to the minimum speed required to measure zone air temperature at the return air temperature sensor. This allows zone air temperature to be accurately measured while the indoor unit is in the Off state.

Upon transition from the Off state to the On state, the RPM of the fan is governed to match a manufacture specified, RPM value assigned to the each discrete fan speed state available in the unit. The number of distinct fan speed states and the fan RPM value for each state varies by manufacture and model of indoor unit. The fan speed state is controlled by one of two methods, automatic fan speed control or manual fan speed control. The choice of control method is made by a user of the system.

Upon indoor unit transition from the On state to the Off state, the fan transitions to the state described when the indoor unit is in the Off state.

Manual Fan Speed Control. A user of the system selects a desired fan speed state. The fan speed RPM will change to match the manufacture specified RPM value and maintain the RMP value until a different fan speed state is selected or a change is made to another control parameter of the indoor unit that causes the fan to change to a different state.

Automatic Fan Speed Control. When a user of the system selects the fan speed state Auto, an algorithm internal to the indoor unit controls the selection of the fan speed state. The algorithm calculates the temperature difference value between the measured zone air temperature value and the zone temperature setpoint value in use. When a large difference value exists, the fan state selected will have a highest fan speed RPM value. As the difference value is reduced, the algorithm will change the fan speed in use to a state with a smaller RPM value.

Condensate Overflow Monitoring:
The unit shall be equipped with a condensate drain pan level sensor to protect against drain pan overflow. If the sensor detects a high condensate level in the drain pan, the control shall shut down the indoor unit before an overflow can occur and a condensate alarm diagnostic shall annunciate at the BAS.

Preheat Control:
When the fan is off, the electric preheat shall be disabled.

When the fan is on, the preheat shall control to maintain a leaving preheat temperature of 45.0 deg. F (adj.). If the preheat temperature sensor fails, the electric preheat shall be disabled. An alarm shall annunciate at the BAS if the leaving preheat temperature sensor or the outdoor air temperature sensor fail.

Filter Timer:
The fan-run time (hrs) shall be compared to the filter maintenance timer setpoint. Once the setpoint is reached a filter timer alarm diagnostic shall annunciate at the BAS. When the diagnostic is cleared, the filter-maintenance timer is reset to zero, and the timer begins accumulating fan-run time again.

Sequence of Operation: DOAS-2

Building Automation System Interface:
The Building Automation System (BAS) will allow the user to monitor the status of Variable Refrigerant Flow (VRF) terminal units, outdoor units, and secondary VRF equipment, and modify control parameters of terminal units and secondary VRF equipment as necessary to maintain the desired space conditions.
If communication between the VRF equipment and the BAS is lost, the VRF system will continue to operate using the current control parameters stored within the equipment to maintain the desired space conditions.

External Control Device:
In this specification the term 'external control device' is used to denote one or more user interface control devices that may be present in the system. The control devices that may be present are a Local Control device, VRF System Control device, or a Building Automation System. When more than one external control device is present in the control system, the last command or configuration value received by the indoor unit governs indoor unit operation.

There may be other means to provide commands and configuration parameters to the VRF system, such as hardwired control inputs. However, these are not considered the typical system control use case and the specification does not address them as written.

Zone Temperature Setpoint Control:
Dual Setpoint. Two zone air temperature setpoints are present. When the terminal unit is in a cooling mode, it will control the zone air temperature value to the Cooling Temperature Setpoint value. When the terminal unit is in a heating mode, it will control the zone air temperature value to the Heating Temperature Setpoint value.

On/Off Mode:
The terminal unit has two modes that drive the overall operation of the unit, On and Off mode.

On. The internal algorithm will control the unit to maintain the desired zone air temperature.

Off. The internal algorithm will NOT control the unit to maintain the desire zone air temperature. The algorithm will control components internal to the unit to minimize energy consumption and isolate it from VRF system refrigerant circuit. The zone air temperature sensor in use will be monitored to allow the Zone Air Temperature Value to be displayed at an External Control Device(s).

Operation Mode:
Operation mode is the primary control parameter of the indoor unit when it is in the On state. The operation mode command provided to the indoor unit from an eternal control device will determine the base HVAC control function the indoor unit is providing. Available modes of operation are Cool, Dry, Fan, Heat, Setback, and Auto.

Cool. When the terminal unit Operation Mode is the Cool state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Cooling Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes less. The algorithm will respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Dry. When the terminal unit Operation Mode is the Dry state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The goal in Dry mode is to remove water vapor from the air, not control the zone air temperature value to a zone temperature setpoint. When the terminal unit is commanded to the Dry state, an algorithm internal to the terminal unit drives the LEV to an open position. It is assumed that the position of the valve allows a sufficient amount of refrigerant to enter the coil, to cause the surface temperature of the coil fins to fall below the dew point temperature. The result is condensation that removes water vapor from the air passing through the coil.

When the zone air temperature value is greater than or equal to the Cooling Temperature Setpoint, Dry state is beneficial from both a humidity and zone temperature perspective because water vapor is being removed from the air in the zone and the difference value between the zone air temperature value and the Cooling Temperature Setpoint value is reduced.

Continued dehumidification will cause the zone air temperature value to become less than the Cooling Temperature Setpoint, which is undesirable. To combat the effect, the algorithm calculates the temperature difference value between the zone air temperature value and Cooling Temperature Setpoint. Based on the difference value, the algorithm uses a sliding time scale method to modulate the LEV between the open position and the fully closed position for a variable length of time. It is assumed that when the LEV is in the fully closed position latent heat within the zone will cause the zone air temperature value to increase. The method allows some dehumidification to take place without significantly lowering the air temperature in the zone below the Cooling Temperature Setpoint.

Fan. When the terminal unit Operation Mode is the Fan state, the LEV is closed and the terminal unit does not attempt regulate the air temperature in the zone. The temperature of the air in the zone may change due to latent heat within the zone. With the use of an external user interface, the speed of the fan may be modulated between the discrete states supported by the terminal unit.

Heat. When the terminal unit Operation Mode is the Heat state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit. The algorithm calculates the temperature difference value between the measured zone air temperature value and the Heating Temperature Setpoint value. When a large difference value exists, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes less. The algorithm will respond and drive the LEV to more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal.

Setback. Some terminal units may not support the Setback state. When the terminal unit Operation Mode transitions to Setback state, the LEV is driven closed and the zone air temperature is allowed to drift. The amount of drift is bounded by the Setback Cooling Temperature Setpoint and the Setback Heating Temperature Setpoint. When the zone air temperature value is greater than the Setback Cooling Temperature Setpoint the terminal unit will execute the setback cool algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Cooling Temperature Setpoint.

When the zone air temperature value is less than the Setback Heating Temperature Setpoint the terminal unit will execute the setback heat algorithm. The algorithm modulates the LEV to maintain the zone temperature to the Setback Heating Temperature Setpoint.

Auto. Some manufacturers' terminal units may not support the Auto state of Operation Mode.

Auto mode is beneficial in a heat recovery system because it allows the terminal unit to automatically switch between cooling and heating states based on the current zone air temperature and the zone temperature setpoint in use. When the terminal unit Operation Mode is the Auto state, two sub-states are available, Auto (Cool) and Auto (Heat).

Depending on the setpoint control configuration of the terminal unit, one of three setpoints is used for control. When the unit is configured for single setpoint control, the Auto Zone Temperature Setpoint is used. When the unit is configured for dual setpoint control, the Cooling Temperature Setpoint is used when the unit is in the Auto (Cool) state and Heating Temperature Setpoint is used when the unit is in the Auto (Heat) state.

When the terminal unit Operation Mode is the Auto (Cool) state, liquid refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the Zone Air Temperature value from the zone temperature setpoint value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature decreases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position to reduce the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

When the terminal unit Operation Mode is the Auto (Heat) state, hot gas refrigerant is provided to the terminal unit. The amount of refrigerant entering the evaporator coil is regulated by the Linear Expansion Valve. The position of LEV is determined by an algorithm internal to the terminal unit.

The algorithm subtracts the zone temperature setpoint value from the Zone Air Temperature value, the result is the temperature difference value. When the result is a large positive value, the LEV is driven open to allow more refrigerant into the evaporator coil. As the zone air temperature increases the difference value becomes smaller. The algorithm will respond and drive the LEV to a more closed position reducing the amount of refrigerant entering into the evaporator coil. As the difference value approaches zero, the system stabilizes and the amount of LEV modulation is minimal. When the difference value is negative, the LEV is driven closed to prevent refrigerant from entering the evaporator.

Auto Mode System Changeover. The state of the terminal unit is Auto (Cool). When the absolute value of the difference value is greater than the factory defined changeover delta value, the terminal unit will transition to the Auto (Heat) state.

The state of the terminal unit is Auto (Heat). When the difference value is greater than the factory defined changeover delta setpoint, the terminal unit will transition to the Auto (Cool) state.

Fan Control. When the indoor unit is in the Off state, the fan is controlled to the minimum speed required to measure zone air temperature at the return air temperature sensor. This allows zone air temperature to be accurately measured while the indoor unit is in the Off state.

Upon transition from the Off state to the On state, the RPM of the fan is governed to match a manufacture specified, RPM value assigned to the each discrete fan speed state available in the unit. The number of distinct fan speed states and the fan RPM value for each state varies by manufacture and model of indoor unit. The fan speed state is controlled by one of two methods, automatic fan speed control or manual fan speed control. The choice of control method is made by a user of the system.

Upon indoor unit transition from the On state to the Off state, the fan transitions to the state described when the indoor unit is in the Off state.

Manual Fan Speed Control. A user of the system selects a desired fan speed state. The fan speed RPM will change to match the manufacture specified RPM value and maintain the RMP value until a different fan speed state is selected or a change is made to another control parameter of the indoor unit that causes the fan to change to a different state.

Automatic Fan Speed Control. When a user of the system selects the fan speed state Auto, an algorithm internal to the indoor unit controls the selection of the fan speed state. The algorithm calculates the temperature difference value between the measured zone air temperature value and the zone temperature setpoint value in use. When a large difference value exists, the fan state selected will have a highest fan speed RPM value. As the difference value is reduced, the algorithm will change the fan speed in use to a state with a smaller RPM value.

Condensate Overflow Monitoring:
The unit shall be equipped with a condensate drain pan level sensor to protect against drain pan overflow. If the sensor detects a high condensate level in the drain pan, the control shall shut down the indoor unit before an overflow can occur and a condensate alarm diagnostic shall annunciate at the BAS.

Filter Timer:
The fan-run time (hrs) shall be compared to the filter maintenance timer setpoint. Once the setpoint is reached a filter timer alarm diagnostic shall annunciate at the BAS. When the diagnostic is cleared, the filter-maintenance timer is reset to zero, and the timer begins accumulating fan-run time again.

Sequence of Operation: EF-1

Building Automation System Interface:
The Building Automation System (BAS) shall send the controller an Occupied or Unoccupied command. If a BAS is not present, or communication is lost with the BAS, the controller shall operate in the Occupied mode.

Occupied:
During occupied periods, the exhaust fan shall run continuously.

Unoccupied:
During unoccupied periods the exhaust fan shall be disabled.

Fan Status:
The fan status shall be monitored by a current sensing switch. If the fan is signaled to start, and status is not proven within 20 seconds (adj.), an alarm shall annunciate at the BAS.

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38093 — DEVIN TATE LAWRENCE — 6/11/2024

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL CONTROLS

DRAWING NO.

M005

Drawn By: WJS Checked By: DTL

Points List - VRF Outdoor Unit

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
COMPRESSOR DISCHARGE TEMPERATURE **CMP DT**		X													
COMPRESSOR OUTPUT(S) **CMP OUT**				X											
DEMAND (EMERGENCY) STOP **CMP ES**			X												
HIGH SIDE SATURATION TEMPERATURE **HSAT TEMP**		X													
INVERTER HEAT SINK TEMPERATURE **IVR TEMP**		X													
LOW SIDE SATURATION TEMPERATURE **LSAT TEMP**		X													
OUTDOOR AIR TEMPERATURE **OAT**		X													
OUTDOOR UNIT FAN OUTPUT(S) **OFN SPD**				X											
POWER 3PH BUT ONLY MEASURING ONE LEG CURRENT (PH-A) **CMP PHA**		X													
POWER 3PH BUT ONLY MEASURING ONE LEG CURRENT (PH-C) **CMP PHC**		X													
REFRIGERANT HIGH SIDE PRESSURE **HPRESS**		X													
REFRIGERANT LOW SIDE PRESSURE **LPRESS**		X													
SUCTION LINE TEMPERATURE **SUC TEMP**		X													
ALARM CODE **ALM**						X									
ALARM MESSAGE **ALM MSG**						X									
COMPRESSOR OPERATION STATUS **CMP STS**						X									
LOW AMBIENT CAPACITY CONTROL **LAMB CAP**						X									
OPERATING SPEED OF THE MAIN ODU **CMP FQ**						X									
OPERATIONAL MODE STATUS **MOD STS**						X									
OUTDOOR UNIT FAN STATE **OFN STS**						X									
POWER LINE FREQUENCY **PWR FQ**						X									
REVERSING VALVE POSITION **REV VLV POS**						X									

Points List - CEILING CONCEALED DUCTED

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
DISCHARGE AIR TEMPERATURE **DAT**		X													
FAN SPEED STATUS **SAF STS**			X												
SPACE TEMPERATURE LOCAL **SPT**	X	X													
SPACE TEMPERATURE SETPOINT LOCAL **SPT SP**	X	X													
SPACE TEMPERATURE (TH1) **SPT**		X													
SUPPLY FAN SPEED **SAF**				X											
VANE DIRECTION **VN DIR**	X			X											
ALARM CODE **ALM**						X									
ALARM MESSAGE **ALM MSG**						X									
BAS COMMUNICATION STATE **BAS COM**						X									X
EXPANSION VALVE STATE **XV RATE**						X									
FILTER TIMER HOURS **FIL HRS**						X									
GAS PIPE TEMPERATURE (TH3) **VAPT**						X									
GAS PIPE TEMPERATURE (TH4) **VAPT**						X									
INDOOR LEV RATE **LEV RATE**						X									
LIQUID PIPE TEMPERATURE (TH2) **LIQT**						X									
OCCUPIED COOLING SETPOINT **OCC CLG SP**						X									
OCCUPIED HEATING SETPOINT **OCC HTG SP**						X									
SUBCOOL (SC) **SC**						X									
SUPERHEAT (SH) **SH**						X									
UNOCCUPIED COOLING SETPOINT **UNOCC CLG SP**						X									
UNOCCUPIED HEATING SETPOINT **UNOCC HTG SP**						X									

Points List - CEILING CASSETTE

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
DISCHARGE AIR TEMPERATURE **DAT**		X													
FAN SPEED STATUS **SAF STS**			X												
SPACE TEMPERATURE LOCAL **SPT**	X	X													
SPACE TEMPERATURE SETPOINT LOCAL **SPT SP**	X	X													
SPACE TEMPERATURE (TH1) **SPT**		X													
SUPPLY FAN SPEED **SAF**				X											
ALARM CODE **ALM**						X									
ALARM MESSAGE **ALM MSG**						X									
BAS COMMUNICATION STATE **BAS COM**						X									X
EXPANSION VALVE STATE **XV RATE**						X									
FILTER TIMER HOURS **FIL HRS**						X									
GAS PIPE TEMPERATURE (TH3) **VAPT**						X									
GAS PIPE TEMPERATURE (TH4) **VAPT**						X									
INDOOR LEV RATE **LEV RATE**						X									
LIQUID PIPE TEMPERATURE (TH2) **LIQT**						X									
OCCUPIED COOLING SETPOINT **OCC CLG SP**						X									
OCCUPIED HEATING SETPOINT **OCC HTG SP**						X									
SUBCOOL (SC) **SC**						X									
SUPERHEAT (SH) **SH**						X									
UNOCCUPIED COOLING SETPOINT **UNOCC CLG SP**						X									
UNOCCUPIED HEATING SETPOINT **UNOCC HTG SP**						X									

Points List - EF-1

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
EXHAUST FAN SPEED COMMAND **EAF**				X											
EXHAUST FAN STATUS **EAF**	X		X												
EXHAUST FAN START STOP COMMAND **EAF**	X				X										
BAS COMMUNICATION STATE **BAS COM**						X									

Points List - DOAS-1

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
PREHEAT LEAVING AIR TEMP **PH LAT**		X													
ELECTRIC PREHEAT **PH1**					X										
DISCHARGE AIR TEMPERATURE **DAT**		X													
HOT GAS REHEAT **HGRH**					X										
SUPPLY FAN SPEED - LOW **SAF LOW**					X										
SUPPLY FAN SPEED - MEDIUM **SAF MED**					X										
SUPPLY FAN SPEED - HIGH **SAF HIGH**					X										
CONDENSATE OVERFLOW DETECTION LOCAL **CND OVRFL**			X										X		
FAN SPEED STATUS **SAF STS**			X												
SPACE TEMPERATURE LOCAL **SPT**	X	X													
SPACE TEMPERATURE SETPOINT LOCAL **SPT SP**	X	X													
SPACE TEMPERATURE (TH1) **SPT**		X													
SUPPLY FAN SPEED **SAF**				X											
ALARM CODE **ALM**						X									
ALARM MESSAGE **ALM MSG**						X									
BAS COMMUNICATION STATE **BAS COM**						X									X
EXPANSION VALVE STATE **XV RATE**						X									
FILTER TIMER HOURS **FIL HRS**						X									
GAS PIPE TEMPERATURE (TH3) **VAPT**						X									
GAS PIPE TEMPERATURE (TH4) **VAPT**						X									
INDOOR LEV RATE **LEV RATE**						X									
LIQUID PIPE TEMPERATURE (TH2) **LIQT**						X									
OCCUPIED COOLING SETPOINT **OCC CLG SP**						X									
OCCUPIED HEATING SETPOINT **OCC HTG SP**						X									
SUBCOOL (SC) **SC**						X									
SUPERHEAT (SH) **SH**						X									
UNOCCUPIED COOLING SETPOINT **UNOCC CLG SP**						X									
UNOCCUPIED HEATING SETPOINT **UNOCC HTG SP**						X									

Points List - DOAS-2

System Point Description	POINTS												ALARMS									
	GRAPHIC	ANALOG HARDWARE INPUT (AI)	BINARY HARDWARE INPUT (BI)	ANALOG HARDWARE OUTPUT (AO)	BINARY HARDWARE OUTPUT (BO)	SOFTWARE POINT (SFT)	HARDWARE INTERLOCK (HDW)	WIRELESS (WLS)	NETWORK (NET)	HIGH ANALOG LIMIT	LOW ANALOG LIMIT	BINARY	LATCH DIAGNOSTIC	SENSOR FAIL	COMMUNICATION FAIL
HOT GAS REHEAT **HGRH**				X											
DISCHARGE AIR TEMPERATURE **DAT**		X													
SUPPLY FAN SPEED - LOW **SAF LOW**					X										
SUPPLY FAN SPEED - MEDIUM **SAF MED**					X										
SUPPLY FAN SPEED - HIGH **SAF HIGH**					X										
CONDENSATE OVERFLOW DETECTION LOCAL **CND OVRFL**			X										X		
FAN SPEED STATUS **SAF STS**			X												
SPACE TEMPERATURE LOCAL **SPT**	X	X													
SPACE TEMPERATURE SETPOINT LOCAL **SPT SP**	X	X													
SPACE TEMPERATURE (TH1) **SPT**		X													
ALARM CODE **ALM**						X									
ALARM MESSAGE **ALM MSG**						X									
BAS COMMUNICATION STATE **BAS COM**						X									X
EXPANSION VALVE STATE **XV RATE**						X									
FILTER TIMER HOURS **FIL HRS**						X									
GAS PIPE TEMPERATURE (TH3) **VAPT**						X									
GAS PIPE TEMPERATURE (TH4) **VAPT**						X									
INDOOR LEV RATE **LEV RATE**						X									
LIQUID PIPE TEMPERATURE (TH2) **LIQT**						X									
OCCUPIED COOLING SETPOINT **OCC CLG SP**						X									
OCCUPIED HEATING SETPOINT **OCC HTG SP**						X									
SUBCOOL (SC) **SC**						X									
SUPERHEAT (SH) **SH**						X									
UNOCCUPIED COOLING SETPOINT **UNOCC CLG SP**						X									
UNOCCUPIED HEATING SETPOINT **UNOCC HTG SP**						X									

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL CONTROLS

DRAWING NO.

