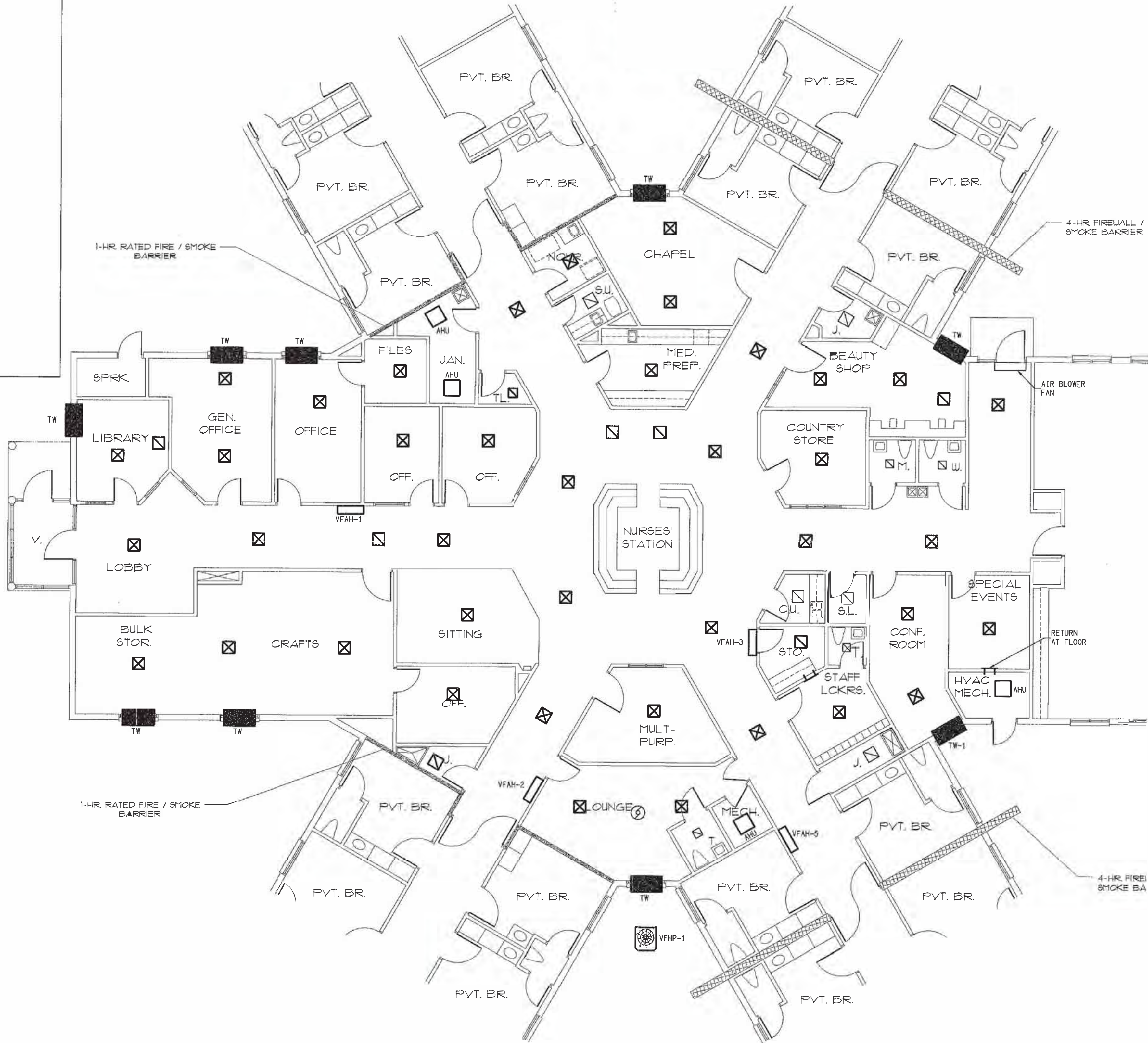


TIME: 8:25 DATE: 02/27/2025 DRAWING LOCATION: F:\PROJECTS\2025\25005\Drawings\Drawings\25005.dwg

| MECHANICAL LEGEND | |
|-------------------|--|
| SYMBOL | DESCRIPTION |
| | NEW SUPPLY GRILLE - WALL |
| | NEW SUPPLY GRILLE - CEILING |
| | NEW RETURN GRILLE - CEILING |
| | EXISTING SUPPLY GRILLE TO BE REUSED |
| | EXISTING RETURN GRILLE TO BE REUSED |
| | COMBINATION THERMOSTAT AND HUMIDISTAT |
| | RECTANGULAR DUCT - 20" WIDE INSIDE A/C SYSTEM - 10" HIGH INSIDE |
| | TURNING VANES |
| | RIGID ROUND DUCT - 10" I.D. |
| | FLEX DUCT - 10" I.D. |
| | REGISTER CFM |
| | BALANCING DAMPER |
| | REDUCER |
| | VENT FAN |
| | VENTILATION DUCT |
| | FRESH AIR DUCT |
| | DOAS SUPPLY DUCT |
| | DOAS RETURN DUCT |
| | EXISTING EQUIPMENT |
| | NEW EQUIPMENT |



A Partial Mechanical Plan - Existing Center Core
M1 SCALE: 1/8" = 1'-0"

| PROJECT NAME | |
|--|------------------------|
| COMPLIANCE SCHEDULE - MECHANICAL | |
| METHOD OF COMPLIANCE | PREScriptive |
| ENERGY COST BUDGET | 4 |
| THERMAL ZONE | |
| EXTERIOR DESIGN CONDITIONS | |
| WINTER DRY BULB | 23° F |
| SUMMER DRY BULB | 91° F |
| INTERIOR DESIGN CONDITIONS | |
| WINTER DRY BULB | 70° F |
| SUMMER DRY BULB | 75° F |
| RELATIVE HUMIDITY | 50% - 60% |
| BUILDING HEATING LOAD | 32,000 BTUH |
| BUILDING COOLING LOAD | 52,000 BTUH |
| MECHANICAL SPACING CONDITIONING SYSTEM | |
| UNITARY | |
| DESCRIPTION OF UNIT - | SEE EQUIPMENT SCHEDULE |
| HEATING EFFICIENCY - | |
| COOLING EFFICIENCY - | |
| HEAT OUTPUT OF UNIT - | |
| COOLING OUTPUT OF UNIT - | |

| BOILER | |
|---|------------------------|
| TOTAL BOILER OUTPUT (IF OVERSIZED STATE REASON) | N/A |
| CHILLER | |
| TOTAL CHILLER CAPACITY | N/A |
| LIST EQUIPMENT EFFICIENCIES | SEE EQUIPMENT SCHEDULE |
| EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEM) | |
| MOTOR HORSEPOWER | N/A |
| NUMBER OF PHASES | N/A |
| MINIMUM EFFICIENCY | N/A |
| MOTOR TYPE | N/A |
| # OF POLES | N/A |

DESIGNER STATEMENT
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE.

