

| ROOFTOP UNIT SCHEDULE | | | | | | | | | | | | | | | | | | |
|-----------------------|----------|-------------|----------------|-------------|----------------------|-----------|----------|----------|----------------|----------------------------|-----------------------------|----------------|-------------------------|-------------------------|--------------------|-------------------|---------------------|------------------------|
| ID | LOCATION | SERVES | SUPPLY FAN CFM | MOTOR DRIVE | MIN. OUTDOOR AIR CFM | ESP IN WG | MOTOR HP | VOLTS/PH | HEATING MEDIUM | HEATING INPUT CAPACITY MBH | HEATING OUTPUT CAPACITY MBH | COOLING MEDIUM | GROSS COOL CAPACITY MBH | SENS. COOL CAPACITY MBH | FILTER SIZE/NUMBER | FILTER EFFICIENCY | MANUFACTURER | REMARKS |
| RTU-1 | ROOF | SALES FLOOR | 8,400 | DIRECT | 2,270 | 1.5 | 10 | 208/3 | GAS | 405.0 | 328.1 | R-410A | 287.1 | 160.1 | 16X20X2 - 9 | MERV 7 | CES-MPU-025-RH-0003 | (1)(2)(3)(4)(5)(6)(10) |
| RTU-2 | ROOF | OFFICE AREA | 600 | DIRECT | 120 | 0.5 | 1/4 | 208/1 | GAS | 65.0 | 52.0 | R-410A | 24.4 | 23.6 | 16X20X2 - 4 | 30% | LENNOX KGA02454D | (7)(8)(9)(11) |

- PROVIDE 14" HIGH INSULATED ROOF CURB & BURGLAR BARS ON SUPPLY AND RETURN OPENINGS. RTU-1 ROOF CURB IS BY AES INDUSTRIES CONTACT GEORGE LASHER T(800)786-0402 X 216. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PURCHASING THE ROOF CURB DIRECTLY FROM AES INDUSTRIES.
- PROVIDE WITH THROUGH THE BASE SINGLE POINT ELECTRICAL CONNECTION. DISCONNECT, VFD 2-SPEED OPERATION, OA HOOD, PROOF AIRFLOW SWITCH, CLOGGED FILTER SWITCH, STAINLESS STEEL DRAIN PAN, 120V CONVENIENCE OUTLET, HEAT RECLAIM COIL, & DEHUMIDIFICATION CONTROL.
- UNIT SUPPLIED BY OWNER, RECEIVED, RIGGED AND INSTALLED BY MECHANICAL CONTRACTOR.
- ROOFTOP UNIT CONTROLLER IS FACTORY INSTALLED IN THE CES MULTI-PATH MPU. SPACE TEMPERATURE, SUPPLY AIR TEMPERATURE & SPACE HUMIDITY SENSORS ARE SUPPLIED BY CD CONTROLS AND SHIPPED TO REFRIGERATION CONTRACTOR FOR FIELD INSTALLATION.
- CES MULTI-PATH MPU IS MANUFACTURED BY AAON INC. (PRODUCTION 10 - 12 WEEKS) TO COORDINATE MPU SHIPPING OR FOR TECHNICAL SUPPORT CONTACT CES INC T(866)706-2647 X222. ALDIORDERS@CESINC.CA
- MECHANICAL CONTRACTOR TO REVIEW AND CONFIRM RTU SETPOINTS/STORE HOURS WITH ALDI DIRECTOR OF REAL ESTATE AND SIEMENS ENERGY MANAGEMENT USER GUIDE.
- PROVIDE WITH GLOBAL ECONOMIZER SECTION AND BAROMETRIC RELIEF DAMPERS.
- ALDI HAS A NATIONAL ACCOUNT WITH LENNOX INDUSTRIES. ALL LENNOX HVAC EQUIPMENT SHOULD BE QUOTED AND ORDERED THROUGH LENNOX NATIONAL ACCOUNTS. PLEASE CALL 800-367-6285 AND HIT "2" FOR SALES AND ASK FOR THE ALDI'S NATIONAL ACCOUNT SALES ADMINISTRATOR WHO WILL ASSIST YOU WITH QUOTES, AVAILABILITY AND ORDERS.
- PROVIDE 14" HIGH INSULATED ROOF CURB & BURGLAR BARS ON SUPPLY AND RETURN OPENINGS. FIELD VERIFY LOCATION.
- PROVIDE WITH CLOGGED CONDENSATE DRAIN SWITCH CONFORMING TO UL508 TO SHUT OFF HVAC UNIT.

| DUCTLESS SPLIT FAN COIL UNIT SCHEDULE | | | | | | | | | | | | | | | | |
|---------------------------------------|----------|--------|----------------|----------------------|-----------|---------|-----------|----------------|---------------------|----------------------------------|--------|----------------------------|-------------|-------------------|----------------|--------------|
| ID | LOCATION | SERVES | SUPPLY FAN CFM | MIN. OUTDOOR AIR CFM | ESP IN WG | FAN RPM | MOTOR MCA | MOTOR VOLTS/PH | TOTAL CAPACITY BTUH | COOLING COIL SENS. CAPACITY BTUH | MEDIUM | HEATING COIL CAPACITY BTUH | FILTER SIZE | FILTER EFFICIENCY | MANUFACTURER | REMARKS |
| FCU-1 | OFFICE | OFFICE | 300 | 30 | - | - | - | 208/1 | 9,900 | - | R-410A | 12,100 | - | MERV 8 | LG - LCN097HV4 | (1)(2)(3)(4) |