M006

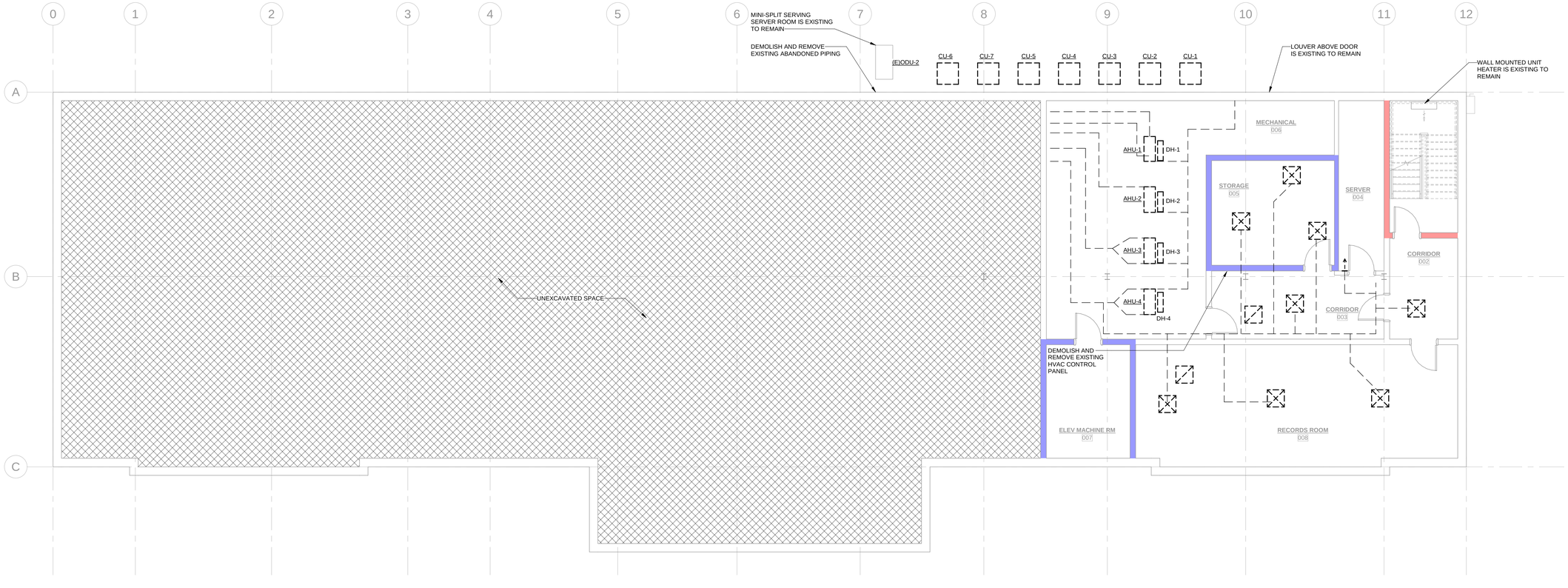
Drawn By: WJS Checked By: DTL

DEMOLITION NOTES:

A. DEMOLISH AND REMOVE EXISTING AIR HANDLERS, AND ASSOCIATED OUTDOOR UNITS, DUCTWORK, REFRIGERANT PIPING, AIR TERMINALS, CONDENSATE PIPING, ETC.

B. ALL UNIT HEATERS ARE EXISTING TO REMAIN.

C. THE HVAC SYSTEM ASSOCIATED WITH COOLING THE EXISTING SERVER ROOM IS EXISTING TO REMAIN IN ITS ENTIRETY.



1 M100 MECHANICAL DEMOLITION PLAN - BASEMENT
3/16" = 1'-0"
0 4' 8' 12' 16'

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38099 — DEVIN TATE LAWRENCE — 6/11/2024

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL DEMOLITION PLAN - BASEMENT

DRAWING NO.

M100

Drawn By: WJS Checked By: DTL

DEMOLITION NOTES:

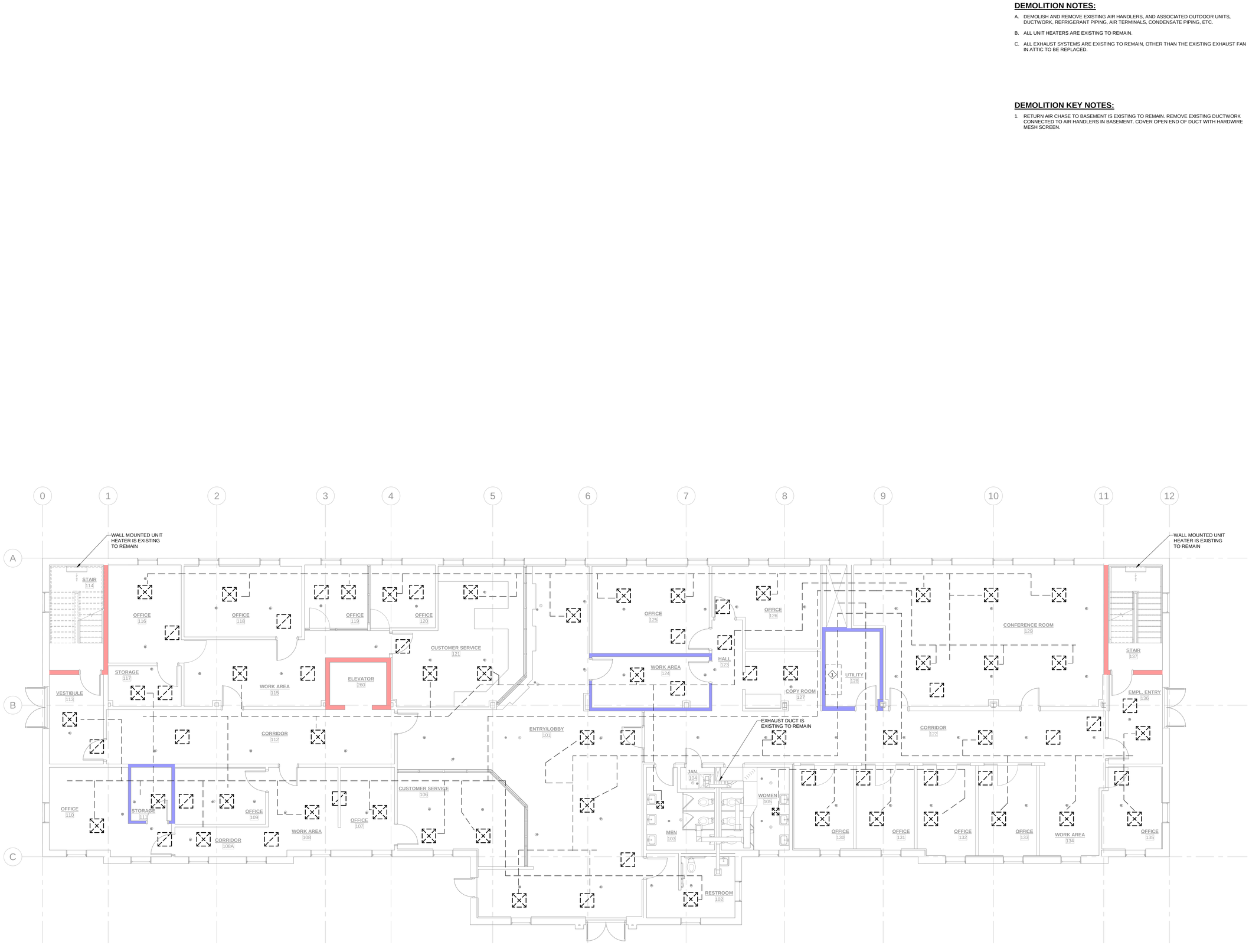
A. DEMOLISH AND REMOVE EXISTING AIR HANDLERS, AND ASSOCIATED OUTDOOR UNITS, DUCTWORK, REFRIGERANT PIPING, AIR TERMINALS, CONDENSATE PIPING, ETC.

B. ALL UNIT HEATERS ARE EXISTING TO REMAIN.

C. ALL EXHAUST SYSTEMS ARE EXISTING TO REMAIN, OTHER THAN THE EXISTING EXHAUST FAN IN ATTIC TO BE REPLACED.

DEMOLITION KEY NOTES:

1. RETURN AIR CHASE TO BASEMENT IS EXISTING TO REMAIN. REMOVE EXISTING DUCTWORK CONNECTED TO AIR HANDLERS IN BASEMENT. COVER OPEN END OF DUCT WITH HARDWIRE MESH SCREEN.



1 M101 MECHANICAL DEMOLITION PLAN - 1ST FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 38099 DEVIN TATE LAWRENCE 6/11/2024

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ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

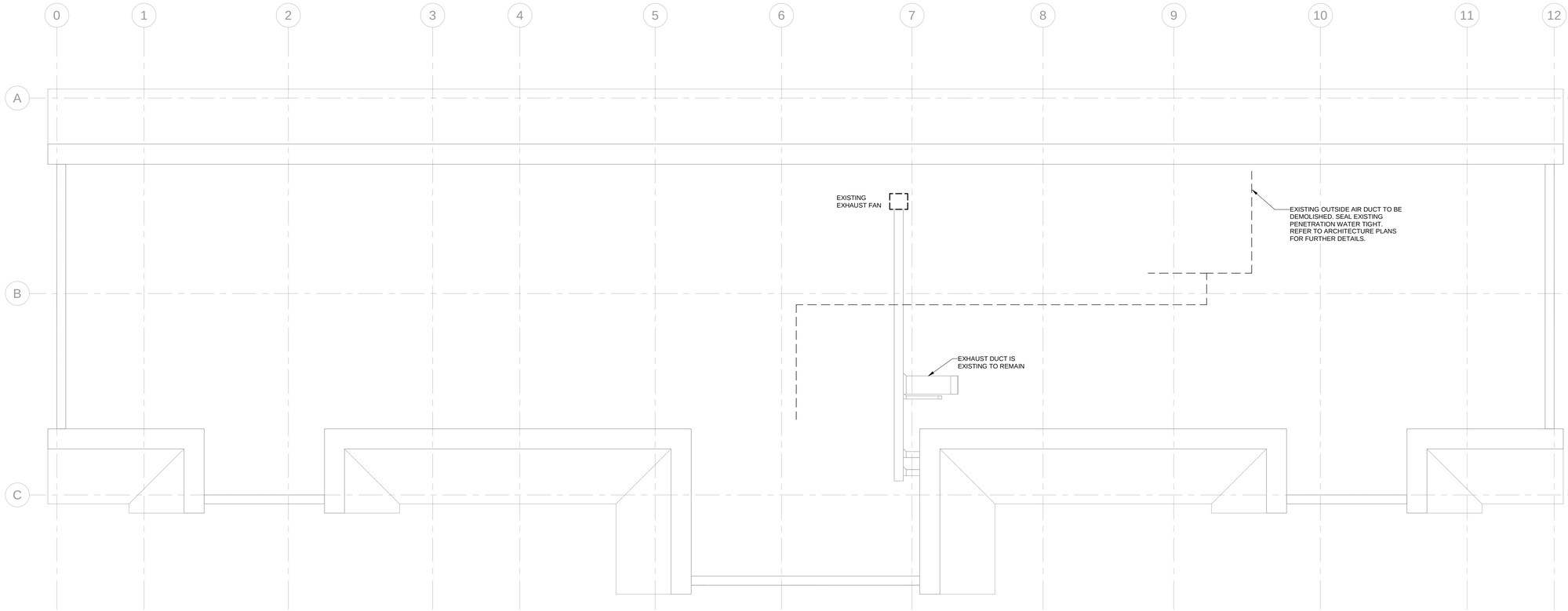
DRAWING NAME

MECHANICAL DEMOLITION PLAN - 1ST FLOOR

DRAWING NO.

M101

Drawn By: WJS Checked By: DTL



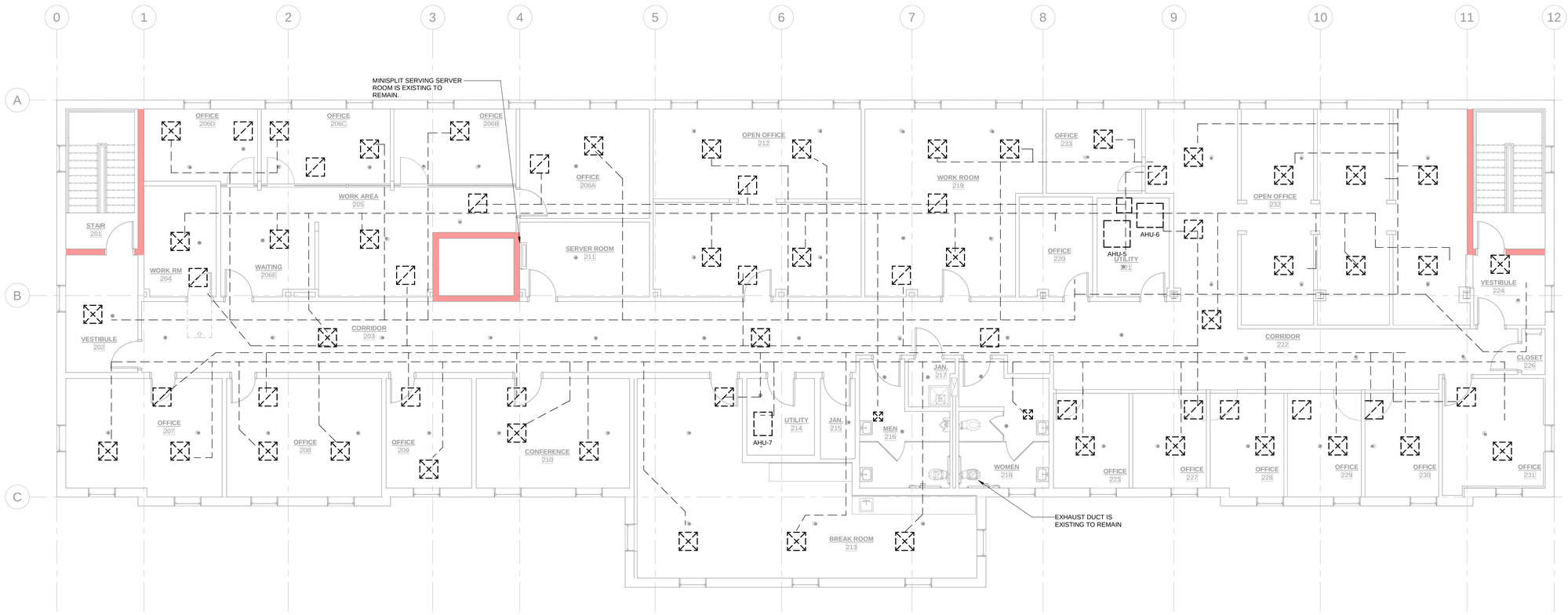
DEMOLITION NOTES:

A. DEMOLISH AND REMOVE EXISTING AIR HANDLERS, AND ASSOCIATED OUTDOOR UNITS, DUCTWORK, REFRIGERANT PIPING, AIR TERMINALS, CONDENSATE PIPING, ETC.

B. ALL EXHAUST SYSTEMS ARE EXISTING TO REMAIN, OTHER THAN THE EXISTING EXHAUST FAN IN ATTIC TO BE REPLACED.

C. THE HVAC SYSTEM ASSOCIATED WITH COOLING THE EXISTING SERVER ROOM IS EXISTING TO REMAIN IN ITS ENTIRETY.

2 M102 MECHANICAL DEMOLITION PLAN - ATTIC
3/16" = 1'-0"
0 4' 8' 12' 16'



1 M102 MECHANICAL DEMOLITION PLAN - 2ND FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38099 — DEVIN TATE LAWRENCE — 6/11/2024

DEVITA Engineering Great Ideas
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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC

DRAWING NO.

M102

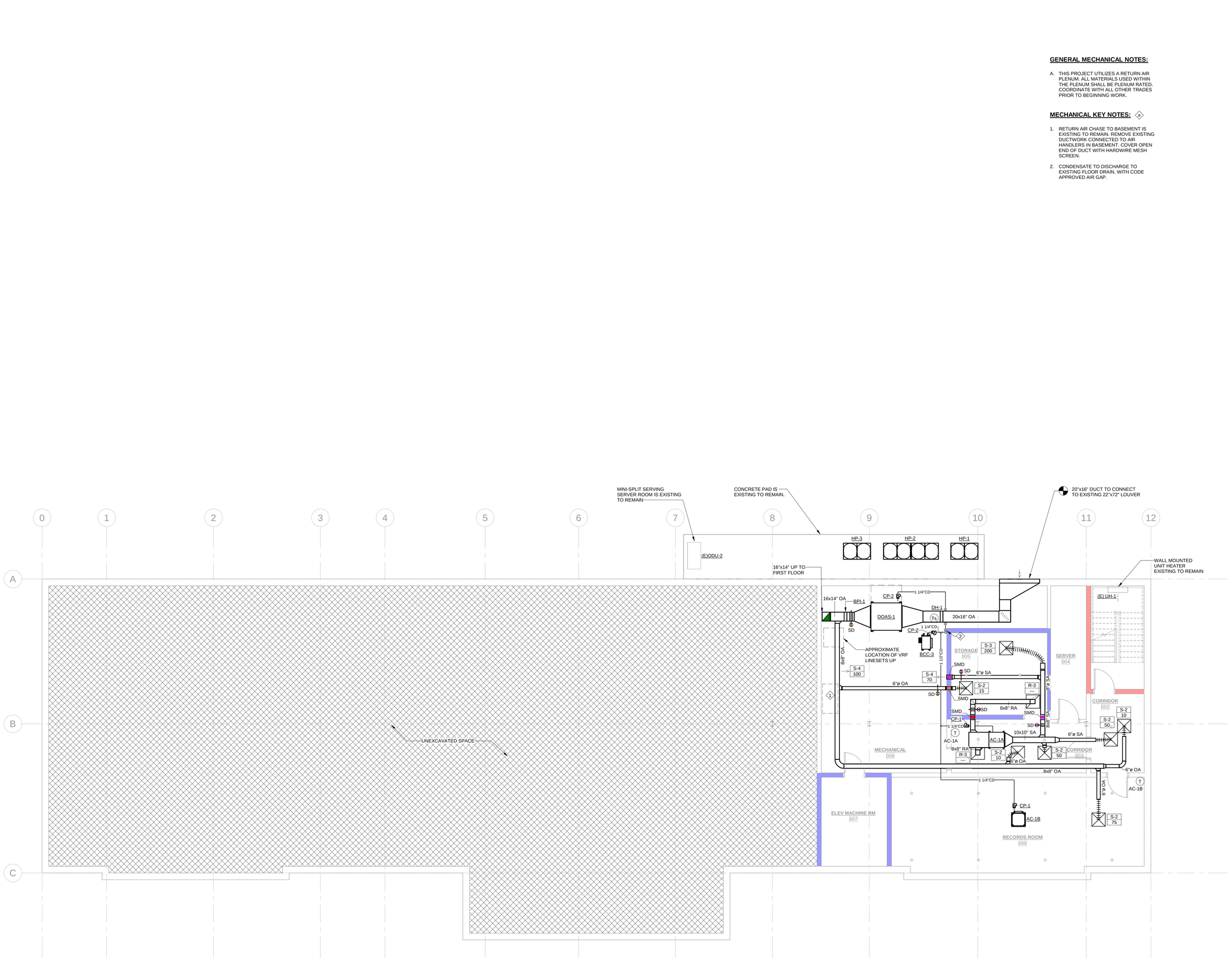
Drawn By: WJS Checked By: DTL

GENERAL MECHANICAL NOTES:

A. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

MECHANICAL KEY NOTES: (#)

1. RETURN AIR CHASE TO BASEMENT IS EXISTING TO REMAIN. REMOVE EXISTING DUCTWORK CONNECTED TO AIR HANDLERS IN BASEMENT. COVER OPEN END OF DUCT WITH HARDWIRE MESH SCREEN.
2. CONDENSATE TO DISCHARGE TO EXISTING FLOOR DRAIN, WITH CODE APPROVED AIR GAP.



1 M200 MECHANICAL PLAN - BASEMENT
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38093 — DEVIN TATE LAWRENCE — 6/11/2024

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PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL PLAN - BASEMENT

DRAWING NO.

M200

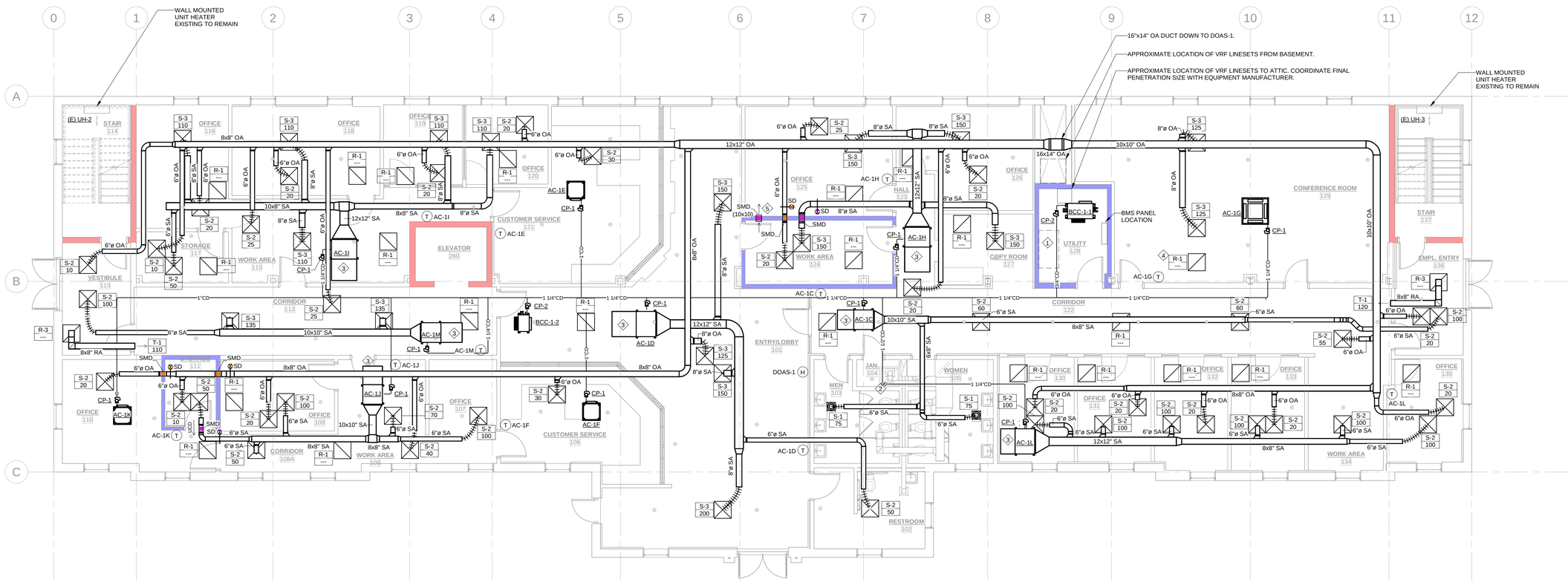
Drawn By: WJS Checked By: DTL

GENERAL MECHANICAL NOTES:

A. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

MECHANICAL KEY NOTES:

1. RETURN AIR CHASE TO BASEMENT IS EXISTING TO REMAIN. REMOVE EXISTING DUCTWORK CONNECTED TO AIR HANDLERS IN BASEMENT. COVER OPEN END OF DUCT WITH HARDWIRE MESH SCREEN.
2. CONDENSATE TO DISCHARGE TO MOP SINK, LOCATED IN JANITORS CLOSET, WITH CODE APPROVED AIR GAP.
3. AIR HANDLER UTILIZES A RETURN AIR PLENUM. EXTEND FULL SIZE RETURN AIR DUCT A MINIMUM OF 12" FROM UNIT. INTERNALLY LINE DUCTWORK FOR SOUND ATTENUATION. COVER OPEN END OF DUCT WITH HARDWIRE MESH SCREEN.
4. RETURN GRILLE TO BE PROVIDED WITH SOUND ATTENUATION AS SHOWN IN DETAIL 12/M003. TYPICAL OF ALL PLENUM RETURN GRILLES.
5. INTERLOCK UNDUCTED SMOKE DAMPER WITH SMOKE DETECTOR AND INSTALL WITHIN 5 FT. HORIZONTALLY OF THE DAMPER PER 2021 SC MECHANICAL CODE SECTION 607.3.3.2.