SIGNED: DAVID B. SIMS JR., PE.

NAME: DAVID B. SIMS JR., PE.

TITLE: ENGINEER

| VENTILATION SCHEDULE | | | | | | | |
|-------------------------------------|--|---------------------|-------------------|---|---|---------------------------|--------------------------|
| FUNCTION OF SPACE | PRESSURE RELATIONSHIP TO ADJACENT AREA | MINIMUM OUTDOOR ACH | MINIMUM TOTAL ACH | ALL ROOM AIR EXHAUSTED DIRECTLY TO OUTDOORS | AIR RECIRCULATED BY MEANS OF ROOM UNITS | DESIGN RELATIVE HUMIDITY% | DESIGN TEMPERATURE °F/°C |
| BATHING ROOM | NEGATIVE | NR | 10 | YES | NO | NR | 70-75/21-24 |
| OCCUPATIONAL THERAPY | NR | 2 | 6 | NR | NR | NR | 70-75/21-24 |
| PHYSICAL THERAPY | NEGATIVE | 2 | 6 | NR | NR | NR | 70-75/21-24 |
| RESIDENT/GATHERING /ACTIVITY/DINING | NR | 4 | 4 | NR | NR | NR | 70-75/21-24 |
| RESIDENT ROOM | NR | 2 | 2 | NR | NR | NR | 70-75/21-24 |
| RESIDENT UNIT CORRIDOR | NR | NR | 4 | NR | NR | NR | NR |

NR: NO REQUIREMENT

DSA ENGINEERING

101 N. 380 ST., SUITE 403
WILMINGTON, NC 2840
910.791.8016
NC License: C-1150
www.dsaeng.com

2/21/25

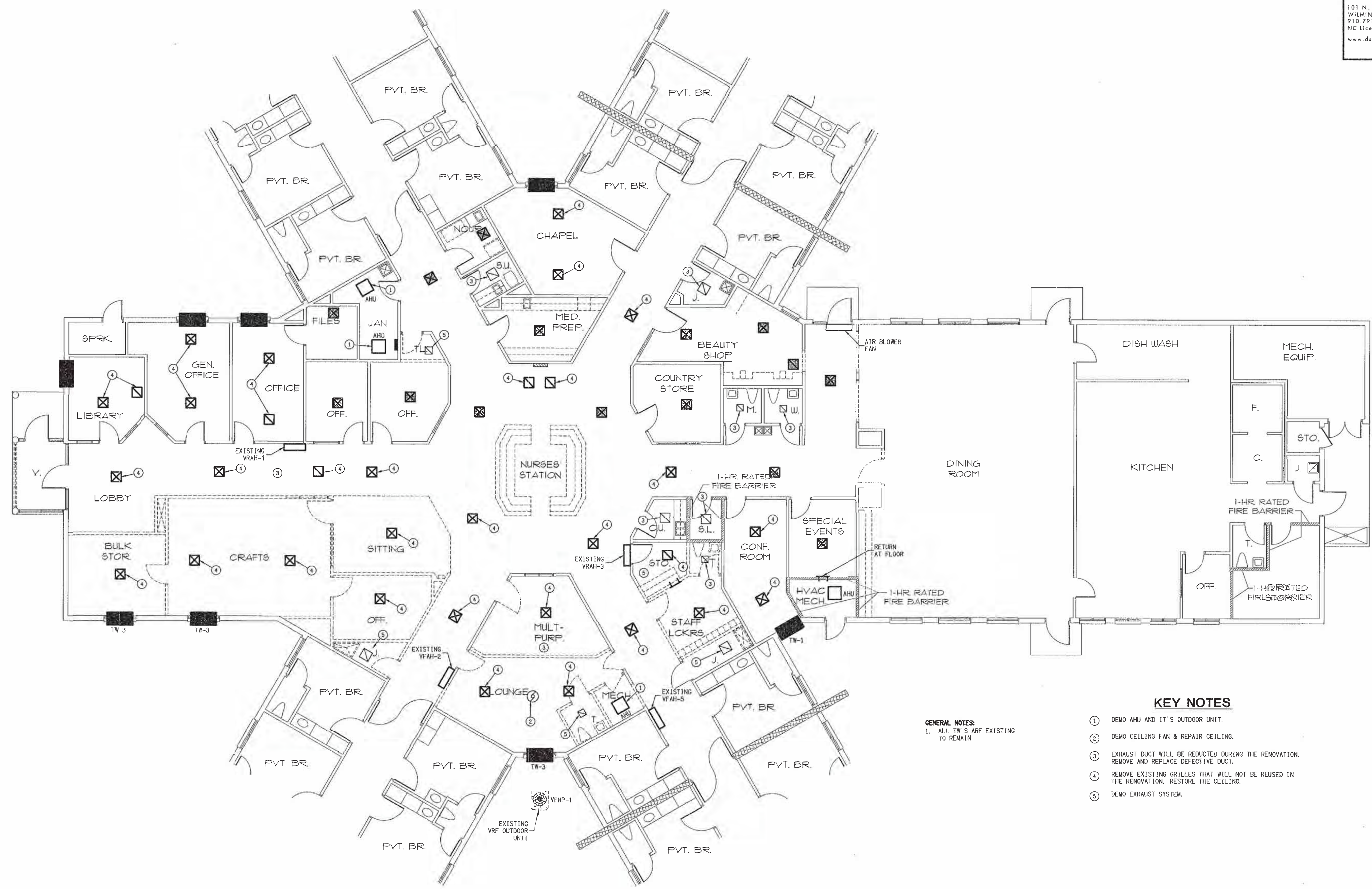
THE CAROLTON OF NASH
NURSING FACILITY
Rocky Mount, North Carolina

David R. Polston - Architect
3806 Park Ave. Suite C, Wilmington, NC 28403
Architecture Planning Design

BUILDING RENOVATIONS

M1

| symbol | date | description | by |
|-----------|------|-------------|----|
| REVISIONS | | | |



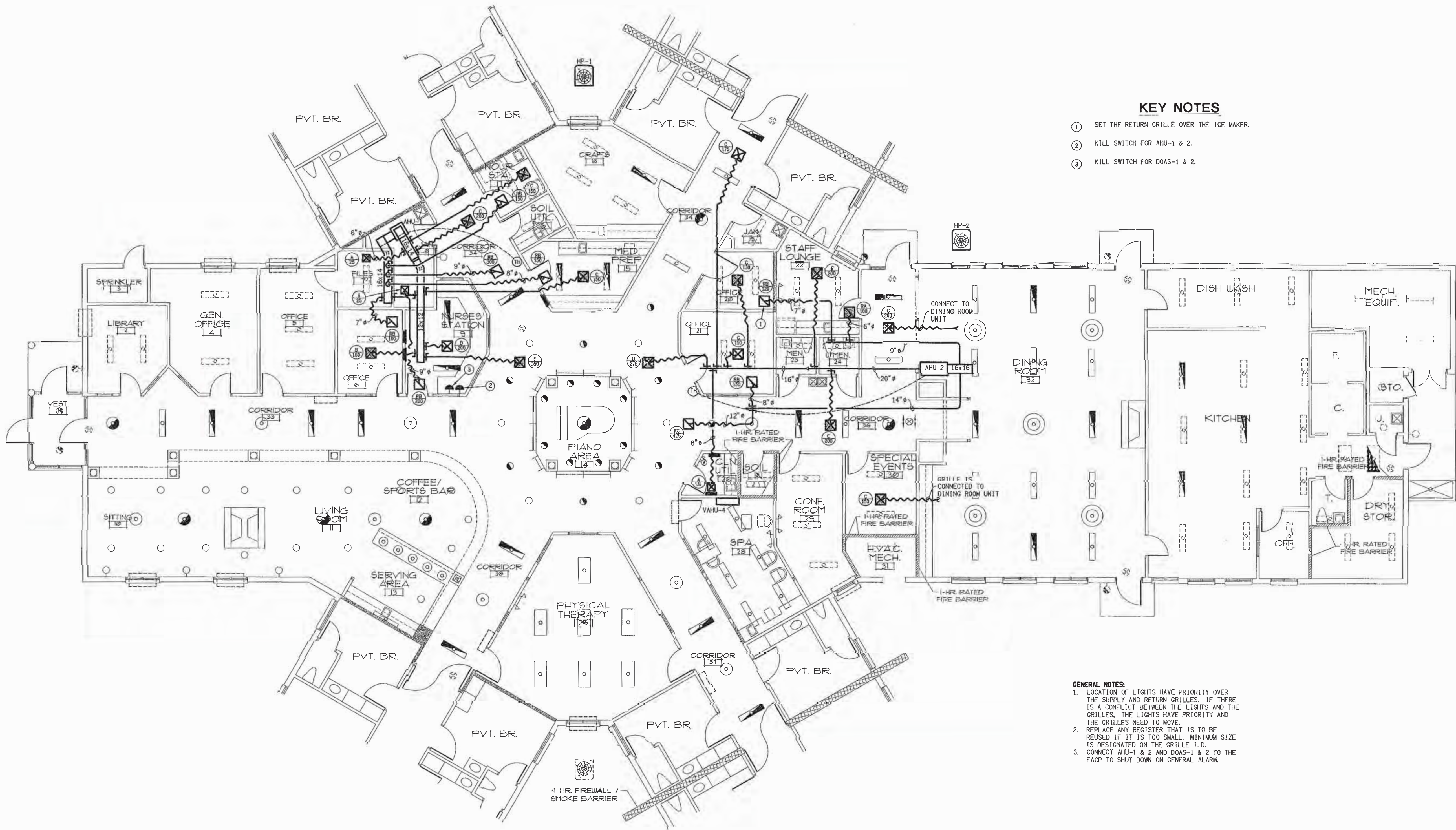
GENERAL NOTES:
1. ALL TW'S ARE EXISTING
TO REMAIN

KEY NOTES

- 1 DEMO AHU AND IT'S OUTDOOR UNIT.
- 2 DEMO CEILING FAN & REPAIR CEILING.
- 3 EXHAUST DUCT WILL BE REDUCED DURING THE RENOVATION. REMOVE AND REPLACE DEFECTIVE DUCT.
- 4 REMOVE EXISTING GRILLES THAT WILL NOT BE REUSED IN THE RENOVATION. RESTORE THE CEILING.
- 5 DEMO EXHAUST SYSTEM.

A Partial Mechanical Demolition Plan - Center Core
M2 SCALE: 1/8" = 1'-0"

| symbol | date | description | by |
|-----------|------|-------------|----|
| REVISIONS | | | |



- KEY NOTES**
1. SET THE RETURN GRILLE OVER THE ICE MAKER.
 2. KILL SWITCH FOR AHU-1 & 2.
 3. KILL SWITCH FOR DOAS-1 & 2.

- GENERAL NOTES:**
1. LOCATION OF LIGHTS HAVE PRIORITY OVER THE SUPPLY AND RETURN GRILLES. IF THERE IS A CONFLICT BETWEEN THE LIGHTS AND THE GRILLES, THE LIGHTS HAVE PRIORITY AND THE GRILLES NEED TO MOVE.
 2. REPLACE ANY REGISTER THAT IS TO BE REUSED IF IT IS TOO SMALL. MINIMUM SIZE IS DESIGNATED ON THE GRILLE I.D.
 3. CONNECT AHU-1 & 2 AND DOAS-1 & 2 TO THE FACP TO SHUT DOWN ON GENERAL ALARM.