1 M201 MECHANICAL PLAN - 1ST FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 38093 — DEVIN TATE LAWRENCE — 6/11/2024

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YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL PLAN - 1ST FLOOR

DRAWING NO.

M201

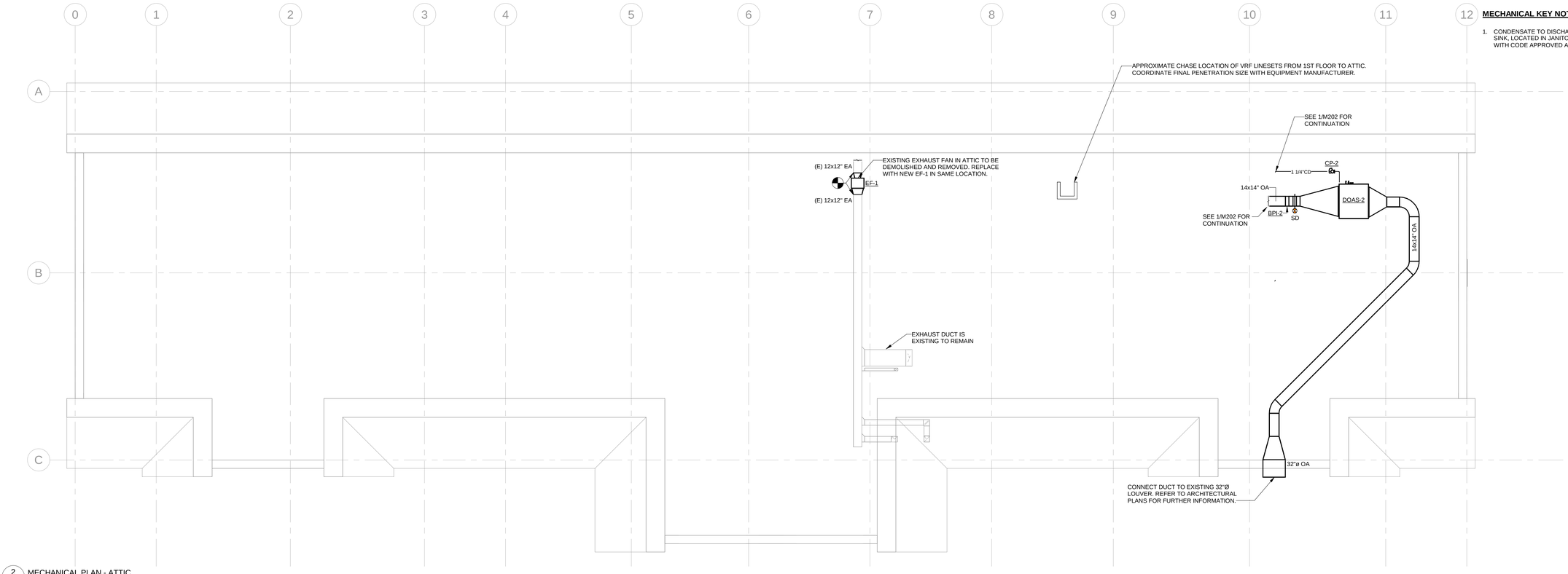
Drawn By: WJS Checked By: DTL

GENERAL MECHANICAL NOTES:

A. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

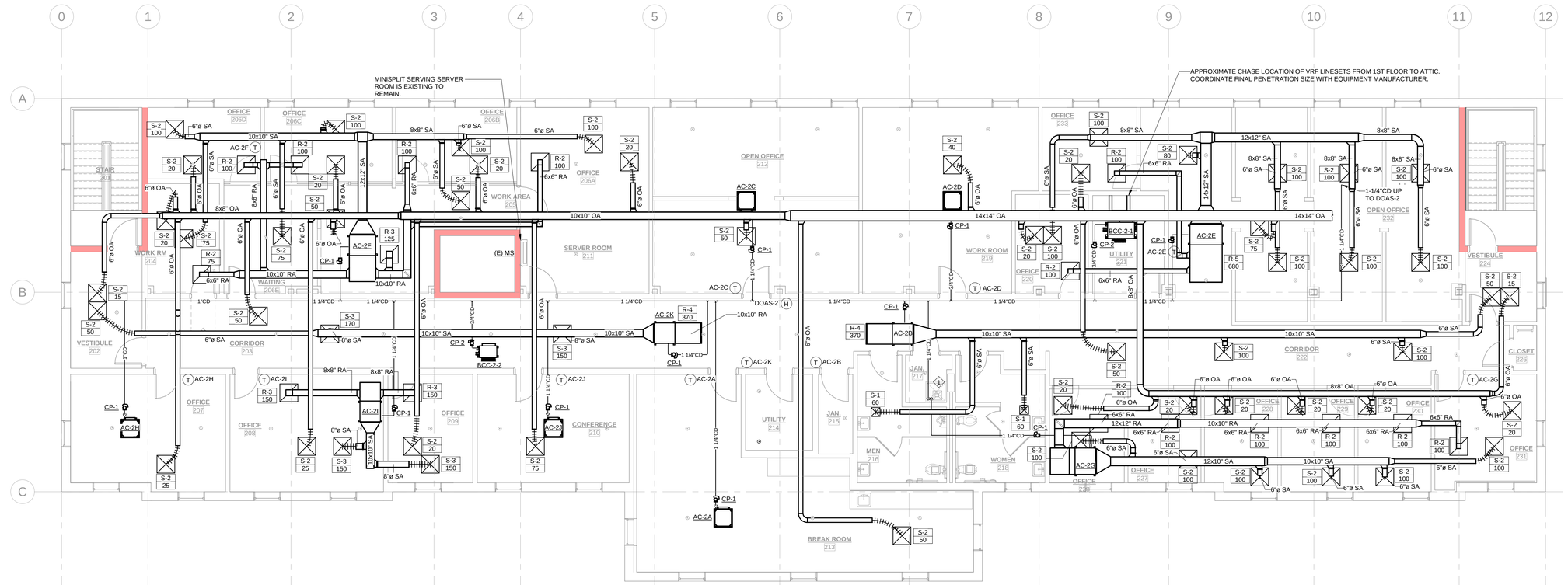
MECHANICAL KEY NOTES:

1. CONDENSATE TO DISCHARGE TO MOP SINK, LOCATED IN JANITORS CLOSET, WITH CODE APPROVED AIR GAP.



2 M202 MECHANICAL PLAN - ATTIC
3/16" = 1'-0"

0 4' 8' 12' 16'



1 M202 MECHANICAL PLAN - 2ND FLOOR
3/16" = 1'-0"

0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 38093 DEVIN TATE LAWRENCE 6/11/2024

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18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

MECHANICAL PLAN - 2ND FLOOR & ATTIC

DRAWING NO.

M202

Drawn By: WJS Checked By: DTL

WIRING DEVICE SYMBOL LEGEND

SYMBOL	DESCRIPTION
A-1	HOMERUN TO LIGHTING/SERVICE PANEL. HOMERUN INDICATES PANEL NAME AND CIRCUIT NUMBER OR FEEDER TAG. CONDUCTORS SHALL BE #12 AWG IN 3/4" CONDUIT (1" UNDERGROUND) UNLESS NOTED OTHERWISE. HOMERUNS MAY BE COMBINED INTO A COMMON RACEWAY FOR 20A SINGLE PHASE CIRCUITS. PROVIDE DEDICATED NEUTRALS. MAXIMUM OF (6) CURRENT CARRYING CONDUCTORS SHALL BE PROVIDED IN RACEWAY. PROVIDE #10 AWG FOR 120V BRANCH CIRCUITS LONGER THAN 100 FEET. PROVIDE #8 AWG FOR 120V BRANCH CIRCUITS LONGER THAN 150 FEET. INCREASE CONDUIT SIZE AS REQUIRED. VERIFY EXACT CIRCUIT LENGTH AND SIZE OF CONDUCTORS TO PROVIDE ACCEPTABLE VOLTAGE DROP PER NEC. COMPLY WITH NEC FOR CONDUCTOR DERATING AND CONDUIT FILL.
	CONDUIT STUB
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT INSTALLED BELOW GRADE OR BELOW FINISHED FLOOR
E101	ELECTRICAL CONNECTION TO EQUIPMENT ITEM 'E101' (LETTER DESIGNATION AS APPLICABLE) - SEE CORRESPONDING EQUIPMENT CONNECTION SCHEDULE
	DUPLEX RECEPTACLE AT 18" AFF, UNO. NEMA 5-20R.
	QUADRUPLEX RECEPTACLE AT 18" AFF, UNO. NEMA 5-20R.
	DUPLEX RECEPTACLE - CEILING MOUNTED. NEMA 5-20R.
	DUPLEX RECEPTACLE - FLOOR MOUNTED. NEMA 5-20R.
	SINGLE RECEPTACLE AT 18" AFF, UNO. NEMA 5-20R. FOR RECEPTACLES ABOVE, SUBSCRIPT DEFINITION AS FOLLOWS: GFI - GROUND FAULT DEVICE IG - ISOLATED GROUND USB - DEVICE WITH USB PORT WP - UL WEATHER-RESISTANT (WR) IN WEATHERPROOF WHILE IN USE COVER CR - CORD REEL C - MOUNTED 8" ABOVE COUNTER
	SPECIAL PURPOSE RECEPTACLE - HEIGHT AND TYPE AS NOTED ON DRAWINGS
	SURFACE RACEWAY
J	JUNCTION BOX - MOUNTING HEIGHT AND SIZE AS REQUIRED BY CODE OR AS NOTED ON DRAWINGS
J	JUNCTION BOX - FLOOR MOUNTED. SIZE AS REQUIRED BY CODE OR AS NOTED ON DRAWINGS
	VERTICAL SERVICE POLE
	COMBINATION IN FLOOR POWER / DATA / A/V DEVICE.
	PUSHBUTTON
	MOTOR. SEE DRAWINGS FOR DESCRIPTION
30A/3P/20/1	SAFETY DISCONNECT SWITCH. "30" INDICATES AMP RATING, "3P" INDICATES NUMBER OF POLES, "20" INDICATES FUSE SIZE, "1" INDICATES NEMA ENCLOSURE RATING (1, 3R, 4X, ETC). HEAVY DUTY SAFETY SWITCH UNLESS NOTED OTHERWISE. "NF" INDICATES NON-FUSED.
	COMBINATION MOTOR STARTER
	MOTOR STARTER
B	DOOR BELL

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION
FAA	FIRE ALARM ANNUNCIATOR PANEL - WALL MOUNTED AT 60" AFF TO CENTER, UNO
FACU	FIRE ALARM CONTROL UNIT; "D" SUBSCRIPT INDICATES DEDICATED UNIT
FATC	FIRE ALARM TERMINAL CABINET - WALL MOUNTED AT 72" AFF TO TOP, UNO
ARCM	AREA OF REFUGE EMERGENCY COMMUNICATION SYSTEM MASTER UNIT
ARCR	AREA OF REFUGE EMERGENCY COMMUNICATION SYSTEM REMOTE UNIT
ESR	ELEVATOR STATUS / RECALL
RTS	REMOTE TEST STATION FOR FA DUCT DETECTOR
NAC_n_	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL. "n" = UNIT NUMBER
PRE	PRE-ACTION SYSTEM / CONTROL UNIT
SD	SMOKE DAMPER
ES	ELEVATOR SHUTDOWN
ER	ELEVATOR RECALL
FH	ELEVATOR FIREMAN'S HAT LIGHT
VM	ELEVATOR SHUNT TRIP VOLTAGE MONITOR
AIM	ADDRESSABLE INPUT MONITOR MODULE
AOM	ADDRESSABLE OUTPUT MONITOR MODULE
IM	ISOLATION MODULE
CO	CO DETECTOR
H XX	HEAT DETECTOR. "XX" = TYPE/BASIC SHAPE
WF	WATER FLOW DETECTOR / SWITCH
RL	NON-ADDRESSABLE OUTPUT RELAY
SS	SURGE SUPPRESSOR
VS	VALVE SUPERVISORY SWITCH
F	FIRE ALARM PULL STATION AT 44" AFF. UNO
S	FIRE ALARM SMOKE DETECTOR / SENSOR
S R	RELAY BASE
SS	SMOKE ALARM. SINGLE STATION
S	SMOKE DETECTOR / SENSOR FOR DUCT
F SS	FIRE ALARM SYSTEM BELL - SINGLE STROKE
F G	GONG
cd	COMBINATION HORN / VISIBLE; cd = CANDELA RATING
cd 1W	COMBINATION SPEAKER / VISIBLE; W = WATTAGE, cd = CANDELA RATING
F H	HORN ONLY
RI	CEILING MOUNT INDICATOR
RTS	REMOTE ALARM INDICATING AND TEST SWITCH
S W	SPEAKER ONLY, WALL MOUNT; W = WATTAGE
CD	VISIBLE ONLY (STROBE), CEILING MOUNT; CD = CANDELA RATING
CD	VISIBLE ONLY (STROBE), WALL MOUNT; CD = CANDELA RATING
DH	DOOR HOLDER
	SUBSCRIPT DEFINITIONS: C - CEILING MOUNTED WP - WEATHERPROOF WG - WIRE GUARD

DISTRIBUTION SYMBOL LEGEND

SYMBOL	DESCRIPTION
	ELECTRICAL PANEL, SURFACE MOUNTED.
	ELECTRICAL PANEL, FLUSH MOUNTED.
T1	TRANSFORMER
ATS	AUTOMATIC TRANSFER SWITCH

LIGHTING & CONTROL SYMBOL LEGEND

SYMBOL	DESCRIPTION
$ x	20A SWITCH AT 44" CL AFF, UNO
D x	WALL DIMMER FOR SWITCH OR DIMMER ABOVE, SUBSCRIPT DEFINITION AS FOLLOWS: a,b - SWITCHING SCHEME m - MOTOR RATED 2 - 2 POLE MOTOR RATED P - PILOT LIGHT 3 - 3-WAY SWITCH 4 - 4-WAY SWITCH o - OCCUPANCY SENSOR v - VACANCY SENSOR
$$	TWO SWITCHES IN COMMON BOX - FOR MULTILEVEL CONTROL AT 44" CL AFF, UNO
OS	LIGHTING CONTROL OCCUPANCY SENSOR - CEILING MOUNTED
PC	LIGHTING CONTROL PHOTOCELL
DS	DAYLIGHT SENSOR
	INTERIOR LIGHT FIXTURES AS SPECIFIED ON THE LIGHT FIXTURE SCHEDULE. REFER ALSO TO LIGHTING CIRCUITING GUIDE.
NL	LIGHT FIXTURE, HALF SHADING INDICATES EMERGENCY BACKUP. "NL" INDICATES 24/7 OPERATION (UNSWITCHED).
	EXTERIOR LIGHT FIXTURES AS SPECIFIED ON THE LIGHT FIXTURE SCHEDULE. REFER ALSO TO LIGHTING CIRCUITING GUIDE.
	EMERGENCY LIGHTING FIXTURE, WITH BATTERY. REFER TO LIGHT FIXTURE SCHEDULE
	EXIT SIGN. WHERE USED, ARROW INDICATES CHEVRON DIRECTION.
	CEILING FAN
	LIGHTING FIXTURE AS SCHEDULED; NORMAL POWER BRANCH
	LIGHTING FIXTURE AS SCHEDULED; LIFE SAFETY EMERGENCY POWER BRANCH

TECHNOLOGY SYMBOL LEGEND

UNLESS NOTED OTHERWISE ON DRAWINGS, FOR EACH DEVICE BELOW, PROVIDE 2-GANG JUNCTION BOX WITH 1-GANG MUDRING AND 1" CONDUIT WITH PULL CORD TO ABOVE NEAREST ACCESSIBLE CEILING IN CORRIDOR. PROVIDE NYLON BUSHING ON CONDUIT END.

SYMBOL	DESCRIPTION
	VOICE / DATA ROUGH-IN BOX, AT 18" AFF UNO.
	VOICE / DATA ROUGH-IN BOX, FLOOR-MOUNTED.
	TELEVISION OUTLET. SINGLE GANG BOX WITH SINGLE GANG PLASTER RING. PROVIDE WITH ADJACENT DUPLEX RECEPTACLE.
SC	SECURITY CAMERA. COORDINATE REQUIREMENTS WITH OWNER.
WAP	WIRELESS ACCESS POINT. CEILING MOUNTED UNLESS NOTED OTHERWISE ON PLAN. COORDINATE PROVISIONS AND REQUIREMENTS WITH OWNER.
P	PROJECTOR. CEILING MOUNTED UNO.
SP	SPEAKER. CEILING MOUNTED UNO.
REX	REQUEST TO EXIT DEVICE. CEILING MOUNTED UNO.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINSHED GRADE
ACH	ABOVE COUNTER HEIGHT
AL	ALUMINUM
BKR	BREAKER
CU	COPPER
CKT	CIRCUIT
DWG	DRAWING
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPS
FU	FUSE
FWE	FURNISHED WITH EQUIPMENT
GC	GENERAL CONTRACTOR
GFI/GFCI	GROUND FAULT INTERRUPTER DEVICE
HPS	HIGH PRESSURE SODIUM
IG	ISOLATED GROUND
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING(L)
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MLO	MAIN LUG ONLY
MOCP	MAXIMUM OVERCURRENT CIRCUIT PROTECTION
MSB	MAIN SWITCHBOARD
NL	NIGHT LIGHT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PH	PHASE
PNL	PANEL
RCPT	RECEPTACLE
REQD	REQUIRED
RTU	ROOFTOP UNIT
SP	SURGE PROTECTED DEVICE
SW	SWITCH
UGND	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WH	WATER HEATER
WP	WEATHER PROOF
XFMR	TRANSFORMER

LIGHTING CIRCUITING GUIDE

SYMBOL	DESCRIPTION
B / X-1	LIGHTING TYPE AND CIRCUIT DESIGNATION X: REFER TO PANEL SCHEDULE, PER DRAWING 1: CIRCUIT NUMBER B: LIGHT FIXTURE TYPE, REFER TO LIGHT FIXTURE SCHEDULE
(a)	SWITCHING SCHEME OR ZONE

POWER CIRCUITING GUIDE

SYMBOL	DESCRIPTION
X-1	POWER CIRCUITING DESIGNATION X: REFER TO PANEL SCHEDULE, PER DRAWING 1: CIRCUIT NUMBER
	DEVICE, JUNCTION BOX, FLOOR BOX, ETC
XXX	EQUIPMENT ABBREVIATION, REFER TO LEGEND AND ABBREVIATION SCHEDULE FOR ADDITIONAL INFORMATION

ELECTRICAL GENERAL NOTES:

A. CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL DRAWINGS AND ALL WORK OF ALL TRADES TO ENSURE A COMPLETE AND THOROUGH PROJECT. CONTRACTOR SHALL COOPERATE AND COORDINATE ALL PHASES OF WORK WITH OTHER DISCIPLINES AND GENERAL CONTRACTOR.

B. VISIT THE SITE AND THOROUGHLY FAMILIARIZE WITH EXISTING CONDITIONS, VERIFY LOCATIONS, CONDUIT ROUTINGS, COORDINATE WITH EXISTING EQUIPMENT, ETC. BEFORE SUBMITTING A BID. ANY DISCREPANCIES SHALL BE REPORTED BEFORE THE BID DATE.

C. FIELD DETERMINE THE EXACT EXISTING CONDITIONS AND EXTENT OF ELECTRICAL WORK REQUIRED TO COMPLETE THE PROJECT, INCLUDING ALL EQUIPMENT RATINGS AND FEEDER SIZES. EXISTING CONDITIONS INDICATED ON THESE DRAWINGS ARE TAKEN FROM EXISTING BUILDING DOCUMENTS AND/OR FIELD OBSERVATION. OTHER ELECTRICAL ITEMS MAY EXIST FOR WHICH THE ELECTRICAL CONTRACTOR IS RESPONSIBLE THAT MAY NOT BE SPECIFICALLY ADDRESSED IN THESE DRAWINGS.

D. VERIFY ALL DIMENSIONS AND CLEARANCES PRIOR TO INSTALLATION OF EQUIPMENT AND RACEWAYS.

E. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH RECOGNIZED STANDARDS OF WORKMANSHIP. ALL WORK SHALL BE INSTALLED IN A NEAT AND ORDERLY MANNER.

F. ALL ELECTRICAL CONSTRUCTION SHALL CONFORM TO THE NEC 2020, APPLICABLE NEMA, ANSI, AND IEEE PUBLICATIONS, U.L. STANDARDS, AND OSHA REQUIREMENTS. WORK SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL CODES HAVING JURISDICTION.

G. CONDUIT PENETRATIONS OF ROOF, WALLS, FLOORS, AND CEILINGS SHALL BE SEALED TO PRESERVE THE INTEGRITY OF WATERPROOFING, FIRE RATING, AND SOUNDPROOFING FOR WHICH THE ROOF, WALL, FLOOR, OR CEILING IS DESIGNED. MATERIALS AND METHODS USED SHALL CONFORM TO THAT SPECIFIED UNDER ARCHITECTURAL SECTIONS AND SHALL COMPLY WITH STATE AND LOCAL BUILDING AND FIRE CODES. COORDINATE WITH GENERAL CONTRACTOR TO ENSURE THAT SEALING/FIRESTOPPING IS DONE.