A Partial Mechanical Plan - Center Core Renovation
M3 SCALE: 1/8" = 1' - 0"

| symbol | date | description | by |
|-----------|------|-------------|----|
| REVISIONS | | | |

DATE: 02/21/2025
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TIME: 9:28

1700 MECHANICAL SPECIFICATIONS

1701 GENERAL

- A. CODES, REGULATIONS AND STANDARD INSTALLATION ARE TO COMPLY WITH THE LATEST EDITION OF THE NORTH CAROLINA STATE BUILDING CODE, NFPA 90A, AND ALL OTHER APPLICABLE LOCAL AND NATIONAL CODES. IN THE CASE OF CONFLICT BETWEEN VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- B. FEES AND PERMITS: PROVIDE ALL LICENSES, FEES, PERMITS, INSURANCE, ETC., REQUIRED FOR THE EXECUTION OF THIS WORK.
- C. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS, PERFORM ALL WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE HEATING, AIR CONDITIONING AND VENTING SYSTEM COMPLETE AND READY FOR USE BY THE OWNER.
- D. GUARANTEE: ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. ALL COMPRESSORS SHALL HAVE A FIVE (5) YEAR GUARANTEE STARTING AFTER FINAL ACCEPTANCE OF WORK.
- E. IT IS UNDERSTOOD AND AGREED THAT THESE PLANS AND SPECIFICATIONS SHALL BE FULFILLED IN THEIR TRUE SPIRIT AND INTENT SO THAT ANY MINOR MATERIALS OR DEVICES ESSENTIAL TO PROPER AND CONVENIENT OPERATION, REQUIRED OR IMPLIED, SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR WITHOUT EXTRA CHARGE, EVEN THOUGH NOT SPECIFICALLY CALLED FOR.
- F. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY.
- G. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE SPECIFICATIONS, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- H. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM THE JOB SITE. THE MECHANICAL CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA.
- I. DIVISION 1 SHALL BECOME A PART OF THESE SPECIFICATIONS BY REFERENCE.
- J. ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE, CONTACT SEISMIC CONTROL AND ISOLATION, INC. PHONE: 910-799-5204. ALL REQUIRED INSPECTIONS FOR THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED INSPECTORS AND AGENCIES HIRED BY THE OWNER OR OWNER'S AGENT.
- K. ALL ROOF MOUNTED MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR WIND DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. ALSO FOR WORK IN THE SEISMIC ZONE, ALL MECHANICAL, ELECTRICAL AND PLUMBING SHALL BE SECURED PER THE NORTH CAROLINA BUILDING CODE FOR SEISMIC CONSTRUCTION. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE, CONTACT SEISMIC CONTROL AND ISOLATION, INC. PHONE: 910-799-5204. ALL REQUIRED INSPECTIONS FOR THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED INSPECTORS AND AGENCIES HIRED BY THE OWNER OR OWNER'S AGENT AS REQUIRED BY THE BUILDING CODE.
- L. THE CONTRACT DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY DIMENSIONED. THE MECHANICAL CONTRACTOR SHALL FOLLOW THE DRAWING AS CLOSELY AS POSSIBLE; HOWEVER, NECESSARY ADJUSTMENTS SHALL BE MADE AS REQUIRED TO CONFORM TO STRUCTURAL CONDITIONS, WORK OF OTHER CONTRACTORS AND THE INTENT OF THE DRAWINGS WITHOUT ADDITIONAL COST TO THE OWNER. THE DRAWINGS SHALL NOT BE SCALED. SECURE DIMENSIONS FROM ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL BUILDING COMPONENTS.

1702 SCOPE

- WORK SHALL INCLUDE BUT NOT BE LIMITED TO:
- A. PROVIDE AND INSTALL SPLIT SYSTEM HEAT PUMP SYSTEMS, DUCT AND REGISTERS.
- B. PROVIDE AND INSTALL VENT FANS AND DUCT.
- C. PROVIDE AND INSTALL ALL CONTROLS AND DUCT DETECTORS.
- D. PROVIDE ALL INCIDENTAL MATERIALS AND EQUIPMENT FOR A COMPLETE AND FUNCTIONING HVAC SYSTEM.
- E. PROVIDE ALL REQUIRED DEMOLITION.

1703 MATERIALS

- A. AIR CONDITIONING DUCT SHALL BE:
1. ALL HEATING AND COOLING MAIN SUPPLY AND RETURN DUCT SHALL BE GALVANIZED SHEET METAL WITH FIBERGLASS WRAP WITH FOIL BACKING, UL LABELED FOR CLASS 1 AIR DUCT MEETING NFPA 90 FLAME SPREAD AND SMOKE GENERATION REQUIREMENTS. DUCT INSULATION SHALL COMPLY WITH ALL NORTH CAROLINA ENERGY CODE REQUIREMENTS AND HAVE A MINIMUM R-VALUE AS SHOWN BELOW:
EXTERIOR R=6.0
INTERIOR R=6.0
2. INSULATION SHALL MEET ALL CODE REQUIREMENTS.
3. FLEX RUNOUTS SHALL BE FLEX DUCT BY ATCO OR EQUAL AND SHALL BE UL LABELED FOR CLASS 1 AIR DUCT MEETING NFPA 90 FLAME SPREAD AND SMOKE GENERATION REQUIREMENTS. MINIMUM R-VALUE SHALL BE R=6.
4. RIGID RUN OUTS SHALL BE GALVANIZED SHEET METAL WITH FIBERGLASS WRAP WITH FOIL BACKING WHICH MEET REQUIREMENTS OF ITEM 1.
5. PROVIDE SINGLE THICKNESS TURNING VANES IN MAIN SUPPLY AND RETURN DUCT AT TEES AND 90° ELLS.
6. FRESH AIR MAKE-UP SHALL BE CLASS 1 DUCT WITH INSULATION WHICH MEET REQUIREMENTS OF ITEM 1.
7. VENT DUCT:
- 6.1 VENT DUCT SHALL BE 26 GA. MINIMUM GALVANIZED SHEET METAL.
- 6.2 THE FIRST 3'-0" OF DUCT FROM THE EXTERIOR WALL SHALL BE INSULATED WITH INSULATION MEETING REQUIREMENTS OF ITEM 1 (MINIMUM R-VALUE SHALL BE 6.0).
- 6.3 VENTILATION DUCT FOR EXHAUST FAN MAY BE UNINSULATED EXCEPT AS REQUIRED BY ITEM 6.2.
- 6.4 THE VENTILATION DUCTS FOR ENERGY RECOVERY UNITS SHALL BE INSULATED AS FOLLOWS:
- 6.4.1 IN ATTICS OUTSIDE THE THERMAL ENVELOPE THE INCOMING EXHAUST AIR STREAM AND THE INCOMING DISCHARGE AIR STREAM ON THE FRESH AIR DUCTING SHALL BE INSULATED WITH THE INSULATION MEETING THE REQUIREMENTS OF ITEM 1.
- 6.4.2 IN ATTICS THAT ARE SEMI-CONDITIONED SPACES INSIDE THE THERMAL ENVELOPE ALL DUCTS (INCOMING AND DISCHARGE, VENT AND FRESH AIR) SHALL BE INSULATED WITH THE INSULATION MEETING THE REQUIREMENTS OF ITEM 1.
- B. THERMOSTAT CABLE SHALL BE UL APPROVED FOR THE APPLICATION.
- C. CONDENSATE PIPE SHALL BE 1" PVC WITH 1/2" ARMAFLEX TYPE INSULATION FOR INTERIOR RUNS.
- D. ALL RUNOUT SUPPLY DUCTS SHALL HAVE BALANCING DAMPERS.
- E. REFRIGERATION TUBING SHALL BE SIZED AND INSULATED AS PER MANUFACTURER'S RECOMMENDATIONS AND STATE BUILDING CODE REQUIREMENTS.
- F. ALL SUPPLY AND RETURN GRILLES SHALL HAVE FULLY INSULATED BACK UNLESS NOTED OTHERWISE.
- G. ALL INTAKE OPENINGS SHALL BE PROTECTED WITH A CORROSION RESISTANT SCREEN WITH OPENINGS GREATER THAN 1/4" AND NOT GREATER THAN 1".
- H. ALL EXHAUST OPENINGS (EXCEPT DRYER EXHAUST) SHALL BE PROTECTED WITH A CORROSION RESISTANT SCREEN WITH OPENINGS NOT LESS THAN 1/4" AND NOT GREATER THAN 1/2".
- I. FILTERS SHALL BE MERV-13.

1704 EXECUTION

- A. ALL JOBS SHALL BE DRILLED OR CUT, DO NOT BREAK HOLES.
- B. THE MECHANICAL CONTRACTOR SHALL DO ALL CUTTING, PATCHING, AND PAINTING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED UNDER THIS CONTRACT, AND SHALL ESTABLISH ALL FINISHES WHEN CUTTING AND PATCHING OCCUR TO THEIR ORIGINAL CONDITION. QUALIFIED WORKERS SHALL DO ALL CUTTING AND PATCHING WORK (I.E. DRY WALL CUTTING AND PATCHING SHALL BE DONE BY QUALIFIED DRY WALL CRAFTSMEN.)
- C. CONTRACTOR SHALL BALANCE THE AIR CONDITIONING SYSTEM AS SHOWN ON THE PLANS WITHIN 10% OF THE NUMBER SHOWN. CONTRACTOR SHALL SUBMIT A BALANCING REPORT SHOWING THE ACTUAL CFM READINGS OF ALL SUPPLY REGISTERS TO THE ARCHITECT AT THE COMPLETION OF THE PROJECT.
- D. UNLESS NOTED OTHERWISE THE DUCT DIMENSIONS SHOWN REFER TO THE DUCTS INSIDE FREE AIR SPACE DIMENSION. ROUND OR RECTANGULAR DUCT MAY BE USED IN PLACE OF THE TYPE OF DUCT SHOWN AS LONG AS THE FOLLOWING REQUIREMENTS ARE MET:
1. THE REPLACEMENT DUCT SIZE SHALL HAVE A STATIC PRESSURE DROP AND AVERAGE DUCT VELOCITY EQUAL TO OR LESS THAN THE DUCT SIZE SHOWN ON THE DRAWINGS.
2. THE CONTRACTOR SHALL TAKE RESPONSIBILITY FOR THE NEW DUCT DESIGN, INCLUDING BUT NOT LIMITED TO, FIT, CLEARANCES AND EFFECTS ON OTHER TRADES.
- E. CONTRACTOR SHALL SUPPLY ALL HANGERS AND SUPPORTS NECESSARY TO SUSPEND DUCT WORK AND EQUIPMENT AS PER GOOD INSTALLATION PRACTICE.
- F. ALL DUCT SHALL BE CONSTRUCTED, SUPPORTED AND REINFORCED PER SMACNA STANDARDS.
- G. MECHANICAL CONTRACTOR SHALL PROVIDE ALL THERMOSTATS, CONTROL, RELAY, STARTERS ETC., FOR A COMPLETE CONTROL SYSTEM FOR THE HEAT PUMP UNITS.
- H. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR PENETRATIONS AND PATCHING.
- I. MECHANICAL CONTRACTOR SHALL PROVIDE CONDENSATE PUMPS WHERE GRAVITY DRAINAGE OF CONDENSATE IS NOT POSSIBLE WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- J. INSTALLATION SHALL COMPLY WITH ALL NORTH CAROLINA STATE ENERGY CODE REQUIREMENTS.
- K. ALL REFRIGERATION PIPING AND CONDENSATE PIPING SHALL BE PROPERLY SUPPORTED AS PER MANUFACTURERS RECOMMENDATIONS, NORTH CAROLINA BUILDING CODE, AND GOOD PIPING PRACTICES. PROPER DRAINAGE OF CONDENSATE LINES SHALL BE MAINTAINED.
- L. ALL MATERIALS AND EQUIPMENT SHALL BE PROPERLY INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS AND GOOD PRACTICE.
- M. THERE WILL BE MINIMUM 25" CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL BUILDING EXHAUSTS AND PLUMBING VENTS.
- N. HORIZONTAL AIR HANDLER INSTALLATIONS SHALL INCLUDE VIBRATION ISOLATION SUPPORTS. VERTICAL FLOOR MOUNTED AIR HANDLERS SHALL BE SUPPORTED ON CORK PADS.
- O. AIR INTAKE AND EXHAUST WEATHER CAPS, GRILLES, AND LOUVERS SHALL BE SIZED TO PRODUCE A STATIC PRESSURE DROP OF .05" OR LESS AT DESIGN AIR FLOW. WEATHER CAPS SHALL BE ALUMINUM BY GREENHECK OR EQUAL.
- P. DUCT SYSTEMS SHALL BE SEALED STRICTLY AS PER NORTH CAROLINA ENERGY CODE.
- Q. ALL DUCT WORK TRANSITIONS SHALL BE SUPPLIED AS REQUIRED FOR CONNECTION OF ALL DUCTED EQUIPMENT AND SYSTEM COMPONENTS.
- R. ALL OUTSIDE AIR INTAKE DUCTS (ONE FOR EACH AIR HANDLER) SHALL HAVE BACKDRIFT DAMPERS BALANCED TO OPEN AND ALLOW IN OUTSIDE AIR AS INDICATED ON DRAWINGS. WHEN AIR HANDLER FAN IS RUNNING, THE USE OF ELECTRONICALLY DRIVEN DAMPERS TIED TO THE AIR HANDLER OPEN WHEN FAN IS ON, CLOSED WHEN FAN IS OFF, SHALL BE AN ACCEPTABLE ALTERNATE. ALL ELECTRICAL CONNECTIONS SHALL BE COORDINATED WITH ELECTRICIAN.
- S. PROVIDE OPERATIONS AND MAINTENANCE MANUALS TO OWNER FOR ALL EQUIPMENT.