H. ALL WORK SHALL HAVE PROPER LABELING. ALL CIRCUITS SHALL BE LABELED AT PANELS AND ON RECEPTACLE DEVICE OUTLET PLATES. ALL PANELS AND DISCONNECTS SHALL BE PERMANENTLY MARKED WITH NAME OR EQUIPMENT SERVED. ALL PANELS SHALL BE PROVIDED WITH TYPEWRITTEN PANEL SCHEDULES.

I. ALL EQUIPMENT, FIXTURES, DEVICES, AND MATERIALS SHALL BE FREE OF CORROSION, DIRT, PAINT, SPLATTER OR DAMAGE OF ANY SORT AT FINAL ACCEPTANCE OF THE WORK. ELECTRICAL CONTRACTOR SHALL CLEAN, REPAIR OR REPLACE SAME AS INSTRUCTED BY OWNER BEFORE FINAL PAYMENT.

FIRE ALARM GENERAL NOTES:

FA. FIRE ALARM INSTALLATION SHALL COMPLY WITH NFPA 72, NFPA 101, NATIONAL ELECTRICAL CODE (NFPA 70) WITH SPECIFIC ATTENTION TO ARTICLE 760, STATE FIRE CODE, AND ALL OTHER APPLICABLE CODES, STANDARDS, AND ORDINANCES.

FB. ALL FIRE ALARM DEVICES AND EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING SYSTEM AND SHALL BE THE FACILITY STANDARD MODELS. FIRE ALARM WIRING AND PATHWAY SHALL BE PER FACILITY STANDARDS AND COMPLY WITH NFPA 72 AND NEC.

FC. ALL VISUAL NOTIFICATION DEVICES (STROBES) IN ONE VIEWING, NEW AND EXISTING, SHALL BE SYNCHRONIZED TO FLASH IN UNISON AS REQUIRED BY NFPA 72, ADA, ANSI 117.1, AND UL 1971.

FD. PROVIDE ALL REQUIRED TESTING OF THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE "INSPECTION, TESTING, AND MAINTENANCE" CHAPTER OF NFPA 72 (WITH SPECIFIC ATTENTION TO 14.4.2) AND MANUFACTURER'S WRITTEN INSTRUCTIONS. FIELD TESTS SHALL BE WITNESSED BY THE AUTHORITY HAVING JURISDICTION. CONDUCT VISUAL INSPECTION AND SYSTEM TESTING IN THE "TEST METHODS" TABLE IN THE "TESTING" SECTION OF NFPA 72. PREPARE A "FIRE ALARM SYSTEM RECORD OF COMPLETION" PER NFPA 72 AND PROVIDE TO OWNER AND AHJ PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. FIRE ALARM SYSTEM WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.

FE. FOR FIRE ALARM DEVICES THAT ARE REMOVED, PERFORM ANY PROGRAMMING CHANGES AT FIRE ALARM CONTROL PANEL TO NOTE DEVICE HAS BEEN REMOVED. RECESSED, EMPTY BACK BOX AND CONDUIT MAY BE ABANDONED IN WALL, UNLESS NOTED OTHERWISE.

FF. FOR FIRE ALARM DEVICES ADDED TO EXISTING SYSTEMS, CONNECT TO EXISTING CIRCUITS AND PROVIDE PROGRAMMING CHANGES AT FIRE ALARM CONTROL PANEL.

FG. COMPLY WITH SC FIRE PREVENTION CODE REQUIREMENTS FOR TAKING REQUIRED FIRE ALARM SYSTEM OUT OF SERVICE WHILE BUILDING IS OCCUPIED BY NOTIFYING THE AUTHORITY HAVING JURISDICTION AND EVACUATING THE BUILDING OR PROVIDING AN APPROVED FIRE WATCH UNTIL THE FIRE ALARM SYSTEM IS RETURNED TO SERVICE.

FH. WHERE RELOCATING OR ADDING FIRE ALARM SYSTEMS DEVICES, DO NOT SPLICE OR "T" TAP FIRE ALARM WIRING. MAKE CONNECTIONS ONLY AT DEVICES OR IN TERMINAL CABINETS.

FI. AFTER COMPLETING FIRE ALARM WORK, TEST 100% OF NEW DEVICES AND DEVICES ON SAME LOOP PLUS 10% OF EXISTING DEVICES FIRE ALARM SYSTEM TO VERIFY PROPER OPERATION.

FJ. VERIFY EXISTING FIRE ALARM SYSTEM HAS BATTERY AND VOLTAGE CAPACITY TO HANDLE ALL DEVICES PLUS REQUIRED CAPACITY FOR POTENTIAL FUTURE DEVICES.

DEMOLITION/RENOVATION NOTES:

DA. REFER TO ARCHITECTURAL AND MECHANICAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR COORDINATION AND ADDITIONAL REQUIRED WORK.

DB. IN SPACES THAT ARE BEING RENOVATED WHERE THE CEILING AND/OR WALLS ARE BEING DEMOLISHED, THE LIGHTING FIXTURES, DEVICES, ETC. SHALL BE REMOVED UNLESS NOTED OTHERWISE. ABANDONED DEVICES SHALL BE REMOVED WITH THE OUTLET BOX.

DC. FOR ITEMS TO BE DEMOLISHED, REMOVE WIRING/CONDUIT BACK TO THE LAST ACTIVE DEVICE OR SOURCE PANELBOARD. MAINTAIN CIRCUIT CONTINUITY TO REMAINING ITEMS ON CIRCUITS REQUIRED TO REMAIN. RELOCATE ANY CIRCUITS TO REMAIN TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.

DD. PATCH AND REPAIR ALL SURFACES CONTAINING DEMOLITION. COORDINATE WITH ARCHITECTURAL DRAWINGS. MATERIALS AND FINISHES SHALL MATCH ADJACENT SURFACES.

DE. ANY EXISTING ELECTRICAL DEVICES LEFT WITHOUT POWER DUE TO THIS RENOVATION SHALL BE RECONNECTED TO SAME SIZE CIRCUIT(S) AS PRESENTLY SERVED. NO ELECTRICAL DEVICES SHALL BE LEFT WITHOUT POWER.

DF. IF OTHER AREAS OF THE FACILITY ARE SERVED THROUGH THE REMODELED AREA, THEIR CIRCUITS SHALL BE REWORKED AT A TIME COORDINATED WITH THE OWNER TO MINIMIZE ANY AREA BEING WITHOUT POWER. ALL AREAS OF THE FACILITY SHALL MAINTAIN THEIR EXISTING ELECTRICAL SERVICES, REWORKED IF NECESSARY.

DG. EXISTING CONDUIT IN THE RENOVATED AREA SHALL BE REUSED IF IT CAN BE LEFT IN PLACE OR IS IN GOOD CONDITION WHEN REMOVED. EXISTING CONDUIT NOT INTENDED TO BE REUSED SHALL BE REMOVED IN CEILING SPACES AND WALLS. EXISTING CONDUIT BELOW FLOOR SLABS MAY BE ABANDONED IN PLACE. REMOVE ALL WIRING, CUT OFF ABANDONED CONDUIT BELOW FLOOR, AND GROUT FLUSH.

DH. CONDUCTORS IN RENOVATED AREA SHALL BE NEW. DO NOT REUSE EXISTING WIRING UNLESS NOTED OTHERWISE. PROPERLY DISPOSE OF ALL ITEMS BEING REMOVED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE THE RIGHT TO RETAIN ANY ELECTRICAL ITEMS REMOVED FROM THE REMODELED AREA AND NOT INDICATED TO BE REUSED. IF THE OWNER DOES NOT WANT THE ITEMS, CONTRACTOR SHALL REMOVE ITEMS FROM THE SITE. COORDINATE ITEMS TO BE RETAINED WITH THE OWNER.

DI. WHERE CIRCUIT BREAKERS ARE ADDED TO EXISTING PANELS, THEY SHALL MATCH EXISTING BREAKERS TYPE, MANUFACTURER, AND AIC RATING. UPDATE DIRECTORIES IN EXISTING PANELS TO REFLECT CHANGES BY THIS RENOVATION. DIRECTORIES SHALL BE TYPEWRITTEN.

TYPICAL NAMEPLATE EXAMPLES FOR EACH EQUIPMENT TYPE

Panelboard

M1

208Y/120V 3Ø 4W
Fed From Panel MDP

Mech Equipment Disconnects & VFD's

HP-1

208V 3Ø
M1-____

Mech Equipment Disconnects & VRF's

AC-1A

208V 1Ø
M1-____

EQUIPMENT LABELING NOTES:

A. PROVIDE ENGRAVED LAMINATED NAMEPLATE FOR EACH PIECE OF ELECTRICAL EQUIPMENT. LABEL TAPE IS NOT ACCEPTABLE.

B. COORDINATE SUPPLY SOURCE (PANEL/CIRCUIT WHERE FED FROM) WITH ACTUAL CIRCUITS USED.

C. ON EACH UNIT OF EQUIPMENT, INSTALL UNIQUE DESIGNATION LABEL THAT IS CONSISTENT WITH WIRING DIAGRAMS AND SCHEDULES.

D. PROVIDE LABEL AS SHOWN FOR EACH EQUIPMENT TYPE. INFORMATION SHALL INCLUDE NAME OF EQUIPMENT, VOLTAGE/PHASE, SUPPLY SOURCE, AND SYSTEM BRANCH.

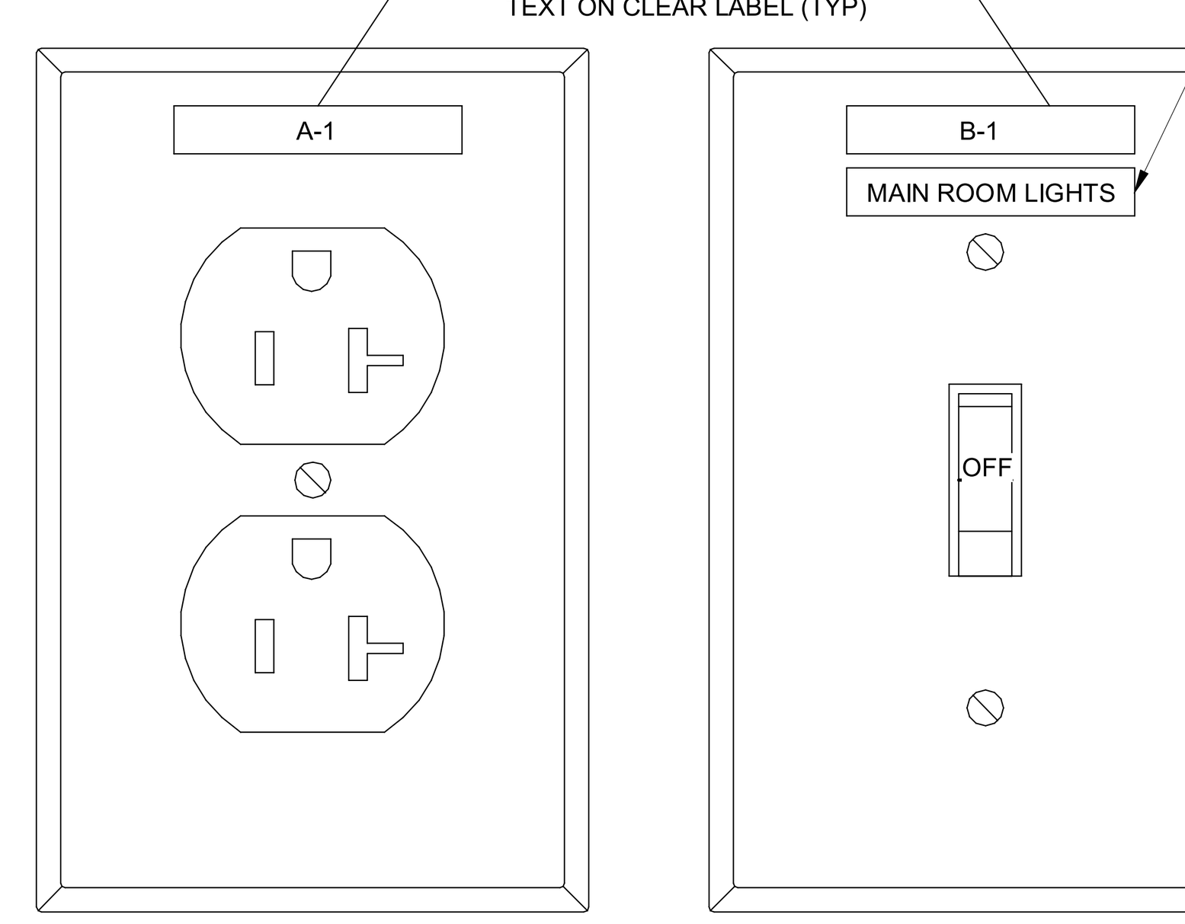
E. COORDINATE EXACT NAME/DESIGNATION OF MECHANICAL/PLUMBING EQUIPMENT WITH MECHANICAL/PLUMBING CONTRACTOR AND OWNER PRIOR TO CONSTRUCTING NAMEPLATES.

F. LABEL EQUIPMENT WITH SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL. UNLESS OTHERWISE INDICATED, EQUIPMENT NAME SHALL BE 1-INCH-HIGH LETTERS, AND ADDITIONAL TEXT SHALL BE 1/2-INCH-HIGH LETTERS. LABEL SIZE SHALL ACCOMMODATE TEXT REQUIRED FOR EACH PARTICULAR PIECE OF EQUIPMENT.

G. FOR MECHANICAL EQUIPMENT SUCH AS AIR HANDLERS, CHILLERS, ETC. THAT MAY BE FURNISHED WITH AN INTEGRAL DISCONNECT, PROVIDE LABEL ON UNIT AT THE INTEGRAL DISCONNECT LOCATION OR INPUT POWER CONNECTION LOCATION.

H. LABEL THE FOLLOWING ITEMS:
- PANELBOARDS
- ENCLOSURES AND ELECTRICAL CABINETS
- DISCONNECT SWITCHES
- ACCESS DOORS AND PANELS FOR CONCEALED ELECTRICAL ITEMS, LABEL WITH ITEMS CONCEALED
- VARIABLE SPEED CONTROLLERS

2 / E001 EQUIPMENT IDENTIFICATION NAMEPLATE DETAIL
NOT TO SCALE



TYPICAL RECEPTACLE FACEPLATE

TYPICAL LIGHTING CONTROL (SWITCH, DIMMER, OCCUPANCY SENSOR) FACEPLATE

NOTES

A. PROVIDE LABEL FOR ALL WIRING DEVICES, INCLUDING BUT NOT LIMITED TO:
- RECEPTACLES
- LIGHT SWITCHES
- WALL DIMMERS
- WALL OCCUPANCY SENSORS
- FAN SPEED CONTROLS
- EMERGENCY STOP BUTTONS (SHUNT-TRIP CIRCUIT)
- MANUAL MOTOR STARTERS
- REMOTE CONTROL SWITCHES
- CONTROL DEVICES

B. LABEL MATERIAL:
- STANDARD WALL PLATES: EMBOSSED ADHESIVE TAPE, WITH ¼-INCH BLACK-FILLED LETTERS ON CLEAR BACKGROUND.

C. PROVIDE DURABLE WIRE MARKERS OR TAGS INSIDE DEVICE BOX OR OUTLET BOX.

D. FOR MULTIPLE LIGHTING CONTROLS IN SAME ROOM, ALSO PROVIDE LABEL INDICATING LIGHTS SERVED BY EACH CONTROL.

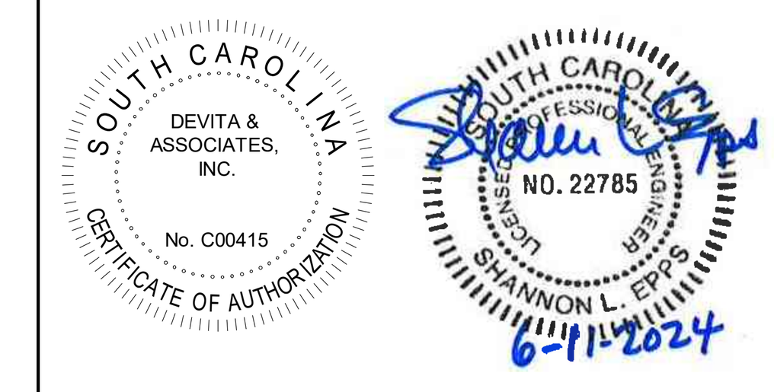
E. FOR MANUAL MOTOR STARTERS AND SWITCHES USED TO CONTROL MOTORS OR EQUIPMENT OTHER THAN LIGHTS, ALSO PROVIDE LABEL INDICATING EQUIPMENT SERVED BY THE CONTROL.

F. WHEN LABELING OUTDOOR DEVICES, LABEL SHALL BE INSTALLED ON THE FACEPLATE INSIDE THE WEATHERPROOF DEVICE COVER, NOT ON THE OUTSIDE OF THE COVER.

1 / E001 WIRING DEVICE LABELING DETAIL
NOT TO SCALE

ELECTRICAL SHEET LIST

SHEET NUMBER	SHEET NAME
E001	ELECTRICAL LEGEND AND NOTES
E002	ELECTRICAL DIAGRAMS
E100	ELECTRICAL DEMOLITION PLAN - BASEMENT
E101	ELECTRICAL DEMOLITION PLAN - 1ST FLOOR
E102	ELECTRICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC
E200	ELECTRICAL POWER PLAN - BASEMENT
E201	ELECTRICAL POWER PLAN - 1ST FLOOR
E202	ELECTRICAL POWER PLAN - 2ND FLOOR & ATTIC
E300	ELECTRICAL CEILING PLAN - BASEMENT
E301	ELECTRICAL CEILING PLAN - 1ST FLOOR
E302	ELECTRICAL CEILING PLAN - 2ND FLOOR & ATTIC
E900	ELECTRICAL SCHEDULES
E901	ELECTRICAL PANEL SCHEDULES



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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

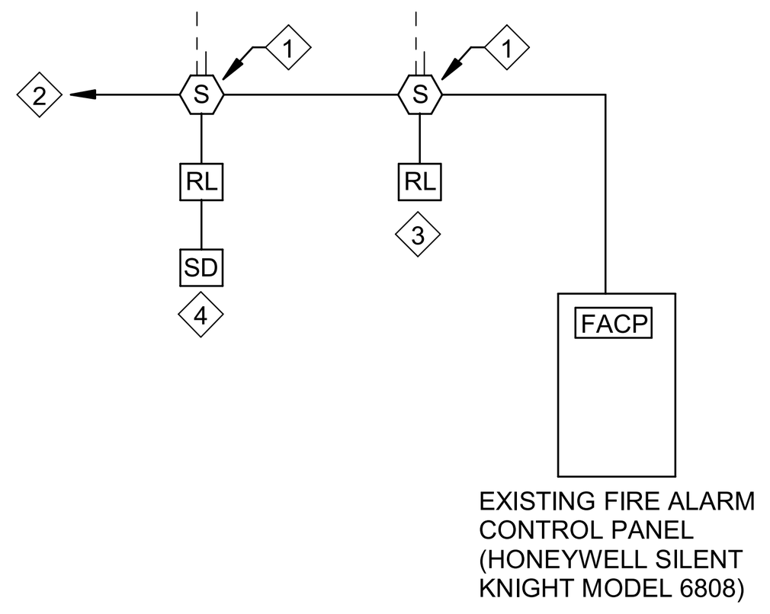
DRAWING NAME

ELECTRICAL LEGEND AND NOTES

DRAWING NO.

E001

Drawn By: RHV Checked By: SLE



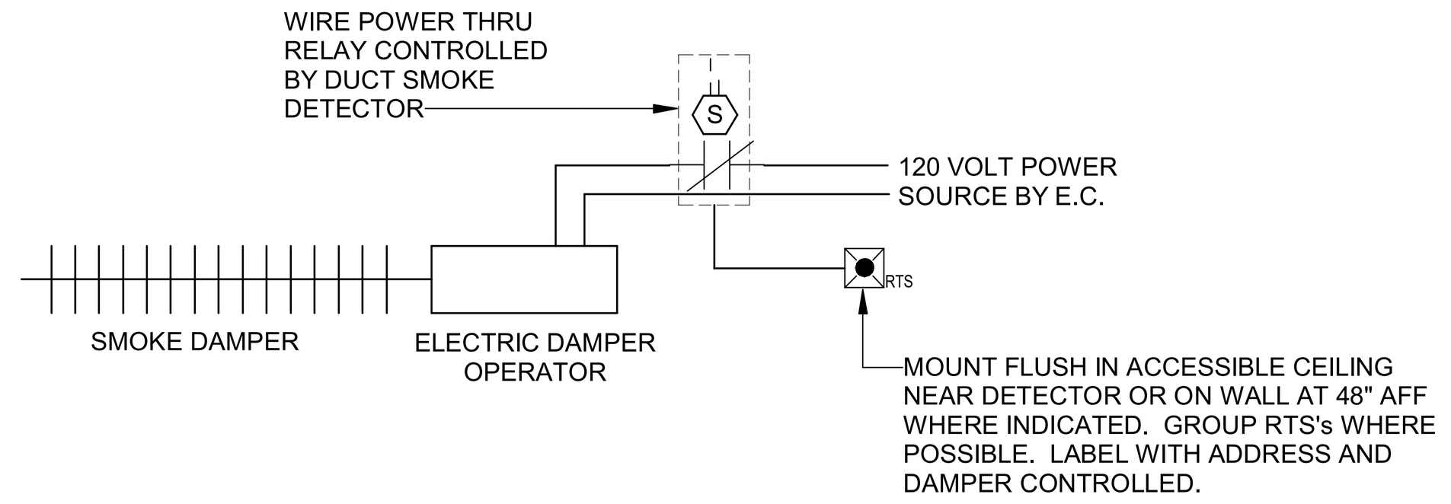
FIRE ALARM RISER DIAGRAM NOTES:

1. DUCT SMOKE DETECTOR. PROVIDE REMOTE TEST STATION FOR EACH.
2. COMMUNICATIONS WIRING LOOP. MATCH EXISTING PATHWAY CLASS.
3. HVAC SHUT DOWN RELAY.
4. SMOKE DAMPER CONNECTION.