1705 ELECTRICAL CONNECTIONS

- ELECTRICAL CIRCUIT SIZES AND NUMBER ARE BASED ON THE MANUFACTURER OF THE EQUIPMENT SPECIFIED, AND IT SHALL BE THE RESPONSIBILITY OF THE HEATING AND AIR CONDITIONING CONTRACTOR TO CHANGE ANY AND ALL ELECTRICAL WORK IN ORDER TO FIT EQUIPMENT OTHER THAN THAT SPECIFIED. THE HEATING AND AIR CONDITIONING CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR AND THE OWNER TO ASSURE THAT ALL UNITS ARE PROPERLY CONNECTED AND SHALL CHECK THE WIRING PRIOR TO STARTING UNITS. TERMINATION OF ELECTRICAL POWER WILL BE AS FOLLOWS:
1. ELECTRICAL CONTRACTOR SHALL PROVIDE AND CONNECT ALL POWER TO THE MECHANICAL EQUIPMENT.
2. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE CONTROL AND THERMOSTAT SYSTEMS FOR THE HEATING, AIR CONDITIONING SYSTEMS.
3. MECHANICAL CONTRACTOR SHALL PROVIDE THE EMERGENCY SHUTDOWN CONTROLS AND COORDINATE WITH THE ELECTRICAL CONTRACTOR ON DUCT DETECTOR INSTALLATION AND AIR HANDLING UNIT SHUTDOWN.
4. MECHANICAL CONTRACTOR SHALL PROVIDE ANY REQUIRED ELECTRICAL CONNECTIONS FOR CONDENSATE PUMPS WITHOUT ADDITIONAL COST TO THE OWNER.

1706 TESTS

- A. ALL HEATING COOLING AND VENTILATION EQUIPMENT, UPON COMPLETION, SHALL BE TESTED FOR AT LEAST ONE (1) DAY AND SHALL BE SHOWN TO BE IN SATISFACTORY CONDITION ON BOTH HEATING AND COOLING.
- B. CONTRACTOR SHALL SUPPLY ALL NECESSARY LABOR AND EQUIPMENT FOR THE TEST.

1707 SUBSTITUTION

- ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS SPECIFIED. REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO FULLY IDENTIFY AND APPRAISE THE PRODUCTS. APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.

1708 VISIT TO SITE

- ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.

1709 SHOP DRAWINGS

- AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF SHOP DRAWINGS OF HEAT PUMPS, REGISTERS, FANS, ANY SPECIAL EQUIPMENT WHICH HE INTENDS TO USE. FOUR (4) COPIES OF THIS DATA WILL BE RETURNED BY THE ENGINEER WHO WILL INDICATE APPROVAL OR OTHERWISE.

1710 FIRE RATED WALLS, FLOORS & CEILINGS

- CONTRACTOR SHALL DETERMINE LOCATION OF ALL FIRE AND SMOKE RATED WALLS, FLOORS AND CEILINGS FROM ARCHITECTURAL DRAWINGS. PIPING PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE AS REQUIRED BY NORTH CAROLINA BUILDING CODE WITH APPROVED AND APPROPRIATELY RATED UL FIRESTOP SYSTEMS AT ALL PENETRATIONS. ALL DUCT PENETRATIONS SHALL BE PROPERLY PROTECTED WITH RADIATION OR FIRE DAMPERS WITH ALL INSTALLATION STRICTLY AS PER MANUFACTURERS RECOMMENDATIONS.

1711 PLACING IN SERVICE

- UPON COMPLETION OF THE ENTIRE SYSTEM, THE MECHANICAL CONTRACTOR SHALL INSTALL NEW AIR FILTERS AND LEAVE ENTIRE SYSTEM CLEAN AND READY FOR OPERATION. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE THE PROPER FUNCTION OF THE ENTIRE SYSTEM. THE MECHANICAL CONTRACTOR SHALL ACQUAINT THE OWNERS REPRESENTATIVE WITH THE PROPER OPERATION OF THE ENTIRE SYSTEM.

1712 DEMOLITION

- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED MECHANICAL DEMOLITION. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TESTING FOR ASBESTOS, LEAD BASED PAINT OR OTHER HAZARDOUS MATERIALS BEFORE DEMOLITION. IF SUCH MATERIALS ARE FOUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDIAL ACTION AS PER LOCAL, STATE AND FEDERAL REGULATIONS BY CONTRACTOR CERTIFIED AND LICENSED FOR THIS WORK. ALL DEMOLITION AND DISPOSAL SHALL BE AS PER ALL PERTINENT LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR SHALL PRESENT OWNER WITH WORK PLAN AND DISPOSAL PLAN FOR ALL HAZARDOUS MATERIALS AND SUBSTANCES. THE CONTRACTOR SHALL DELIVER TO THE OWNER ALL ITEMS THE OWNER WISHES TO RETAIN. ALL OTHER EQUIPMENT AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE.

SPLIT SYSTEM HEAT PUMP SCHEDULE

| COMPRESSOR | | | | | | | | | | AIR HANDLING UNIT | | | | | | | | | | | | | |
|------------|-------------------------|----------|-------|-----|------|-------|-----------|--------|--------|-------------------|----------|-------|-----|------|-------|-----------|---------|------------------------|-----------------------------|------|---------------|------------------|---------|
| SYMBOL | COOLING CAPACITY (TONS) | ELECTRIC | | | | MFG. | MODEL | SYMBOL | TYPE | STRIP (KW) | ELECTRIC | | | | MFG. | MODEL | FAN CFM | FRESH AIR INTAKE (CFM) | ESP (IN OF H2O) VERT/H.L.R. | SEER | DUCT DETECTOR | HUMIDITY CONTROL | REMARKS |
| | | VOLT | PHASE | MCA | MOCP | | | | | | VOLT | PHASE | MCA | MOCP | | | | | | | | | |
| HP-1 | 3 TONS | 208 | 1ø | 18 | 30 | TRANE | 4TWR4036N | AHU-1 | VERT. | 7.2 | 208 | 1ø | 49 | 50 | TRANE | TEM6AC36H | 1,200 | 150 | 0.7 | - | NO | YES | - |
| HP-2 | 3 TONS | 208 | 1ø | 18 | 30 | TRANE | 4TWR4036N | AHU-2 | HORIZ. | 7.2 | 208 | 1ø | 49 | 50 | TRANE | TEM6AC36H | 1,180 | 150 | 0.7 | - | NO | YES | - |

NOTES A/C UNITS:

1. PROVIDE GALVANIZED DRIP PANS WITH FLOAT SWITCHES.
2. INCLUDE AUTOMATIC CROSSOVER THERMOSTAT SET AT 5°-40° AFF. PROVIDE PROGRAMMABLE THERMOSTATS WITH SETBACK TO 55° (HEAT AND 85° (COOL), 7 DAY CLOCK, 2 HOUR OCCUPANT OVERRIDE, 10 HOUR BACKUP. PROVIDE 5° DEAD BAND FOR AUTO CHANGEOVER.
3. PROVIDE CONCRETE PAD FOR COMPRESSORS. SECURE OUTDOOR UNIT TO CONCRETE PAD.
4. ALL INTAKE DUCTS SHALL HAVE ALUMINUM WEATHER CAPS, TO PREVENT THE INTAKE OF RAIN. INTAKE DEVICE SHALL BE APPROVED BY THE ENGINEER. PAINT INTAKE THE SAME COLOR AS THE ROOF.
5. CONTRACTOR SHALL BALANCE SYSTEM. CONTRACTOR SHALL PRESENT BALANCING REPORT TO ARCHITECT AT FINAL INSPECTION.
6. CONTRACTOR SHALL CONSTRUCT FILTER HOUSING AND PROVIDE FILTERS AT EACH AHU. FILTER SHALL BE SIZED PER MFG. RECOMMENDATIONS. PROVIDE MERV-13 FILTERS.
7. PROVIDE FRENCH DRAINS PER N.C. STATE CODE FOR CONDENSATE DISCHARGE OR DROP CONDENSATE ON ROOF IF ACCEPTABLE TO LOCAL AUTHORITIES. AVOID NUISANCE PUDDLING.
8. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL INDOOR AND OUTDOOR UNITS.
9. CONSULT WITH COMPRESSOR MANUFACTURER FOR THE CORRECT SIZING OF REFRIGERANT LINES.
10. PROVIDE KILL SWITCH AT NURSE'S STATION AND CONNECT TO THE FACP TO SHUTOFF ON GENERAL ALARM.
11. PROVIDE LOW AMBIENT CONTROLS FOR FREEZE PROTECTION.
12. PROVIDE CONTROLS THAT PREVENT AUXILIARY HEAT STRIPS FROM BEING ACTIVATED WHEN THE HEAT PUMP CAN HANDLE THE HEATING LOAD EXCEPT DURING DEFROST CYCLE.
13. PROVIDE HUMIDISTAT. HUMIDISTAT SHALL ACTIVATE THE COOLING CYCLE UPON HIGH HUMIDITY CALL. THE THERMOSTAT SHALL BE CAPABLE OF OPERATING THE HEAT STRIPS FOR TEMPERATURE CONTROL WHILE A HIGH HUMIDITY CALL IS BEING MADE. CONSULT WITH EQUIPMENT MANUFACTURER FOR WIRING DIAGRAM.
14. PROVIDE GRAVITY BACKDRAFT DAMPER OR MOTORIZED DAMPER FOR OUTDOOR AIR.

FRESH AIR MAKE UP UNIT SCHEDULE

| SYMBOL | DESCRIPTION | MANUFACTURER | MODEL | ELECTRIC | | | | S.P. | SUPPLY | RETURN | WINTER OUTSIDE AIR | | WINTER COND AIR | | SUMMER OUTSIDE AIR | | SUMMER COND AIR | | LA SUMMER | | LA WINTER | | COMP | TOTAL COOLING CAP | TOTAL HEATING CAP | SHIPPING WEIGHT | REMARKS |
|--------|------------------------|--------------|---------------|----------|-------|------|---------|------|---------|---------|--------------------|-----|-----------------|-----|--------------------|---------|-----------------|---------|-----------|---------|-----------|---------|----------|-------------------|-------------------|-----------------|---------|
| | | | | VOLT | PHASE | MCA | BREAKER | | | | TEMP | RH | TEMP | RH | TEMP | WB | TEMP | WB | TEMP | WB | TEMP | WB | | | | | |
| DOAS-2 | 100% FRESH AIR MAKE UP | ALPHA AIRE | AAH100G1ASTA3 | 208 | 1ø | 10.4 | 15/2 | 1" | 400 CFM | 400 CFM | 15° F | 80% | 70° F | 42% | 93.2° F | 80.8° F | 77° F | 65.3° F | 78.2° F | 61.9° F | 77.6° F | 58.6° F | 0.75 TON | 31,900 | 40,000 | 750 LBS. | - |

NOTES:

1. PROVIDE MERV-13 FILTER 12"x24" RACK.
2. COORDINATE WITH GC TO ENLARGE ATTIC ACCESS PORT TO ALLOW A 28"x30" UNIT.
3. PROVIDE CONDENSATE PIPING OR CONDENSATE PUMP.
4. AIR BALANCE FOR DOAS UNITS MUST BE 15% MAXIMUM.
5. PROVIDE MEANS TO BALANCE AIR AT UNIT.