FIRE ALARM SYSTEM NOTES:

1. THIS RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT INTENDED FOR INSTALLATION. SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS. EXACT SYSTEM REQUIREMENTS SHALL BE COORDINATED WITH THE SYSTEM SUPPLIER.
2. THIS DIAGRAM IS NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES, AND NOT ALL DEVICE TYPES SHOWN IN THIS DIAGRAM MAY BE USED ON THIS PARTICULAR PROJECT. REFER TO PLAN FOR EXACT DEVICE QUANTITY AND TYPES.
3. REMOVE EXISTING FIRE ALARM DEVICES PER PLANS. PROVIDE NEW FIRE ALARM DEVICES AS REQUIRED TO MEET NEW RENOVATED AREA PLAN. ALL FIRE ALARM DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM AND MATCH EXISTING. PROVIDE ALL WIRING, RACEWAY, ACCESSORIES, ETC. REQUIRED TO FULLY INTEGRATE ALL DEVICES INTO THE EXISTING SYSTEM. FIELD VERIFY EXACT REQUIREMENTS.
4. PROVIDE SHOP DRAWINGS AND PRODUCT DATA SUBMITTALS FOR FIRE ALARM WORK REQUIRED IN THESE DRAWINGS IN ACCORDANCE WITH NFPA 72-2016 SECTION 7.4.

1 E002 FIRE ALARM RISER DIAGRAM
NOT TO SCALE



2 E002 SMOKE DAMPER CONTROL DETAIL
NOT TO SCALE

PARTIAL FIRE ALARM SYSTEM MATRIX

Columns A–S: BUILDING SYSTEM OUTPUTS; columns T–X: CENTRAL COMM.

	ACTION	A: ACTUATE COMMON ALARM SIGNAL INDICATOR	B: ACTUATE AUDIBLE ALARM SIGNAL	C: ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	D: ACTUATE AUDIBLE SUPERVISORY SIGNAL	E: ACTUATE COMMON TROUBLE SIGNAL INDICATOR	F: ACTUATE AUDIBLE TROUBLE SIGNAL	G: ACTUATE GENERAL EVACUATION SIGNAL	H: DISPLAY CHANGE OF STATUS	I: ACTUATE EXTERNAL HORN / STROBE	J: TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	K: TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	L: TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	M: RETURN ELEVATOR TO PRIMARY FLOOR	N: RETURN ELEVATOR TO SECONDARY FLOOR	O: ACTIVATE FIREMAN'S HAT LIGHT IN ELEVATOR CAR PER NFPA 72	P: SHUNT TRIP AFTER ELEVATOR REACHES APPROPRIATE FLOOR PRIOR TO FIRE SPRINKLER OPERATION	Q: SHUT DOWN RESPECTIVE AIR HANDLER	R: CLOSE RESPECTIVE SMOKE DAMPER	S: RELEASE MAGNETIC DOOR HOLDERS	T: SHOW CHANGE OF STATUS ON ANNUNCIATOR	U: SHOW CHANGE OF STATUS ON CENTRAL PANEL	V: TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	W: TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	X: TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	
1	DUCT SMOKE DETECTORS			X	X				X			X						X			X	X		X		1
2	SMOKE DAMPER SMOKE DETECTOR			X	X				X			X						X	X		X	X		X		2
3	OPEN CIRCUIT					X	X		X				X								X	X			X	3
4	GROUND FAULT					X	X		X				X								X	X			X	4

SEQUENCE OF OPERATION:

A. SUPERVISORY SIGNAL: WHEN A SUPERVISORY CONDITION IS DETECTED BY ONE OF THE SYSTEM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:
   1. SYSTEM SUPERVISORY INDICATOR SHALL FLASH.
   2. A LOCAL SOUNDING DEVICE IN THE PANEL SHALL SOUND.
   3. CONTROL PANEL SHALL INDICATE ALL PERTINENT INFORMATION ASSOCIATED WITH THE SUPERVISORY CONDITION AND ITS LOCATION.
   4. UNACKNOWLEDGED ALARM MESSAGES SHALL HAVE PRIORITY OVER SUPERVISORY MESSAGES, AND IF SUCH AN ALARM MUST ALSO BE DISPLAYED, THE SUPERVISORY MESSAGE WILL NOT BE DISPLAYED UNTIL THE OPERATOR HAS ACKNOWLEDGED ALL ALARM MESSAGES.
   5. UNACKNOWLEDGED SUPERVISORY MESSAGES SHALL HAVE PRIORITY OVER TROUBLE MESSAGES, AND IF SUCH AN ALARM MUST ALSO BE DISPLAYED, THE SUPERVISORY MESSAGE WILL NOT BE DISPLAYED UNTIL THE OPERATOR HAS ACKNOWLEDGED ALL ALARM MESSAGES.

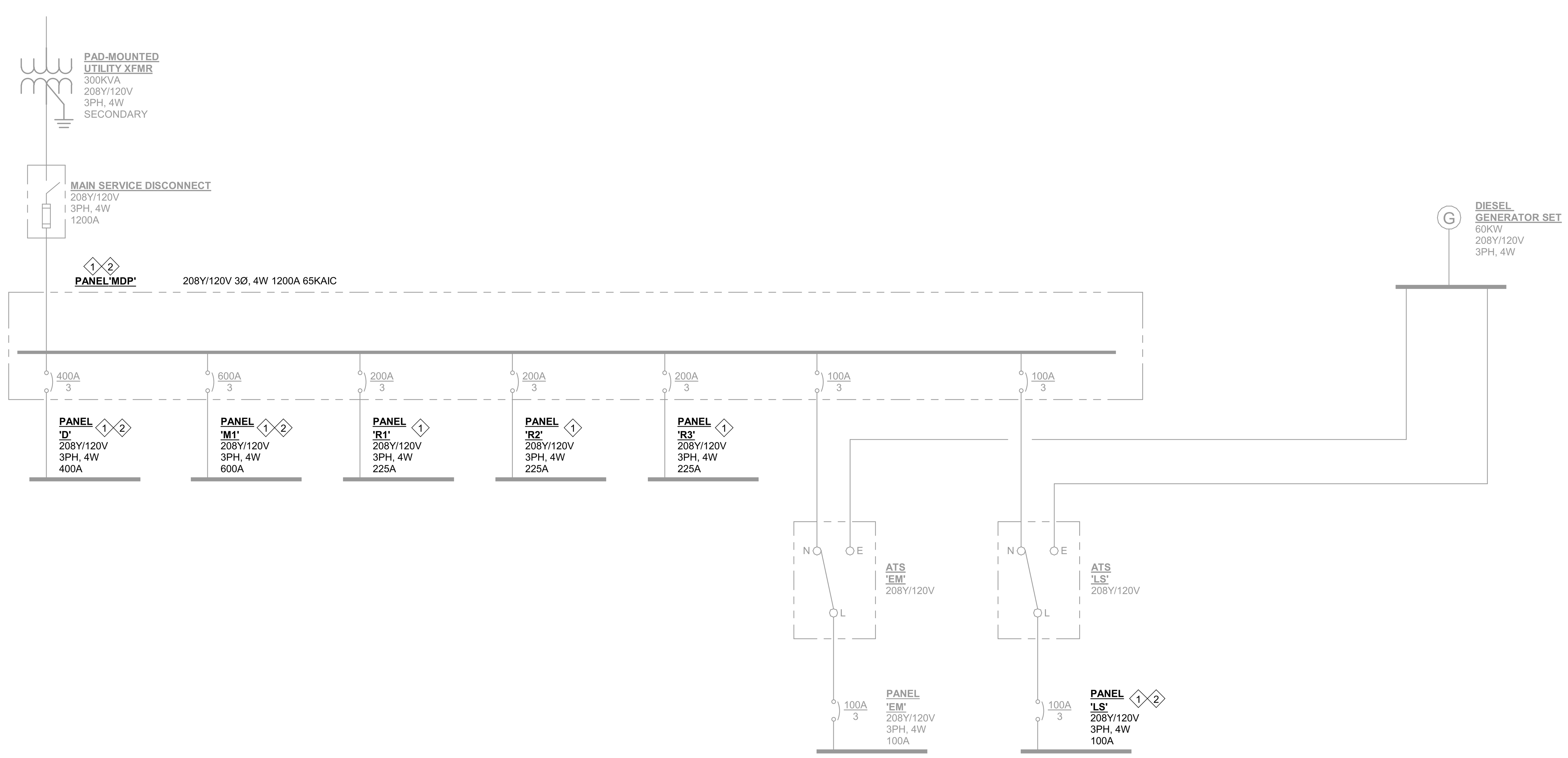
B. TROUBLE DETECTION: WHEN A TROUBLE CONDITION IS DETECTED BY ONE OF THE SYSTEM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:
   1. SYSTEM TROUBLE INDICATOR SHALL FLASH.
   2. A LOCAL SOUNDING DEVICE IN THE PANEL SHALL SOUND.
   3. CONTROL PANEL SHALL INDICATE ALL PERTINENT INFORMATION ASSOCIATED WITH THE TROUBLE CONDITION AND ITS LOCATION.
   4. UNACKNOWLEDGED ALARM AND SUPERVISORY MESSAGES SHALL HAVE PRIORITY OVER TROUBLE MESSAGES, AND IF SUCH AN ALARM AND SUPERVISORY MUST ALSO BE DISPLAYED, THE TROUBLE MESSAGE WILL NOT BE DISPLAYED UNTIL THE OPERATOR HAS ACKNOWLEDGED ALL ALARM AND SUPERVISORY MESSAGES.

C. REFER TO MECHANICAL DRAWINGS FOR SMOKE CONTROL SEQUENCES.

SYSTEM DEVICES:

A. PROVIDE ADDRESSABLE DEVICES ONLY IN CONDITIONED SPACES. NO ADDRESSABLE DEVICES ARE ALLOWED IN UNCONDITIONED SPACES.

B. DUCT-MOUNTED SMOKE DETECTORS ARE FURNISHED, WIRED, AND PROGRAMMED BY ELECTRICAL/FIRE ALARM CONTRACTOR AND INSTALLED IN DUCTWORK BY MECHANICAL CONTRACTOR. PROVIDE CONNECTION TO DUCT-MOUNTED SMOKE DETECTORS AFTER DEVICES ARE SECURED IN FINAL LOCATION.



3 E002 ELECTRICAL SINGLE-LINE DIAGRAM
NOT TO SCALE

GENERAL NOTES:

A. ALL EQUIPMENT IS EXISTING TO REMAIN UNO.

B. PROVIDE NEW NAMEPLATE FOR ALL EXISTING PANELBOARDS. REFER TO NAMEPLATE DETAIL ON SHEET E001.

KEY NOTES:

1. CIRCUITS IN THIS EXISTING PANEL SHALL BE MODIFIED AS DESCRIBED IN THESE DRAWINGS. REFER TO PLANS AND PANEL SCHEDULES.
2. PROVIDE UPDATED TYPEWRITTEN PANEL DIRECTORY IN THIS PANEL TO REFLECT CONDITIONS UPON COMPLETION OF THE PROJECT. TRACE OUT AND VERIFY ALL AFFECTED EXISTING CIRCUITS. FOR REMOVED ITEMS OR CIRCUITS THAT ARE NO LONGER USED, LABEL CIRCUIT AS 'SPARE' AND TURN BREAKER OFF. DIRECTORY SHALL INDICATE PANEL NAME/DESIGNATION AS WELL AS PROPER IDENTIFICATION OF ALL EXISTING CIRCUITS.

SOUTH CAROLINA DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA NO. 22785 SHANNON L. EPPS 6-11-2024
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DEVITA Project No. 23501-01
CONSULTANT

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YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME
ELECTRICAL DIAGRAMS

DRAWING NO.
E002

Drawn By: RHV Checked By: SLE

GENERAL DEMOLITION NOTES:

A. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. SECURE ALL CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO ACCOMMODATE THE REMOVAL OF THE CEILING AND THE HVAC RENOVATION.

B. FOR ALL EXISTING EQUIPMENT, DEVICES, ETC. INDICATED TO REMAIN, FIELD VERIFY THE EXISTING CIRCUIT, AND PROVIDE NEW LABEL ON DEVICE PLATE WITH CORRECT PANEL/CIRCUIT. REFER TO LABELING DETAIL ON SHEET E001.

C. ITEMS TO BE REMOVED ARE INDICATED BY DASHED LINETYPE AND/OR HATCHING.

D. FOR DEVICES, FIXTURES, ETC. TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD, UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING TO FEED THROUGH TO THESE REMAINING ITEMS. RE-CIRCUIT ANY REMAINING DEVICES AS REQUIRED TO AVAILABLE PANELBOARD SPACE. RELOCATE ANY CIRCUITS THAT REMAIN TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.

E. EXISTING CIRCUITS INDICATED ARE FOR REFERENCE ONLY. FIELD VERIFY ALL AFFECTED CIRCUITS.

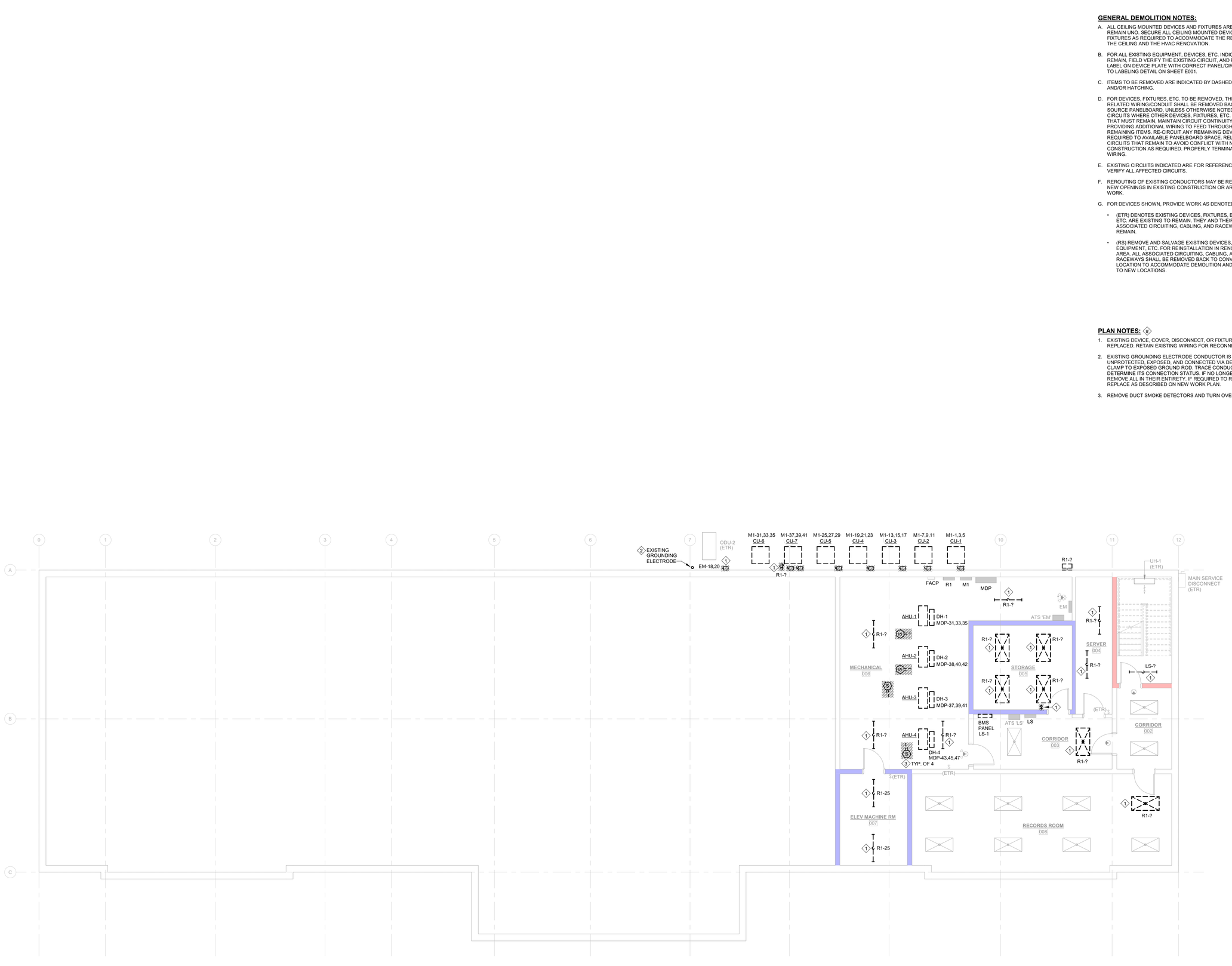
F. REROUTING OF EXISTING CONDUCTORS MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR AROUND NEW WORK.

G. FOR DEVICES SHOWN, PROVIDE WORK AS DENOTED BELOW:

- (ETR) DENOTES EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) REMOVE AND SALVAGE EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. FOR REINSTALLATION IN RENOVATED AREA. ALL ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL BE REMOVED BACK TO CONVENIENT LOCATION TO ACCOMMODATE DEMOLITION AND EXTENSION TO NEW LOCATIONS.

PLAN NOTES:

1. EXISTING DEVICE, COVER, DISCONNECT, OR FIXTURE TO BE REPLACED. RETAIN EXISTING WIRING FOR RECONNECTION.
2. EXISTING GROUNDING ELECTRODE CONDUCTOR IS UNPROTECTED, EXPOSED, AND CONNECTED VIA DETERIORATED CLAMP TO EXPOSED GROUND ROD. TRACE CONDUCTOR TO DETERMINE ITS CONNECTION STATUS. IF NO LONGER REQUIRED, REMOVE ALL IN THEIR ENTIRETY. IF REQUIRED TO REMAIN, REPLACE AS DESCRIBED ON NEW WORK PLAN.
3. REMOVE DUCT SMOKE DETECTORS AND TURN OVER TO OWNER.



1 E100 ELECTRICAL DEMOLITION PLAN - BASEMENT
3/16" = 1'-0"
0 8' 16' 24'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION — SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER NO. 22785 SHANNON L. ELLIS 6-11-2024

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NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL DEMOLITION PLAN - BASEMENT

DRAWING NO.

E100

Drawn By: RHV Checked By: SLE

GENERAL DEMOLITION NOTES:

A. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. SECURE ALL CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO ACCOMMODATE THE REMOVAL OF THE CEILING AND THE HVAC RENOVATION.

B. FOR ALL EXISTING FIXTURES, DEVICES, ETC. INDICATED TO REMAIN, FIELD VERIFY THE EXISTING CIRCUIT, AND PROVIDE NEW LABEL ON DEVICE PLATE WITH CORRECT PANEL/CIRCUIT. REFER TO LABELING DETAIL ON SHEET E001.

C. ITEMS TO BE REMOVED ARE INDICATED BY DASHED LINETYPE AND/OR HATCHING.

D. FOR DEVICES, FIXTURES, ETC. TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD, UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING TO FEED THROUGH TO THESE REMAINING ITEMS. RE-CIRCUIT ANY REMAINING DEVICES AS REQUIRED TO AVAILABLE PANELBOARD SPACE. RELOCATE ANY CIRCUITS THAT REMAIN TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.

E. EXISTING CIRCUITS INDICATED ARE FOR REFERENCE ONLY. FIELD VERIFY ALL AFFECTED CIRCUITS.

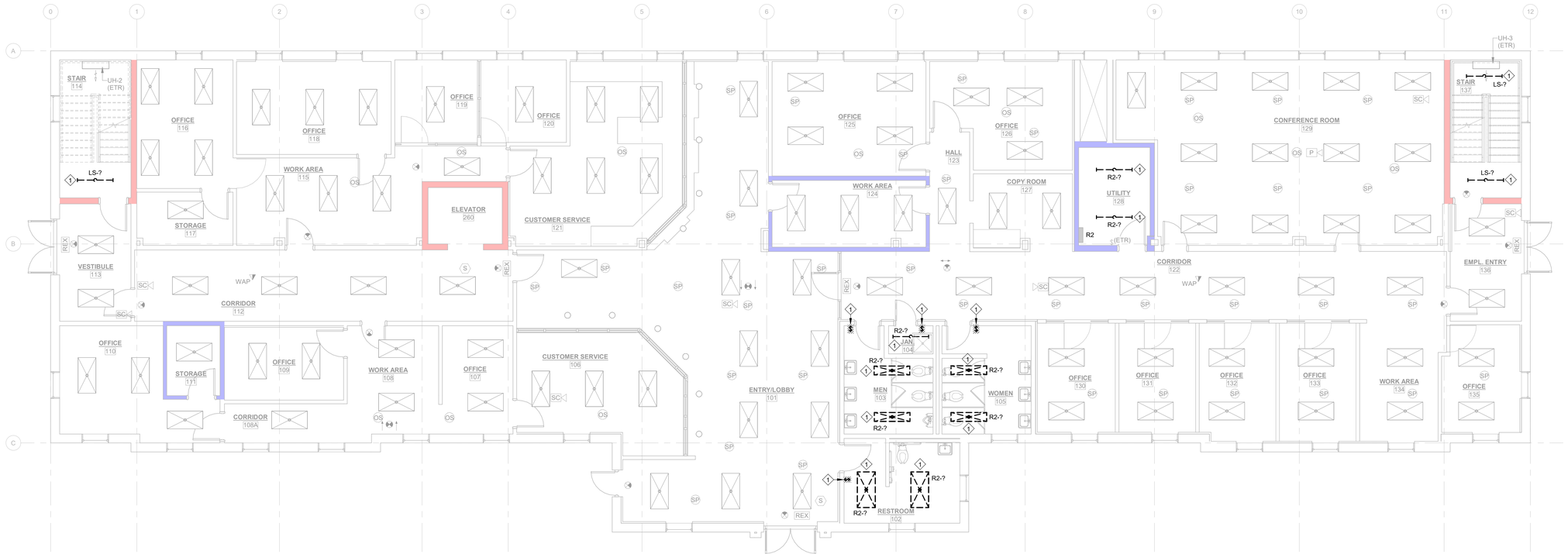
F. REROUTING OF EXISTING CONDUCTORS MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR AROUND NEW WORK.

G. FOR DEVICES SHOWN, PROVIDE WORK AS DENOTED BELOW:

- (ETR) DENOTES EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) REMOVE AND SALVAGE EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. FOR REINSTALLATION IN RENOVATED AREA. ALL ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL BE REMOVED BACK TO CONVENIENT LOCATION TO ACCOMMODATE DEMOLITION AND EXTENSION TO NEW LOCATIONS.

PLAN NOTES:

1. EXISTING DEVICE, COVER, OR FIXTURE TO BE REPLACED. RETAIN EXISTING WIRING FOR RECONNECTION.



1 / E101 ELECTRICAL DEMOLITION PLAN - 1ST FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER NO. 22785 SHANNON L. ELLIS 6-11-2024

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NO.	DATE	DESCRIPTION

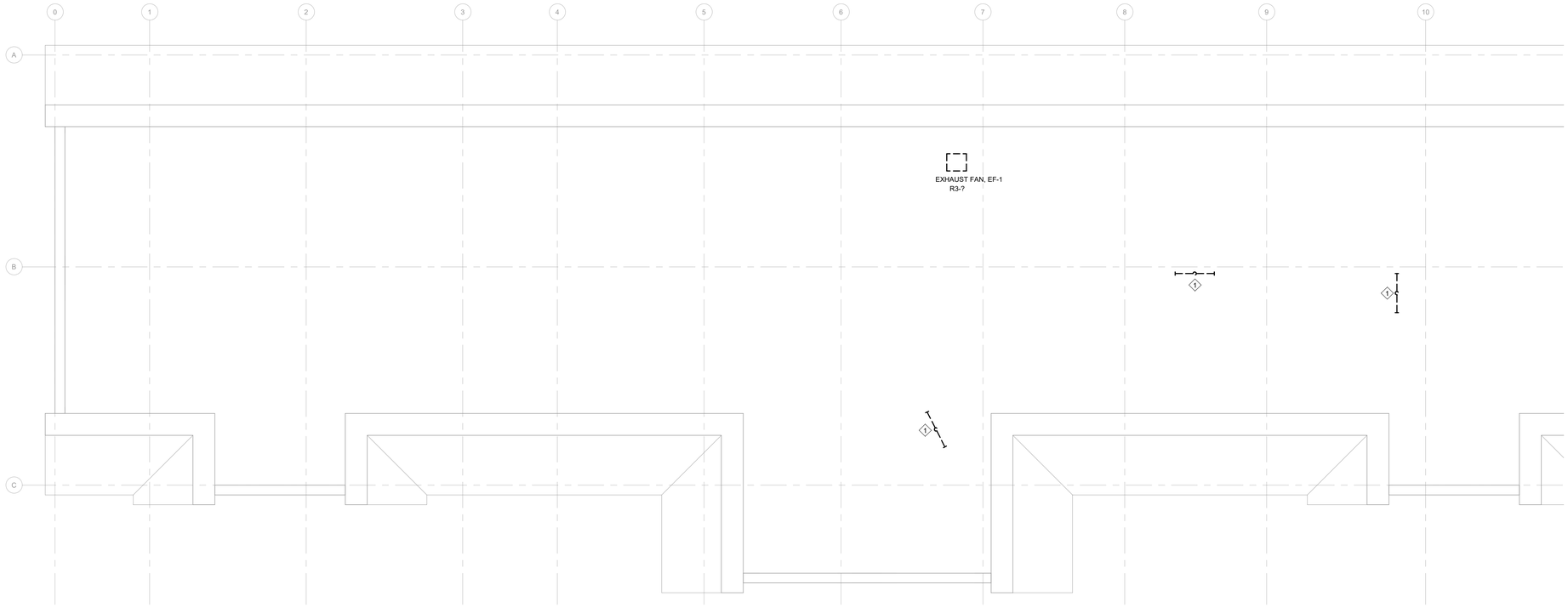
DRAWING NAME

ELECTRICAL DEMOLITION PLAN - 1ST FLOOR

DRAWING NO.

E101

Drawn By: RHV Checked By: SLE



2 E102 ELECTRICAL DEMOLITION PLAN - ATTIC
3/16" = 1'-0"
0 4' 8' 12' 16'

GENERAL DEMOLITION NOTES:

A. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. SECURE ALL CEILING MOUNTED DEVICES AND FIXTURES AS REQUIRED TO ACCOMMODATE THE REMOVAL OF THE CEILING AND THE HVAC RENOVATION.

B. FOR ALL EXISTING FIXTURES, DEVICES, ETC. INDICATED TO REMAIN, FIELD VERIFY THE EXISTING CIRCUIT, AND PROVIDE NEW LABEL ON DEVICE PLATE WITH CORRECT PANEL/CIRCUIT. REFER TO LABELING DETAIL ON SHEET E001.

C. ITEMS TO BE REMOVED ARE INDICATED BY DASHED LINETYPE AND/OR HATCHING.

D. FOR DEVICES, FIXTURES, ETC. TO BE REMOVED, THEY AND THEIR RELATED WIRING/CONDUIT SHALL BE REMOVED BACK TO THE SOURCE PANELBOARD, UNLESS OTHERWISE NOTED. ON CIRCUITS WHERE OTHER DEVICES, FIXTURES, ETC. ARE FOUND THAT MUST REMAIN, MAINTAIN CIRCUIT CONTINUITY BY PROVIDING ADDITIONAL WIRING TO FEED THROUGH TO THESE REMAINING ITEMS. RE-CIRCUIT ANY REMAINING DEVICES AS REQUIRED TO AVAILABLE PANELBOARD SPACE. RELOCATE ANY CIRCUITS THAT REMAIN TO AVOID CONFLICT WITH NEW CONSTRUCTION AS REQUIRED. PROPERLY TERMINATE ALL WIRING.

E. EXISTING CIRCUITS INDICATED ARE FOR REFERENCE ONLY. FIELD VERIFY ALL AFFECTED CIRCUITS.

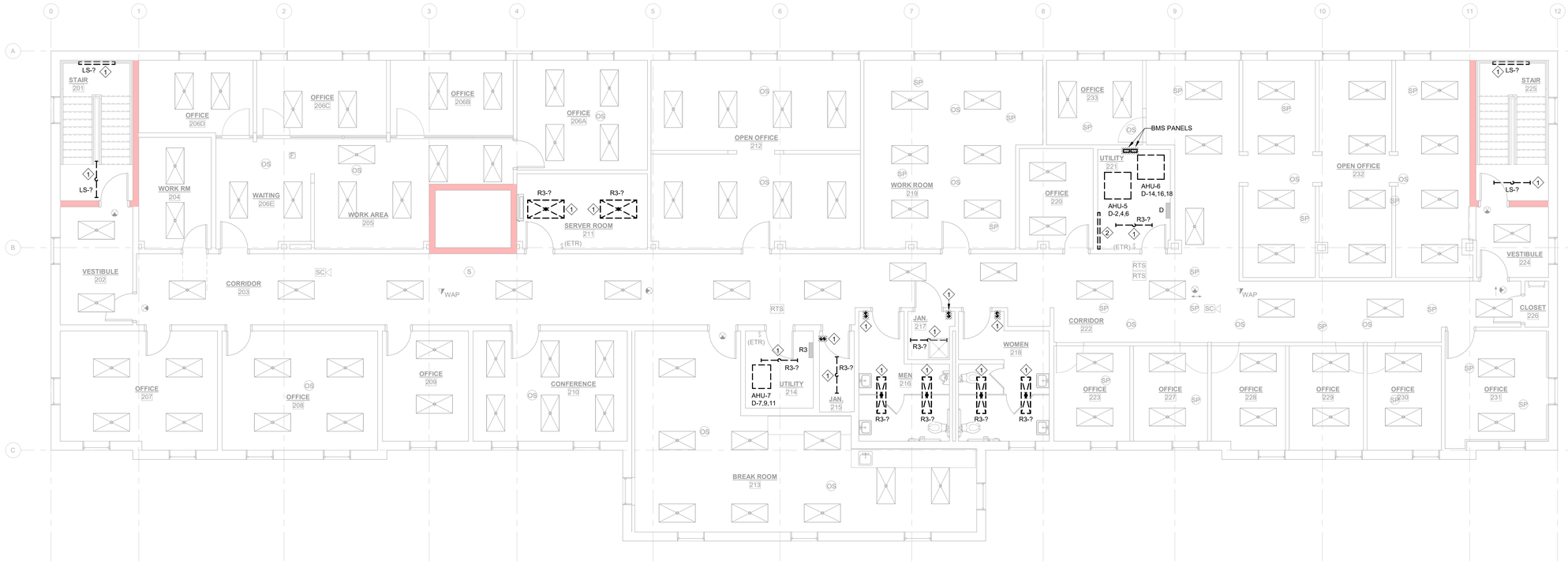
F. REROUTING OF EXISTING CONDUCTORS MAY BE REQUIRED AT NEW OPENINGS IN EXISTING CONSTRUCTION OR AROUND NEW WORK.

G. FOR DEVICES SHOWN, PROVIDE WORK AS DENOTED BELOW:

- (ETR) DENOTES EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) REMOVE AND SALVAGE EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. FOR REINSTALLATION IN RENOVATED AREA. ALL ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL BE REMOVED BACK TO CONVENIENT LOCATION TO ACCOMMODATE DEMOLITION AND EXTENSION TO NEW LOCATIONS.

PLAN NOTES: ①

1. EXISTING DEVICE, COVER, OR FIXTURE TO BE REPLACED. RETAIN EXISTING WIRING FOR RECONNECTION.
2. REMOVE ABANDONED CONDUIT AND HVAC CONTROLS ON EXISTING BACKBOARD.



1 E102 ELECTRICAL DEMOLITION PLAN - 2ND FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED ENGINEER NO. 22785 SHANNON L. EPPS 6/11/2024

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NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL DEMOLITION PLAN - 2ND FLOOR & ATTIC

DRAWING NO.

E102

Drawn By: RHV Checked By: SLE

GENERAL NOTES:

A. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET E900 FOR MECHANICAL EQUIPMENT DISCONNECT REQUIREMENTS.

B. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E001.

C. COORDINATE EXACT CIRCUIT REQUIREMENTS WITH ACTUAL EQUIPMENT NAMEPLATE PRIOR TO WORK.

D. PROVIDE WORKING CLEARANCE FOR ALL ELECTRICAL DISCONNECTS PER NEC.

E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

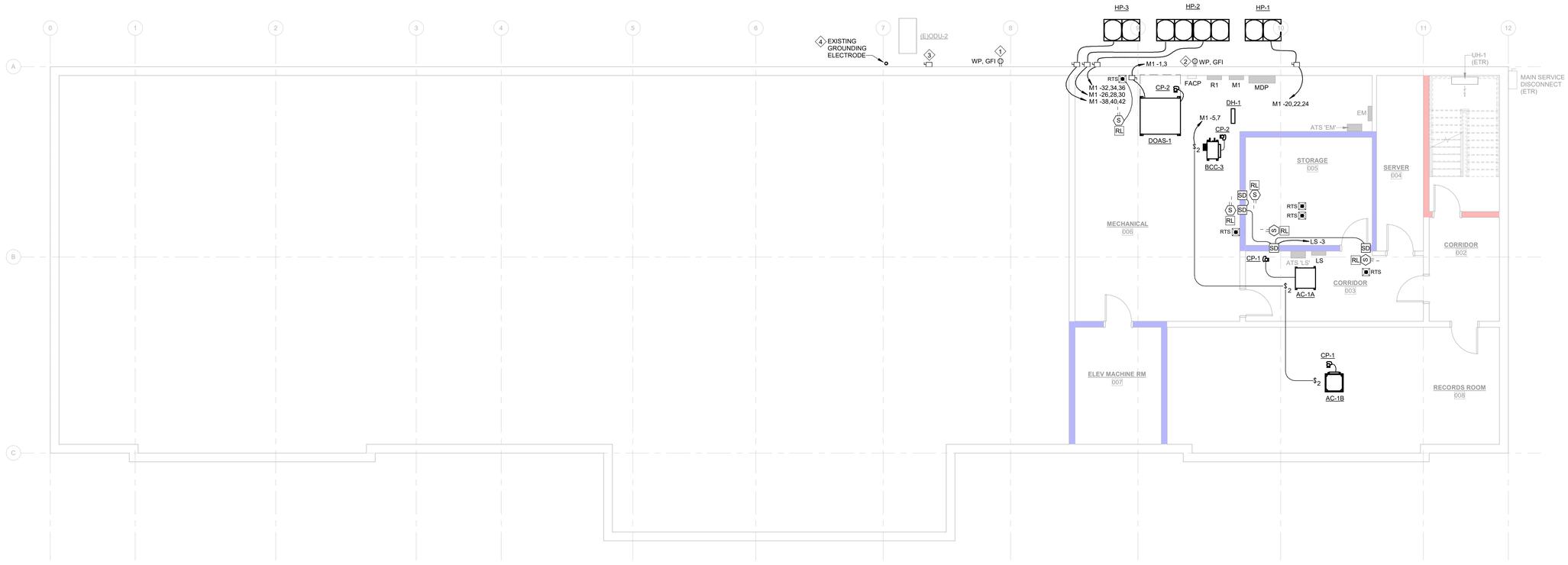
- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE, IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

G. PROVIDE POWER TO CONDENSATE PUMPS (CP-#) FROM ADJACENT AC, DOAS, OR BCC PER MANUFACTURER'S INSTRUCTIONS.

PLAN NOTES: (#)

1. REPLACE EXISTING DEVICE OR FIXTURE WITH NEW PER SPECIFICATIONS AND RECONNECT TO THE EXISTING CIRCUIT. EXTEND CONDUIT AND WIRING AS NECESSARY TO NEW LOCATIONS. NOTE THE EXISTING CIRCUIT ON THE AS-BUILT DRAWINGS.
2. PROVIDE NEW DEVICE AND CONNECT TO EXISTING EXTERIOR RECEPTACLE CIRCUIT FROM PANEL 'R1'.
3. REPLACE EXISTING DISCONNECT WITH NEW AND RECONNECT TO THE EXISTING CIRCUIT.
4. FROM DEMOLITION PHASE, IF EXISTING GROUNDING ELECTRODE CONDUCTOR IS DETERMINED TO BE IN USE, PROVIDE DEDICATED EXTERIOR WALL PENETRATION AND REROUTE CONDUCTOR THROUGH PENETRATION. DRIVE EXISTING GROUND ROD BELOW GRADE PER NEC AND MAKE NEW CONNECTION VIA EXOTHERMIC WELD. ROUTE CONDUCTOR IN 1" RIGID CONDUIT.



1 E200 ELECTRICAL POWER PLAN - BASEMENT

3/16" = 1'-0"

0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED NO. 22785 PROFESSIONAL ENGINEER SHANNON L. ELLIS 6-11-2024

DEVITA Engineering Great Ideas

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL POWER PLAN - BASEMENT

DRAWING NO.

E200

Drawn By: RHV Checked By: SLE

GENERAL NOTES:

A. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET E900 FOR MECHANICAL EQUIPMENT CIRCUIT AND DISCONNECT REQUIREMENTS.

B. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E001.

C. COORDINATE EXACT CIRCUIT REQUIREMENTS WITH ACTUAL EQUIPMENT NAMEPLATE PRIOR TO WORK.

D. PROVIDE WORKING CLEARANCE FOR ALL ELECTRICAL DISCONNECTS PER NEC.

E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

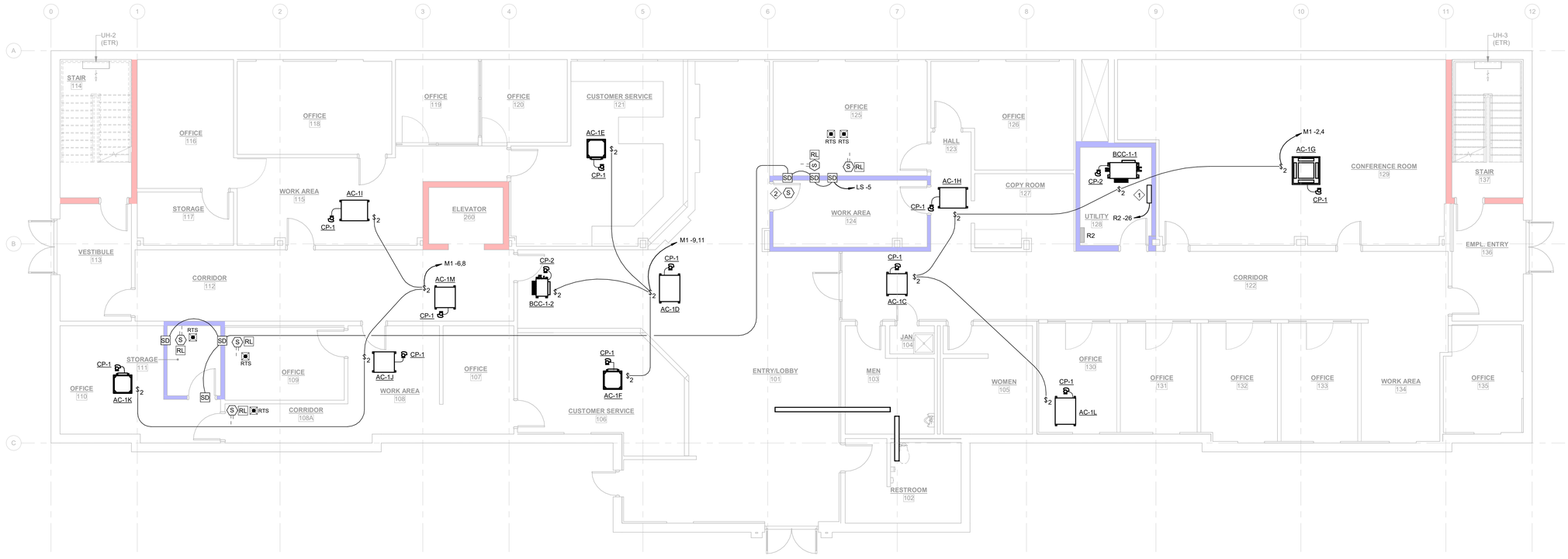
- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE, IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

G. PROVIDE POWER TO CONDENSATE PUMPS (CP-#) FROM ADJACENT AC, DOAS, OR BCC PER MANUFACTURER'S INSTRUCTIONS.

PLAN NOTES: (#)

1. COORDINATE FINAL LOCATION OF BMS CONTROL PANEL AND REQUIREMENTS WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
2. PROVIDE SMOKE DETECTOR WITH AUX CONTACTS LISTED FOR RELEASING SERVICE FOR CONTROL OF SMOKE DAMPER IN UNDUCTED OPENING IN WALL. MOUNT ABOVE CEILING ON WALL WITHIN 5' OF SMOKE DAMPER. CONNECT PER DETAIL FOR DUCT DETECTORS ON SHEET E002. COORDINATE EXACT LOCATION WITH MECHANICAL PRIOR TO ROUGH-IN.



1 E201 ELECTRICAL POWER PLAN - 1ST FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — NO. 22785 — SHANNON L. EPPS — 6/11/2024

SEALS

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DEVITA Project No. 23501-01

CONSULTANT

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YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

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NO.	DATE	DESCRIPTION

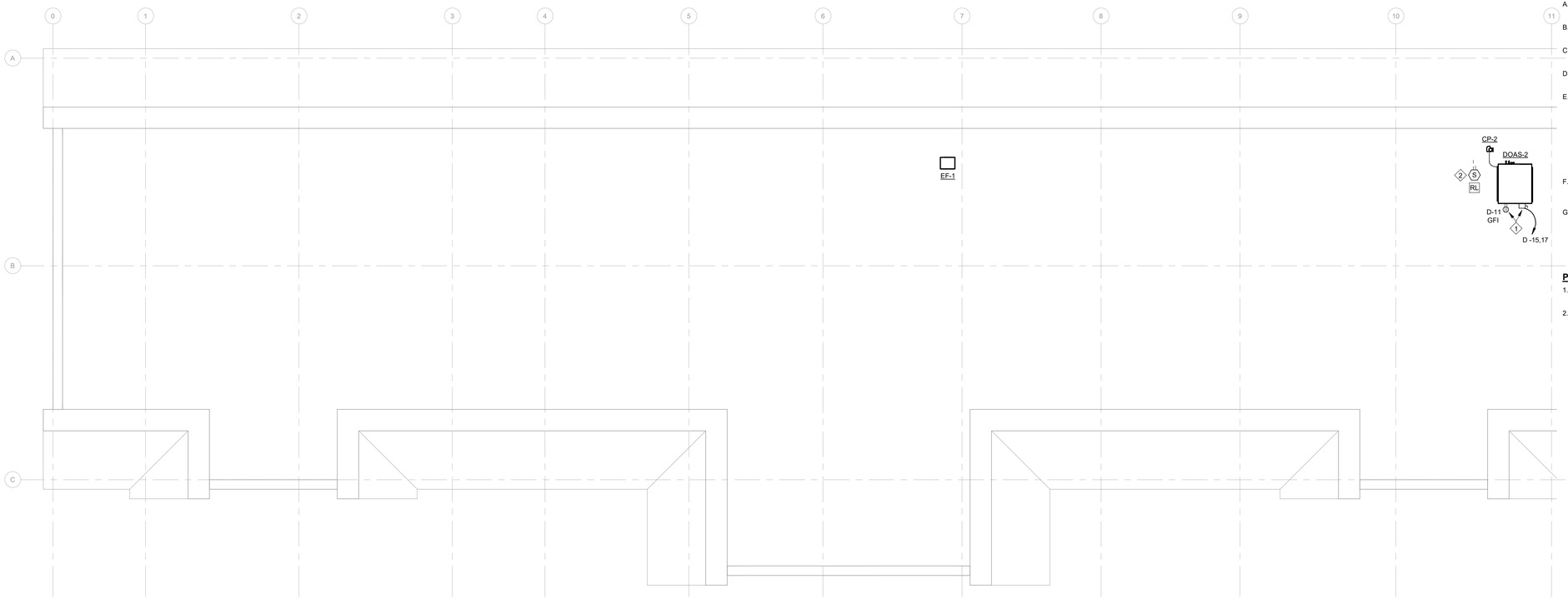
DRAWING NAME

ELECTRICAL POWER PLAN - 1ST FLOOR

DRAWING NO.