FRESH AIR MAKE UP UNIT SCHEDULE

| SYMBOL | DESCRIPTION | MANUFACTURER | MODEL | DISCHARGE | INTAKE | ELECTRIC | | | | | AIR SUPPLY | MINIMUM AIR FLOW | WEIGHT (LBS) | COOLING CAPACITY | | REMARKS |
|--------|-------------------|--------------|---|-----------|------------|----------|-------|------|-------|---------|------------|------------------|--------------|------------------|-------------------------|---------|
| | | | | | | VOLT | PHASE | FLA | MCA | BREAKER | | | | GROSS CAPACITY | GROSS SENSIBLE CAPACITY | |
| DOAS-1 | FRESH AIR MAKE UP | HORIZON | DADE-109F3-01B4C1KE-D3000AF005003B001A0 | VERTICAL | HORIZONTAL | 208 | 3ø | 90.6 | 111.6 | 125/3 | 1000 CFM | 786 CFM | 1,532 | 90.5 MBH | 47.8 MBH | ASHP |

FRESH AIR MAKE UP UNIT NOTES:

1. PROVIDE MERV-13 FILTERS.
2. PROVIDE CONCRETE PAD & SECURE UNIT TO THE CURB.
3. HP HEATING

FAN SCHEDULE

| SYMBOL | DESCRIPTION | CFM | SP | SET CFM | VOLT | PHASE | HP | AMPS | MOUNTING | MFG. | MODEL | REMARKS |
|--------|-------------|------|-----|---------|------|-------|----|------|----------|-----------|--------------|---------|
| F-1 | INLINE FAN | 1439 | 3/8 | 1010 | 120 | 1 | - | - | INLINE | GREENHECK | CSP-A1410-QD | - |
| F-2 | INLINE FAN | 566 | 3/8 | 460 | 120 | 1 | - | - | INLINE | GREENHECK | CSP-A710-QD | - |

FAN NOTES:

1. PROVIDE BACK DRAFT DAMPER.
2. PROVIDE VARIABLE SPEED CONTROL.

REGISTER SCHEDULE

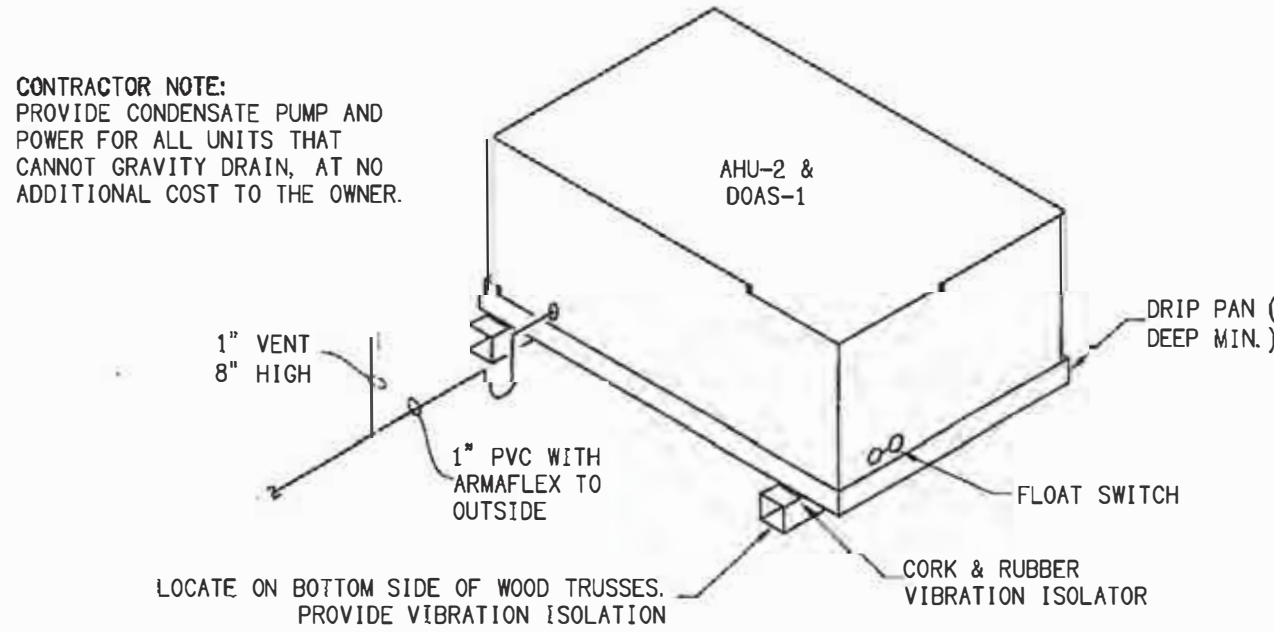
| SYMBOL | DESCRIPTION | NECK | RUN OUT | FIRE DAMPER | MATERIAL | COLOR | MFG. | MODEL | REMARKS |
|--------|----------------------------|-------|---------|-------------|----------|-------|------|-------|----------------------|
| A | LOUVERED FACE 4-WAY SUPPLY | 6x6 | 6"ø | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| B | LOUVERED FACE 4-WAY SUPPLY | 6x6 | 7"ø | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| C | LOUVERED FACE 4-WAY SUPPLY | 9x9 | 8"ø | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| D | LOUVERED FACE 4-WAY SUPPLY | 9x9 | 9"ø | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| E | LOUVERED FACE 4-WAY SUPPLY | 12x12 | 10"ø | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| RA | LOUVERED FACE RETURN | 8x8 | - | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| RB | LOUVERED FACE RETURN | 12x12 | - | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |
| RC | LOUVERED FACE RETURN | 18x18 | - | YES | STEEL | WHITE | | | MATCH EXISTING STYLE |

ROOF MOUNTED GRAVITY VENTILATOR

| SYMBOL | TYPE | CFM | SIZE | MFG. | MODEL | MATERIAL | REMARKS |
|--------|-----------|-------|------|-----------|--------|----------|---------|
| DC-1 | DISCHARGE | 810 | 16 | GREENHECK | GRS-16 | ALUMINUM | - |
| DC-2 | DISCHARGE | 1,010 | 20 | GREENHECK | GRS-20 | ALUMINUM | - |
| IC-1 | INTAKE | 900 | 18 | GREENHECK | GRS-18 | ALUMINUM | - |
| IC-2 | INTAKE | 150 | 8 | GREENHECK | GRS-8 | ALUMINUM | - |

GRAVITY VENTILATOR NOTES:

1. PROVIDE ROOF CURB.
2. FOR IC-1 & 2, THE INTAKE SHALL BE 37" ABOVE THE ROOF.



CONTRACTOR NOTE:
PROVIDE CONDENSATE PUMP AND POWER FOR ALL UNITS THAT CANNOT GRAVITY DRAIN, AT NO ADDITIONAL COST TO THE OWNER.

| | |
|----|----------------------------------|
| A | Horizontal AHU Condensate Piping |
| M5 | SCALE: NTS (ATTIC UNITS) |

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Architecture Planning Design

BUILDING RENOVATIONS

M5

| symbol | date | description | by |
|-----------|------|-------------|----|
| REVISIONS | | | |