E201

Drawn By: RHV Checked By: SLE



2 E202 ELECTRICAL POWER PLAN - ATTIC
3/16" = 1'-0"
0 4' 8' 12' 16'

GENERAL NOTES:

A. REFER TO MECHANICAL EQUIPMENT SCHEDULE ON SHEET E900 FOR MECHANICAL EQUIPMENT CIRCUIT AND DISCONNECT REQUIREMENTS.

B. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E001.

C. COORDINATE EXACT CIRCUIT REQUIREMENTS WITH ACTUAL EQUIPMENT NAMEPLATE PRIOR TO WORK.

D. PROVIDE WORKING CLEARANCE FOR ALL ELECTRICAL DISCONNECTS PER NEC.

E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

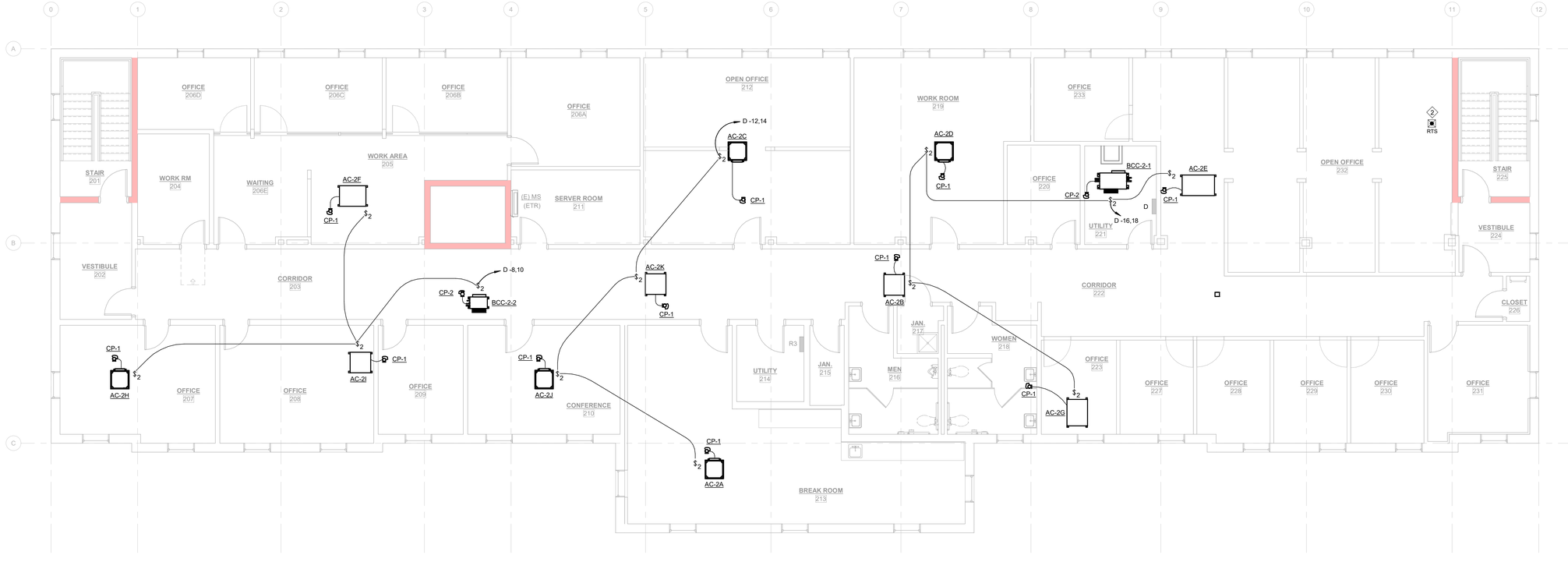
- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE, IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

G. PROVIDE POWER TO CONDENSATE PUMPS (CP-#) FROM ADJACENT AC, DOAS, OR BCC PER MANUFACTURER'S INSTRUCTIONS.

PLAN NOTES: (#)

1. COORDINATE FINAL LOCATION OF RECEPTACLE AND DISCONNECT WITH HVAC EQUIPMENT.
2. MOUNT RTS FOR DETECTOR AT DOAS-2 IN CEILING BELOW UNIT LOCATION.



1 E202 ELECTRICAL POWER PLAN - 2ND FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED NO. 22785 PROFESSIONAL ENGINEER STEPHEN LEE SMITH 6-11-2024

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY PLANNING FACILITY HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL POWER PLAN - 2ND FLOOR & ATTIC

DRAWING NO.

E202

Drawn By: RHV Checked By: SLE

GENERAL NOTES:

A. REFER TO SHEET E900 FOR LIGHTING FIXTURE SCHEDULE.

B. EMERGENCY LIGHTS/EXIT SIGNS SHALL BE CONNECTED TO UNSWITCHED HOT CONDUCTOR OF CIRCUIT INDICATED.

C. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E901.

D. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. REINSTALL AND RECONNECT ALL EXISTING TO REMAIN CEILING MOUNTED DEVICES AND FIXTURES AFTER REINSTALLATION OF THE CEILING.

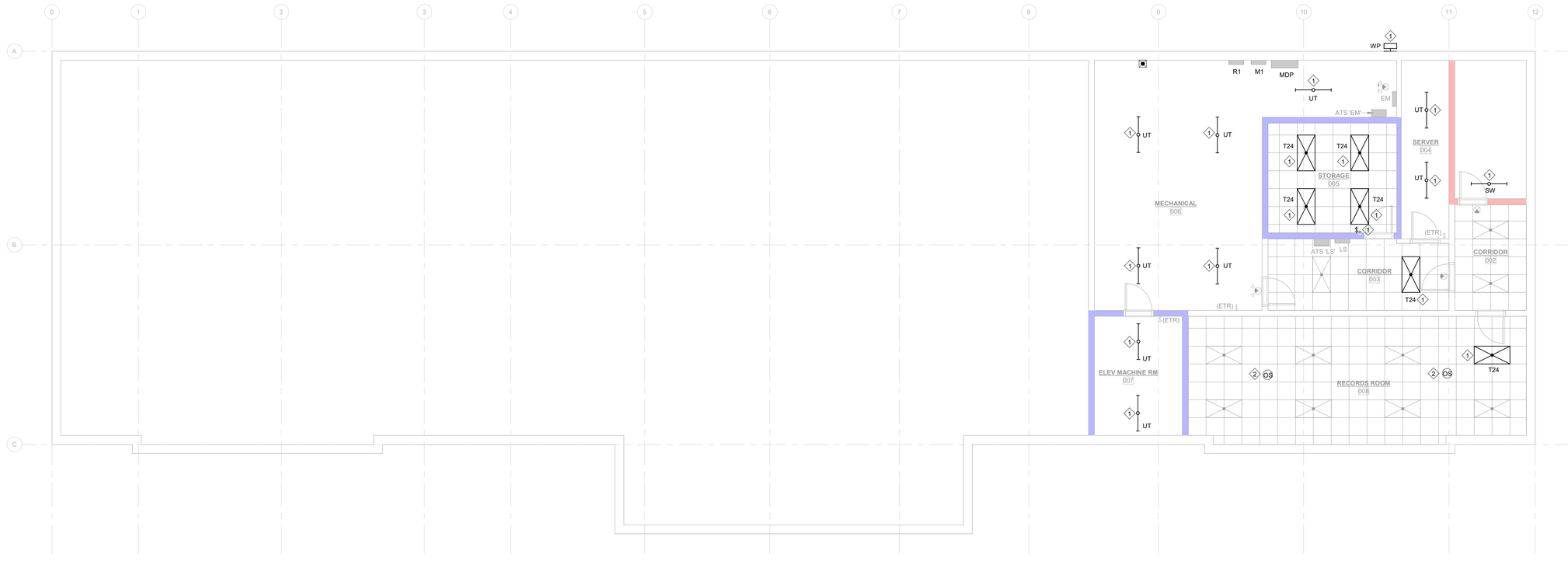
E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE. IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

PLAN NOTES: (R)

1. REPLACE EXISTING DEVICE OR FIXTURE WITH NEW PER SPECIFICATIONS AND RECONNECT TO THE EXISTING CIRCUIT. EXTEND CONDUIT AND WIRING AS NECESSARY TO NEW LOCATIONS. NOTE THE EXISTING CIRCUIT ON THE AS-BUILT DRAWINGS AND LABEL ON DEVICE COVERPLATE.
2. PROVIDE NEW DEVICE.



1 E300 ELECTRICAL CEILING PLAN - BASEMENT
3/16" = 1'-0"
0 4' 8' 12' 16'

SEALS

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 22785 STEPHEN L. ELLIS 6-11-2024

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NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL CEILING PLAN - BASEMENT

DRAWING NO.

E300

Drawn By: RHV Checked By: SLE

GENERAL NOTES:

A. REFER TO SHEET E900 FOR LIGHTING FIXTURE SCHEDULE.

B. EMERGENCY LIGHTS/EXIT SIGNS SHALL BE CONNECTED TO UNSWITCHED HOT CONDUCTOR OF CIRCUIT INDICATED.

C. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E001.

D. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. REINSTALL AND RECONNECT ALL EXISTING TO REMAIN CEILING MOUNTED DEVICES AND FIXTURES AFTER REINSTALLATION OF THE CEILING.

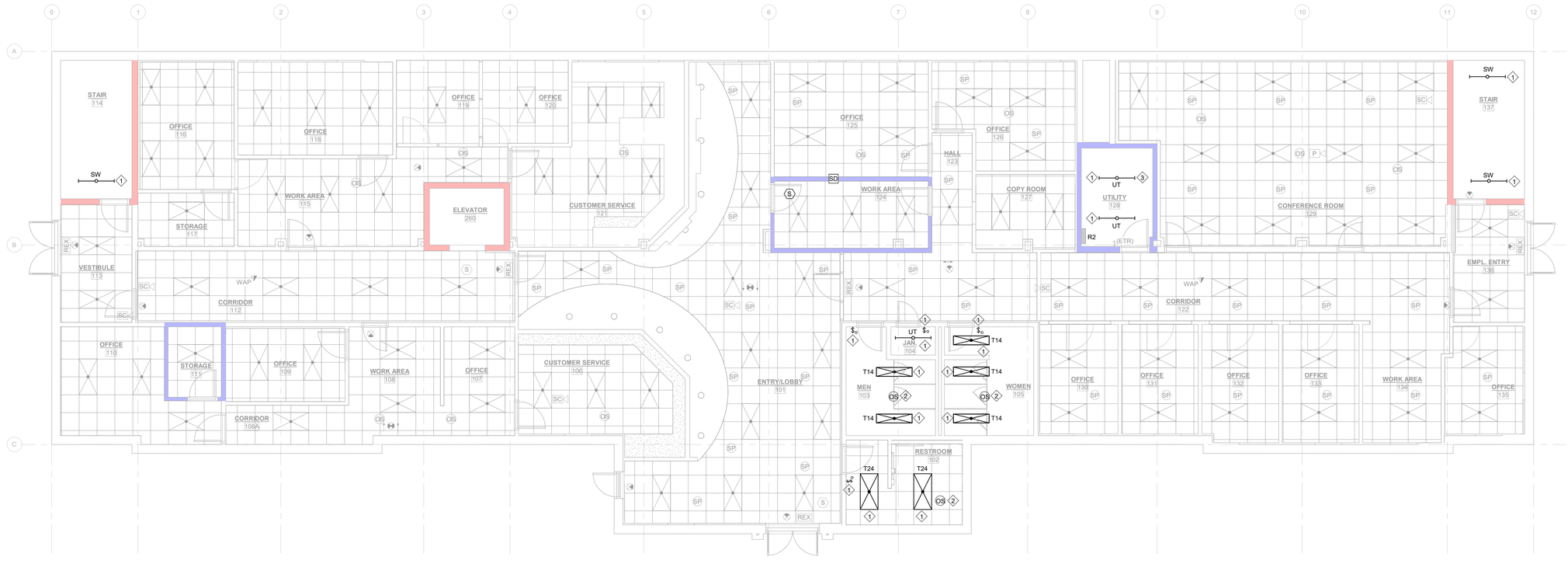
E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE, IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

PLAN NOTES: (#)

1. REPLACE EXISTING DEVICE OR FIXTURE WITH NEW PER SPECIFICATIONS AND RECONNECT TO THE EXISTING CIRCUIT. EXTEND CONDUIT AND WIRING AS NECESSARY TO NEW LOCATIONS. NOTE THE EXISTING CIRCUIT ON THE AS-BUILT DRAWINGS AND LABEL ON DEVICE COVERPLATE.
2. PROVIDE NEW DEVICE.
3. COORDINATE LIGHT FIXTURE LOCATION WITH NEW CHASE. EXTEND EXISTING CIRCUIT TO NEW LOCATION AND RECONNECT.



1 E301 ELECTRICAL CEILING PLAN - 1ST FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

DEVITA & ASSOCIATES, INC. No. C00415 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA NO. 22785 REGISTERED PROFESSIONAL ENGINEER SHANNON L. ELLER 6-11-2024

SEALS

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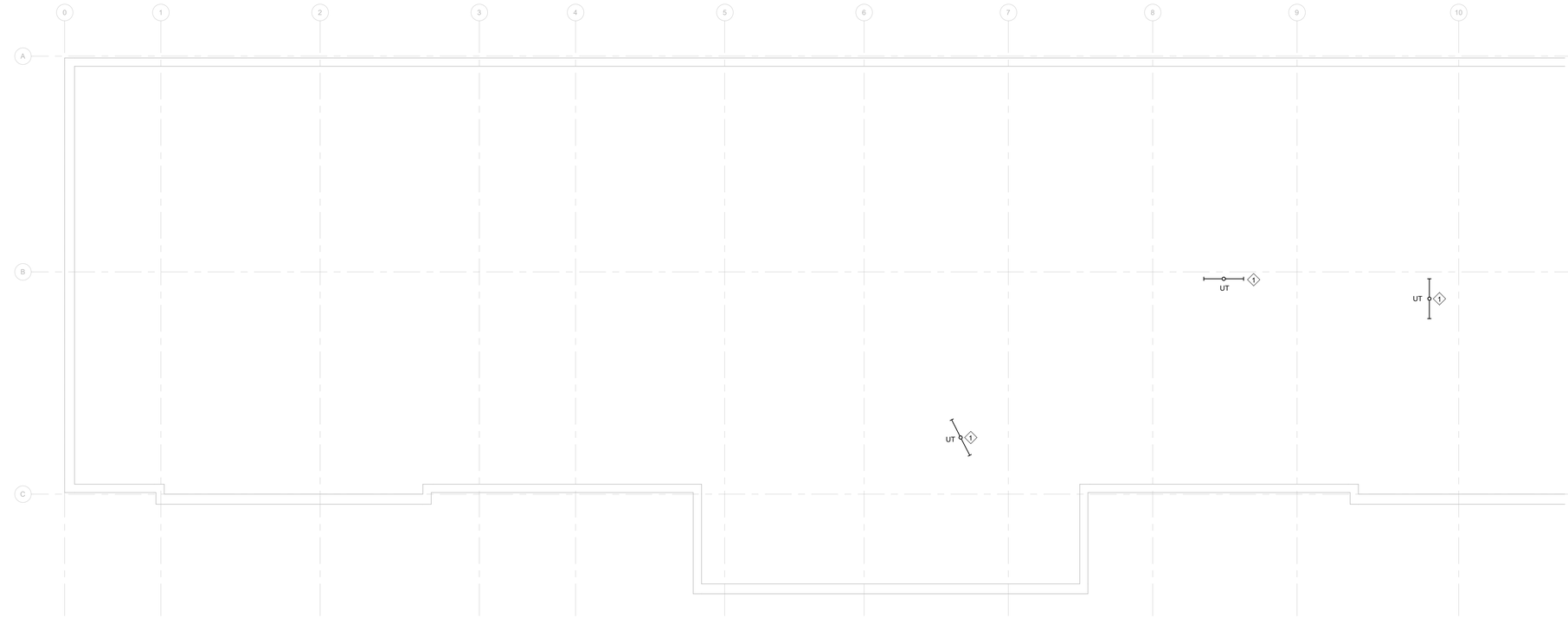
DRAWING NAME

ELECTRICAL CEILING PLAN - 1ST FLOOR

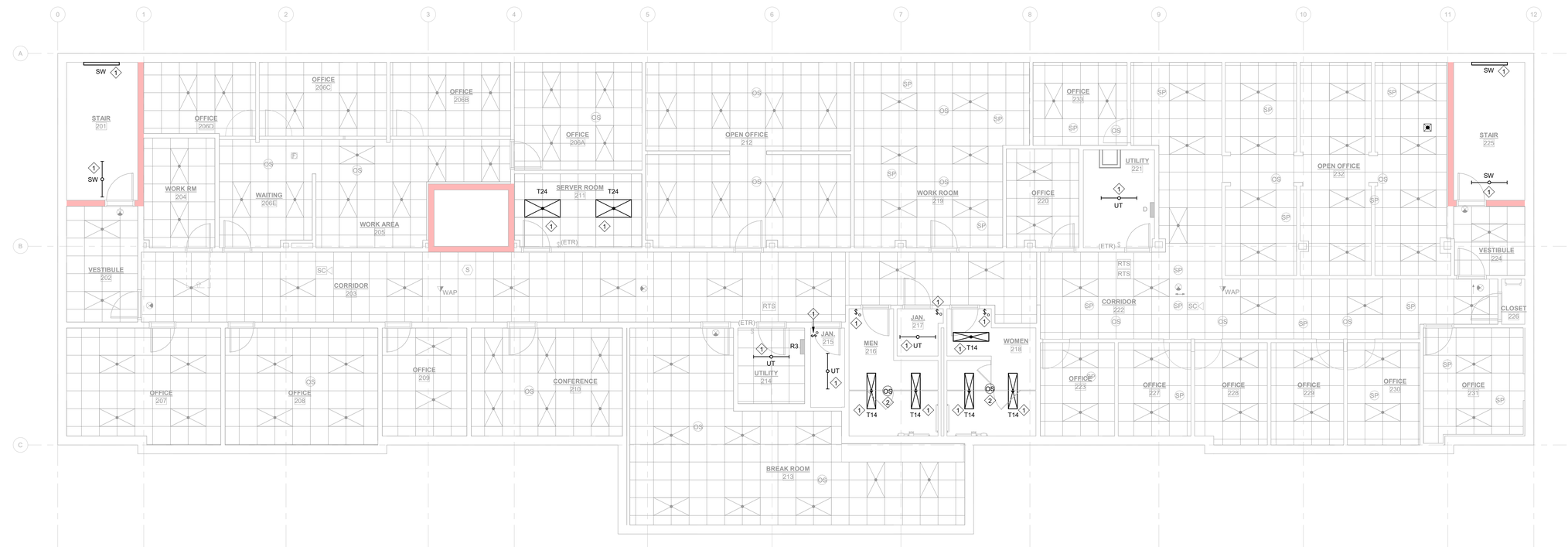
DRAWING NO.

E301

Drawn By: RHV Checked By: SLE



2 E302 ELECTRICAL CEILING PLAN - ATTIC
3/16" = 1'-0"
0 4' 8' 12' 16'



1 E302 ELECTRICAL CEILING PLAN - 2ND FLOOR
3/16" = 1'-0"
0 4' 8' 12' 16'

GENERAL NOTES:

A. REFER TO SHEET E900 FOR LIGHTING FIXTURE SCHEDULE.

B. EMERGENCY LIGHTS/EXIT SIGNS SHALL BE CONNECTED TO UNSWITCHED HOT CONDUCTOR OF CIRCUIT INDICATED.

C. LABEL ALL WIRING DEVICES WITH PANEL/CIRCUIT SERVING DEVICE. REFER TO LABELING DETAIL ON SHEET E001.

D. ALL CEILING MOUNTED DEVICES AND FIXTURES ARE EXISTING TO REMAIN UNO. REINSTALL AND RECONNECT ALL EXISTING TO REMAIN CEILING MOUNTED DEVICES AND FIXTURES AFTER REINSTALLATION OF THE CEILING.

E. WHERE INDICATED PER BELOW, PROVIDE WORK AS FOLLOWS:

- (ETR) EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. ARE EXISTING TO REMAIN. THEY AND THEIR ASSOCIATED CIRCUITING, CABLING, AND RACEWAYS SHALL REMAIN.
- (RS) DENOTES REINSTALLED EXISTING DEVICES, FIXTURES, EQUIPMENT, ETC. REMOVED AND SALVAGED DURING DEMOLITION PHASE, IN RENOVATED AREA. EXTEND HOMERUNS TO NEW LOCATIONS AS REQUIRED UNLESS NOTED OTHERWISE.

F. THIS PROJECT UTILIZES A RETURN AIR PLENUM. ALL MATERIALS USED WITHIN THE PLENUM SHALL BE PLENUM RATED. COORDINATE WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.

PLAN NOTES: (#)

1. REPLACE EXISTING DEVICE OR FIXTURE WITH NEW PER SPECIFICATIONS AND RECONNECT TO THE EXISTING CIRCUIT. EXTEND CONDUIT AND WIRING AS NECESSARY TO NEW LOCATIONS. NOTE THE EXISTING CIRCUIT ON THE AS-BUILT DRAWINGS AND LABEL ON DEVICE COVERPLATE.
2. PROVIDE NEW DEVICE.

SEALS

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NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL CEILING PLAN - 2ND FLOOR & ATTIC

DRAWING NO.

E302

Drawn By: RHV Checked By: SLE

MECHANICAL EQUIPMENT SCHEDULE

TAG	VOLTAGE	PHASE	LOAD			CONDUCTORS & CONDUIT	DISCONNECT	CIRCUIT		REMARKS
			kW	HP	FLA			PANEL	NO.	
(E)ODU-2	208	1			EXISTING	EXISTING	30A/2P/NF/3R	EM	18,20	1
AC-1A	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	5,7	
AC-1B	208	1			0.24	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	5,7	
AC-1C	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	2,4	
AC-1D	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	9,11	
AC-1E	208	1			0.24	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	9,11	
AC-1F	208	1			0.24	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	9,11	
AC-1G	208	1			0.54	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	2,4	
AC-1H	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	2,4	
AC-1I	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	6,8	
AC-1J	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	6,8	
AC-1K	208	1			0.24	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	6,8	
AC-1L	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	2,4	
AC-1M	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	6,8	
AC-2A	208	1			0.54	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	12,14	
AC-2B	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	16,18	
AC-2C	208	1			0.39	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	12,14	
AC-2D	208	1			0.28	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	16,18	
AC-2E	208	1			2.88	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	16,18	
AC-2F	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	8,10	
AC-2G	208	1			2.94	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	16,18	
AC-2H	208	1			0.24	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	8,10	
AC-2I	208	1			1.75	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	8,10	
AC-2J	208	1			0.28	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	12,14	
AC-2K	208	1			2.13	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	12,14	
BCC-1-1	208	1			0.83	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	2,4	
BCC-1-2	208	1			0.74	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	9,11	
BCC-2-1	208	1			0.83	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	16,18	
BCC-2-2	208	1			0.74	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	D	8,10	
BCC-3	208	1			0.55	2#12, 1#12G; 3/4"C	2 POLE MOTOR RATED SWITCH	M1	5,7	
DH-1	208	3	9			3#8, 1#10G; 1"C	FURNISHED WITH EQUIPMENT	M1	14,16,18	
DOAS-1	208	1			3.99	2#12, 1#12G; 3/4"C	30A/2P/NF/1	M1	1,3	
DOAS-2	208	1			4.80	2#12, 1#12G; 3/4"C	30A/2P/NF/1	D	15,17	
EF-1	120	1			7.40	2#12, 1#12G; 3/4"C	FURNISHED WITH EQUIPMENT	D	13	
HP-1	208	3			49	3#3,1#8G;1-1/4"C	100A/3P/NF/3R	M1	20,22,24	
HP-2 (CKT 1)	208	3			41	3#4,1#10G;1-1/4"C	60A/3P/NF/3R	M1	26,28,30	
HP-2 (CKT 2)	208	3			41	3#4,1#10G;1-1/4"C	60A/3P/NF/3R	M1	32,34,36	
HP-3	208	3			43	3#4,1#8G;1-1/4"C	100A/3P/NF/3R	M1	38,40,42	

MECHANICAL EQUIPMENT SCHEDULE REMARKS

1. EXISTING EQUIPMENT TO REMAIN. REPLACE DISCONNECT ONLY AND RECONNECT TO EXISTING CIRCUIT.

LIGHTING FIXTURE SCHEDULE

FIXTURE MARK	FIXTURE DESCRIPTION	LAMP TYPE AND LUMENS	VOLTAGE	FIXTURE WATTS	MOUNTING METHOD AND HEIGHT	ACCEPTABLE MANUFACTURERS	REMARKS
SW	4' LED STRIP FIXTURE, WHITE STEEL HOUSING, LINEAR FACETED REFRACTOR, DIMS TO 50% WHEN UNOCCUPIED.	LED 4000°K 4000 LUMENS	120	40	CEILING OR WALL SURFACE	MANUF: LITHONIA LIGHTING PART # WL4 40L EZ1 LP840 DIM50 OR EQUAL BY COLUMBIA OR METALUX	
T14	1X4' RECESSED LED ARCHITECTURAL TROFFER, FROSTED ACRYLIC LENS, CRS STEEL HOUSING AND REFLECTOR, DRYWALL MOUNT, 1% MINIMUM 0-10V DIMMING	LED 4000°K 4000 LUMENS	120	32	CEILING RECESSED	MANUF: HE WILLIAMS PART # FT 1 4 LS 4800 8 CS 4000K AF DFK-1248W DIM UNV OR EQUAL BY COLUMBIA OR METALUX	
T24	2X4' RECESSED LED ARCHITECTURAL TROFFER, FROSTED ACRYLIC LENS, CRS STEEL HOUSING AND REFLECTOR, GRID MOUNT, 1% MINIMUM 0-10V DIMMING	LED 4000°K 4100 LUMENS	120	28	CEILING RECESSED	MANUF: HE WILLIAMS PART # FT 2 4 LS 4100 8 CS 4000K AF DIM UNV OR EQUAL BY COLUMBIA OR METALUX	
UT	4' LED STRIP FIXTURE, BAKED WHITE STEEL HOUSING, DIFFUSE SNAP-ON LENS	LED 4000°K 5000 LUMENS	120	41	CEILING SURFACE	MANUF: LITHONIA LIGHTING PART # ZL1D L48 5000LM FST MVOLT 40K 80CRI HC36 M12 OR EQUAL BY COLUMBIA OR METALUX	1
WP	LED WEDGE WALL MOUNT, DIE-CAST ALUMINUM HOUSING WITH BLACK FINISH, BUTTON PHOTOCELL, UL LISTED FOR WET LOCATIONS.	LED 4000°K 2000 LUMENS	120	15	WALL SURFACE	MANUF: LITHONIA LIGHTING PART # WDGE2 LED P2 40K 80CRI MVOLT SRM PE OR EQUAL BY LUMARK OR HUBBELL	

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

A. FINISHES SHALL BE CONFIRMED BY ARCHITECT OR OWNER PRIOR TO ORDERING.

B. LED DRIVERS SHALL CONFORM TO IEEE P1789 STANDARDS. ALTERNATIVELY, MANUFACTURERS MUST DEMONSTRATE CONFORMANCE WITH PRODUCT LITERATURE AND TESTING WHICH DEMONSTRATES THIS PERFORMANCE. SYSTEMS THAT DO NOT MEET IEEE P1789 WILL NOT BE CONSIDRED.

C. LED DRIVERS SHALL BE MULTI-VOLT. IF MULTI-VOLT DRIVERS ARE NOT AVAILABLE, THEN REQUIRED VOLTAGE SHALL BE VERIFIED WITH ENGINEER PRIOR TO ORDERING.

D. ENSURE THAT LIGHTING CONTROL DEVICES ARE COMPATIBLE WITH FIXTURES AND LAMPS.

E. PROVIDE MOUNTING KITS AND/OR ACCESSORIES REQUIRED FOR INSTALLING FIXTURES IN VARIOUS CEILING TYPES. VERIFY CEILING TYPES WITH ARCHITECTURAL DRAWINGS.

LIGHTING FIXTURE SCHEDULE REMARKS:

1. SURFACE MOUNT ON HARD CEILINGS OR CHAIN-HANG AT 8'-0" AFF ON CEILINGS > 10'-0".

SEALS

SOUTH CAROLINA — DEVITA & ASSOCIATES, INC. — No. C00415 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED — NO. 22785 — PROFESSIONAL ENGINEER — STEPHEN L. ELLIS — 6/11/2024

DEVITA Engineering Great Ideas

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DEVITA Project No. 23501-01

CONSULTANT

PROJECT INFORMATION:

YORK COUNTY
PLANNING FACILITY
HVAC UPGRADES

18 W. LIBERTY ST
YORK, SC 29745

ISSUE DATE: 11 JUNE 2024

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING NAME

ELECTRICAL
SCHEDULES

DRAWING NO.

E900

Drawn By: RHV Checked By: SLE

Panel: MDP
(EXISTING)

Voltage: 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **Enclosure:** TYPE 1
Min SCCR: EXISTING | **Mounting:** SURFACE | **Feeder Rating:** 1200 A | **Panel Rating:** 1200 A | **Type:** MLO

Remarks: EATON PRL4

BRKR	Notes	Circuit Description	CKT	A (VA)		B (VA)		C (VA)		CKT	Circuit Description	Notes	BRKR
			1	0	6402					2			
30 A	3 E	SPD	3			0	5040			4	PANEL EM	E 3	100 A
			5					0	5062	6			
			7	8520	700					8			
200 A	3 E	PANEL R3	9			8320	600			10	PANEL LS	E 3	100 A
			11					8740	800	12			
			13	1825	--					14			
400 A	3 E	PANEL D	15			2121	--			16	SPACE OCCUPIED BY PANEL D	E 3	--
			17					2058	--	18			
			19	26361	--					20			
600 A	3 E	PANEL M1	21			25716	--			22	SPACE OCCUPIED BY PANEL M1	E 3	--
			23					25406	--	24			
			25	10300	10000					26			
150 A	3 E	ELEVATOR	27			10300	8750			28	PANEL R1	E 3	200 A
			29					10300	7580	30			
			31	0	8820					32			
125 A	**3 R**	**SPARE**	33			0	8320			34	PANEL R2	E 3	200 A
			35					0	8740	36			
			37	0	0					38			
125 A	**3 R**	**SPARE**	39			0	0			40	**SPARE**	**R 3**	**45 A**
			41					0	0	42			
			43	0	--					44			
125 A	**3 R**	**SPARE**	45			0	--			46	SPACE	3	--
			47					0	--	48			
				72928 VA		69167 VA		68686 VA					

	Lighting	HVAC	Motors	Receptacle	Refrig	Kitchen	Misc	PANEL TOTALS:	
Connected Load	19730 VA	49447 VA		54720 VA			86705 VA		
Demand Factor	125.00%	100.00%		**NEC**			100.00%	**Total Conn. Load:**	210782 VA
Demand Load	24663 VA	49447 VA		32360 VA			86705 VA	**Total Est. Demand:**	193318 VA
								Total Conn. Current:	585 A
								Total Est. Demand Current:	537 A

Panel: M1
(EXISTING)

Voltage: 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **Enclosure:** TYPE 1
Min SCCR: EXISTING | **Mounting:** SURFACE | **Feeder Rating:** 600 A | **Panel Rating:** 600 A | **Type:** MLO

Remarks: EATON PRL3A

BRKR	Notes	Circuit Description	CKT	A (VA)		B (VA)		C (VA)		CKT	Circuit Description	Notes	BRKR
			1	415	973					2	**AC-1C, AC-1G, AC-1H, AC-1L, BCC-1-1,**		
15 A	**2 N**	**DOAS-1, CP-25**	3			415	973			4	**CP-3, CP-7, CP-8, CP-12, CP-27**	**N 2**	**15 A**
			5					304	774	6	**AC-1I, AC-1J, AC-1K,AC-1M, CP-9,**		
15 A	**2 N**	**AC-1A, AC-1B, BCC-3, CP-1, CP-2, CP-31**	7	304	774					8	**CP-10, CP-11, CP-13**	**N 2**	**15 A**
			9			433	--			10	SPACE	1	--
15 A	**2 N**	**AC-1D, AC-1E, AC-1F, BCC-1-2, CP-4, CP-5, CP-6, CP-28**	11					433	--	12	SPACE	1	--
			13	0	3000					14			
70 A	**3 R**	**SPARE**	15			0	3000			16	**DH-1**	**N 3**	**35 A**
			17					0	3000	18			
			19	0	5884					20			
70 A	**3 R**	**SPARE**	21			0	5884			22	**HP-1**	**N 3**	**80 A**
			23					0	5884	24			
			25	0	4924					26			
70 A	**3 R**	**SPARE**	27			0	4924			28	**HP-2 (CKT 1)**	**N 3**	**60 A**
			29					0	4924	30			
			31	0	4924					32			
70 A	**3 R**	**SPARE**	33			0	4924			34	**HP-2 (CKT 2)**	**N 3**	**60 A**
			35					0	4924	36			
			37	0	5164					38			
70 A	**3 R**	**SPARE**	39			0	5164			40	**HP-3**	**N 3**	**70 A**
			41					0	5164	42			
				26361 VA		25716 VA		25406 VA					

	Lighting	HVAC	Motors	Receptacle	Refrig	Kitchen	Misc	PANEL TOTALS:	
Connected Load	0 VA	42762 VA					34721 VA		
Demand Factor	Not...	100.00%		**NEC**			100.00%	**Total Conn. Load:**	77483 VA
Demand Load	0 VA	42762 VA					34721 VA	**Total Est. Demand:**	77483 VA
								Total Conn. Current:	215 A
								Total Est. Demand Current:	215 A

Panel: R2
(EXISTING)

Voltage: 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **Enclosure:** TYPE 1
Min SCCR: EXISTING | **Mounting:** SURFACE | **Feeder Rating:** 200 A | **Panel Rating:** 225 A | **Type:** MLO

Remarks: EATON PRL2A

BRKR	Notes	Circuit Description	CKT	A (VA)		B (VA)		C (VA)		CKT	Circuit Description	Notes	BRKR
			1	0	720					2	RECEPTACLE	E 1	20 A
30 A	3 E	SPD	3			0	720			4	RECEPTACLE	E 1	20 A
			5					0	720	6	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	7	720	720					8	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	9			720	720			10	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	11					720	720	12	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	13	720	720					14	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	15			720	720			16	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	17					720	720	18	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	19	720	720					20	RECEPTACLE	E 1	20 A
20 A	1 E	RECEPTACLE	21			720	1000			22	EWH	E 2	15 A
20 A	1 E	RECEPTACLE	23					720	1000	24			
20 A	1 E	RECEPTACLE	25	720	300					26	**BMS CONTROL**	**R 1**	**20 A**
20 A	1 E	RECEPTACLE	27			720	0			28	SPARE	E 1	20 A
20 A	1 E	RECEPTACLE	29					720	420	30	1ST FLOOR LIGHTING	E 1	20 A
20 A	1 E	ATM	31	1200	420					32	1ST FLOOR LIGHTING	E 1	20 A
20 A	1 E	RECEPTACLE	33			720	420			34	1ST FLOOR LIGHTING	E 1	20 A
20 A	1 E	RECEPTACLE	35					720	420	36	1ST FLOOR LIGHTING - RM 109, 110	E 1	20 A
20 A	1 E	RECEPTACLE	37	720	420					38	1ST FLOOR LIGHTING	E 1	20 A
20 A	1 E	CEILING RECEPTACLE	39			720	420			40	1ST FLOOR LIGHTING	E 1	20 A
20 A	1 E	GFI RECEPTACLE	41					720	420	42	1ST FLOOR LIGHTING	E 1	20 A
				8820 VA		8320 VA		8740 VA					

	Lighting	HVAC	Motors	Receptacle	Refrig	Kitchen	Misc	PANEL TOTALS:	
Connected Load	2940 VA			19440 VA			3500 VA		
Demand Factor	125.00%			**NEC**			100.00%	**Total Conn. Load:**	25880 VA
Demand Load	3675 VA			14720 VA			3500 VA	**Total Est. Demand:**	21895 VA
								Total Conn. Current:	72 A
								Total Est. Demand Current:	61 A

Panel: D
(EXISTING)

Voltage: 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **Enclosure:** TYPE 1
Min SCCR: EXISTING | **Mounting:** SURFACE | **Feeder Rating:** 400 A | **Panel Rating:** 400 A | **Type:** MLO

Remarks: EATON PRL3A

BRKR	Notes	Circuit Description	CKT	A (VA)		B (VA)		C (VA)		CKT	Circuit Description	Notes	BRKR
			1	0	0					2			
150 A	**3 R**	**SPARE**	3			0	0			4	**SPARE**	**R 3**	**125 A**
			5					0	0	6			
--	1	SPACE	7	--	590					8	**AC-2F, AC-2H, AC-2I, BCC-2-2, CP-19,**		
--	1	SPACE	9			--	590			10	**CP-21, CP-22, CP-30**	**N 2**	**15 A**
20 A	**1 N**	**REC - ATTIC**	11					180	347	12	**AC-2A, AC-2C, AC-2J, AC-2K, CP-14,**		
20 A	**1 N**	**EF-1**	13	888	347					14	**CP-16, CP-23, CP-24**	**N 2**	**15 A**
			15			589	942			16	**AC-2B, AC-2D, AC-2E, AC-2G, BCC-2-1,**		
15 A	**2 N**	**DOAS-2, CP-26**	17					589	942	18	**CP-15, CP-17, CP-18, CP-20, CP-29**	**N 2**	**15 A**
				1825 VA		2121 VA		2058 VA					

	Lighting	HVAC	Motors	Receptacle	Refrig	Kitchen	Misc	PANEL TOTALS:	
Connected Load	0 VA	3961 VA		180 VA			1684 VA		
Demand Factor	Not...	100.00%		**NEC**			100.00%	**Total Conn. Load:**	6005 VA
Demand Load	0 VA	3961 VA		180 VA			1684 VA	**Total Est. Demand:**	5969 VA
								Total Conn. Current:	17 A
								Total Est. Demand Current:	17 A

Panel: LS
(EXISTING)

Voltage: 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **Enclosure:** TYPE 1
Min SCCR: EXISTING | **Mounting:** SURFACE | **Feeder Rating:** 100 A | **Panel Rating:** 100 A | **Type:** MCB

Remarks: EATON PRL1A

BRKR	Notes	Circuit Description	CKT	A (VA)		B (VA)		C (VA)		CKT	Circuit Description	Notes	BRKR
20 A	1 E	ELEVATOR CAR LIGHT	1	500	200					2	BASEMENT EM LIGHTS	E 1	20 A
20 A	**1 R**	**BASEMENT SMOKE DAMPERS**	3			400	200			4	1ST FLOOR EM LIGHTS	E 1	20 A
20 A	**1 R**	**1ST FLOOR SMOKE DAMPERS**	5					600	200	6	2ND FLOOR EM LIGHTS	E 1	20 A
20 A	1 E	SPARE	7	0	0					8	SPARE	E 1	20 A
20 A	1 E	SPARE	9			0	0			10	SPARE	E 1	20 A
20 A	1 E	SPARE	11					0	0	12	SPARE	E 1	20 A
20 A	1 E	SPARE	13	0	0					14	SPARE	E 1	20 A
20 A	1 E	SPARE	15			0	0			16	SPARE	E 1	20 A
20 A	1 E	SPARE	17					0	0	18	SPARE	E 1	20 A
20 A	1 E	SPARE	19	0	0					20	SPARE	E 1	20 A
20 A	1 E	SPARE	21			0	0			22	SPARE	E 1	20 A
--	1	SPACE	23					--	0	24	SPARE	E 1	20 A
--	1	SPACE	25	--	--					26	SPACE	1	--
--	1	SPACE	27			--	--			28	SPACE	1	--
--	1	SPACE	29					--	--	30	SPACE	1	--
--	1	SPACE	31	--	--					32	SPACE	1	--
--	1	SPACE	33			--	--			34	SPACE	1	--
--	1	SPACE	35					--	--	36	SPACE	1	--
--	1	SPACE	37	--	--					38	SPACE	1	--
--	1	SPACE	39			--	--			40	SPACE	1	--
--	1	SPACE	41					--	--	42	SPACE	1	--
				700 VA		600 VA		800 VA					

	Lighting	HVAC	Motors	Receptacle	Refrig	Kitchen	Misc	PANEL TOTALS:	
Connected Load	1100 VA						1000 VA		
Demand Factor	125.00%			**NEC**			100.00%	**Total Conn. Load:**	2100 VA
Demand Load	1375 VA						1000 VA	**Total Est. Demand:**	2375 VA
								Total Conn. Current:	6 A
								Total Est. Demand Current:	7 A

EXISTING PANEL GENERAL NOTES:

1. EXISTING CIRCUIT DATA SHOWN IS TAKEN FROM EXISTING FACILITY DOCUMENTATION AND/OR FIELD OBSERVATION. FIELD VERIFY ALL CIRCUITS.
2. VERIFY CIRCUITS ON EXISTING PANELS. ADJUST CIRCUITING AS REQUIRED TO MEET DESIGN INTENT OF DRAWINGS. TURN SPARE BREAKERS OFF.
3. PROVIDE NEW TYPEWRITTEN PANEL DIRECTORY TO REFLECT NEW CONDITIONS UPON COMPLETION OF WORK DESCRIBED IN THESE DRAWINGS.
4. REUSE EXISTING CIRCUIT BREAKERS WHERE POSSIBLE. PROVIDE NEW BREAKERS AS REQUIRED; TYPE, VOLTAGE RATING, AND AIC RATING TO MATCH EXISTING.
5. PANEL SCHEDULES REFLECT STATUS AFTER PROPOSED WORK IS COMPLETE, UNLESS NOTED OTHERWISE.
6. BOLD TEXT INDICATES EXISTING CIRCUITS MODIFIED AS PART OF THIS RENOVATION.

PANEL SCHEDULE NOTES:

A	-	AFCI BREAKER
G	-	GFI CIRCUIT BREAKER
IG	-	ISOLATED GROUND CIRCUIT
C#	-	ROUTE CIRCUIT HOMERUN VIA CONTACTOR INDICATED
LF	-	PROVIDE PAD-LOCK ATTACHMENT FOR MAINTENANCE LOCK-OUT OF CIRCUIT BREAKER
LO	-	PROVIDE LOCK-ON DEVICE FOR CIRCUIT BREAKER
P	-	PRE-WIRED INTERNAL CIRCUIT BY SWITCHGEAR MANUFACTURER
ST	-	SHUNT TRIP CIRCUIT BREAKER
SUB	-	SUB-FEED CIRCUIT BREAKER
E	-	EXISTING BREAKER AND CIRCUIT IN EXISTING PANEL TO REMAIN
N	-	NEW BREAKER. REMOVE EXISTING BREAKER IN SPACE AND TURN OVER TO OWNER IF ONE IS PRESENT.
R	-	REUSE EXISTING BREAKER FOR NEW CIRCUIT LOAD AND/OR DESCRIPTION INDICATED

SEALS

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ELECTRICAL PANEL SCHEDULES

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E901

Drawn By: RHV Checked By: SLE