- PROVIDE WITH DRY CONTACT (INSTALLED BY REFRIGERATION CONTRACTOR) FOR INTEGRATION WITH SIEMENS BMS. CONTROLLED BY WALL MOUNTED TEMPERATURE SENSOR PROVIDED AND INSTALLED BY SIEMENS.
- COORDINATE REFRIGERANT LINE SIZING PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH MATCHING AIR COOLED HEAT PUMP SCHEDULED.
- PROVIDE VENTILATION KIT PTVK430, INLINE BOOSTER FAN (S&P USA TD100), CASSETTE GRILLE & CONDENSATE PUMP. INLINE BOOSTER FAN TO BE INSTALLED BY THE MECHANICAL CONTRACTOR; POWER WIRING BY THE ELECTRICIAN, CONTROL RELAY AND WIRING BY REFRIGERATION CONTRACTOR. INLINE BOOSTER FAN SHALL RUN WHEN THE FAN COIL UNIT OPERATES.

| AIR COOLED HEAT PUMP SCHEDULE | | | | | | | | | | | | | | | |
|-------------------------------|----------|--------|----------------------------|-----------------|----------------------------|-------------|--------------------|------|----------------------|----------------------|----------|------|------|---------------|---------|
| ID | LOCATION | SERVES | TOTAL COOLING CAPACITY MBH | OUTDOOR TEMP DB | TOTAL HEATING CAPACITY MBH | REFRIGERANT | COMPRESSORS NUMBER | SEER | REFRIGERANT CIRCUITS | CONDENSER FAN NUMBER | VOLTS/PH | MCA | MOCP | MANUFACTURER | REMARKS |
| HP-1 | ROOF | FCU-1 | 9.9 | 95 | 12.1 | R-410A | 1 | 20.2 | 1 | 1 | 208/1 | 11.9 | 15.0 | LG - LUU097HV | (1) |

- PROVIDE WITH MATCHING DUCTED SPLIT FAN COIL.

| VENTILATION RATE SCHEDULE | | | | | | | | | |
|---|--------------------------|--------------------|-----------------------------|-----------------|----------------|-------------------|---------------------------|--------------|--------------|
| NORTH CAROLINA MECHANICAL CODE 2012 TABLE 403.3 - SUPERMARKETS | | | | | | | | | |
| ROOM NAME | OCCUPANCY CLASSIFICATION | GROSS AREA (SQ FT) | NET OCCUPIABLE AREA (SQ FT) | TOTAL OCCUPANTS | CFM PER PERSON | CFM PER SQ. FT. | VENTILATION EFFECTIVENESS | REQ'D OA CFM | REQ'D EA CFM |
| SALES FLOOR/VEST. | SUPERMARKET | 14,738 | 13,950 | 112 | 7.5 | 0.06 | 0.8 | 2,100 | - |
| OFFICE | OFFICE SPACES | 252 | 252 | 1 | 5 | 0.06 | 0.8 | 25 | - |
| BREAK RM. | CONFERENCE RM. | 419 | 419 | 8 | 5 | 0.06 | 0.8 | 80 | - |
| MEN'S RM. | TOILET RM. - PUBLIC | 107 | 107 | - | - | 50 ⁽¹⁾ | - | - | 100 |
| WOMEN'S RM. | TOILET RM. - PUBLIC | 107 | 107 | - | - | 50 ⁽¹⁾ | - | - | 100 |
| HALL | CORRIDOR | 151 | 151 | - | - | 0.06 | - | 10 | - |
| BACK ROOM | WAREHOUSE | 3,376 | 3,376 | - | - | 0.06 | - | 200 | - |
| TOTAL OA REQUIRED | | | | | | | | 2,415 | - |
| TOTAL OA PROVIDED | | | | | | | | 2,420 | - |

- RATE PER WATER CLOSET/URINAL WITH EXHAUST OPERATING CONTINUOUSLY DURING OCCUPIED HOURS.

| EXHAUST FAN SCHEDULE | | | | | | | | | | | | |
|----------------------|-------------|------------|-------|--------|-------|-----------------|---------|------|---------|-------------------|--------------|--|
| ID | SERVES | LOCATION | TYPE | DRIVE | CFM | EXT. SP IN. WG. | FAN RPM | HP | VOLTAGE | MANUFACTURER | REMARKS | |
| EF-1 | BREAK ROOM | ROOF | CENT. | DIRECT | 180 | 0.25 | 1,319 | 1/30 | 120/1 | GREENHECK G-070-D | (1)(2)(3)(5) | |
| EF-2 | BACKROOM | ROOF | CENT. | DIRECT | 1,920 | 0.375 | 1,725 | 1/2 | 120/1 | GREENHECK G-123-A | (2)(3)(4)(5) | |
| EF-3 | TOILET | ROOF | CENT. | DIRECT | 300 | 0.4 | 1,519 | 1/20 | 120/1 | GREENHECK G-080-D | (2)(3)(4)(5) | |
| DF-1 | SALES FLOOR | ROOF JOIST | CENT. | DIRECT | 1,061 | - | 1,550 | 31W | 120/1 | AIR-FLOW F-18 | (6)(7)(8) | |
| DF-2 | SALES FLOOR | ROOF JOIST | CENT. | DIRECT | 1,061 | - | 1,550 | 31W | 120/1 | AIR-FLOW F-18 | (6)(7)(8) | |
| DF-3 | SALES FLOOR | ROOF JOIST | CENT. | DIRECT | 1,061 | - | 1,550 | 31W | 120/1 | AIR-FLOW F-18 | (6)(7)(8) | |

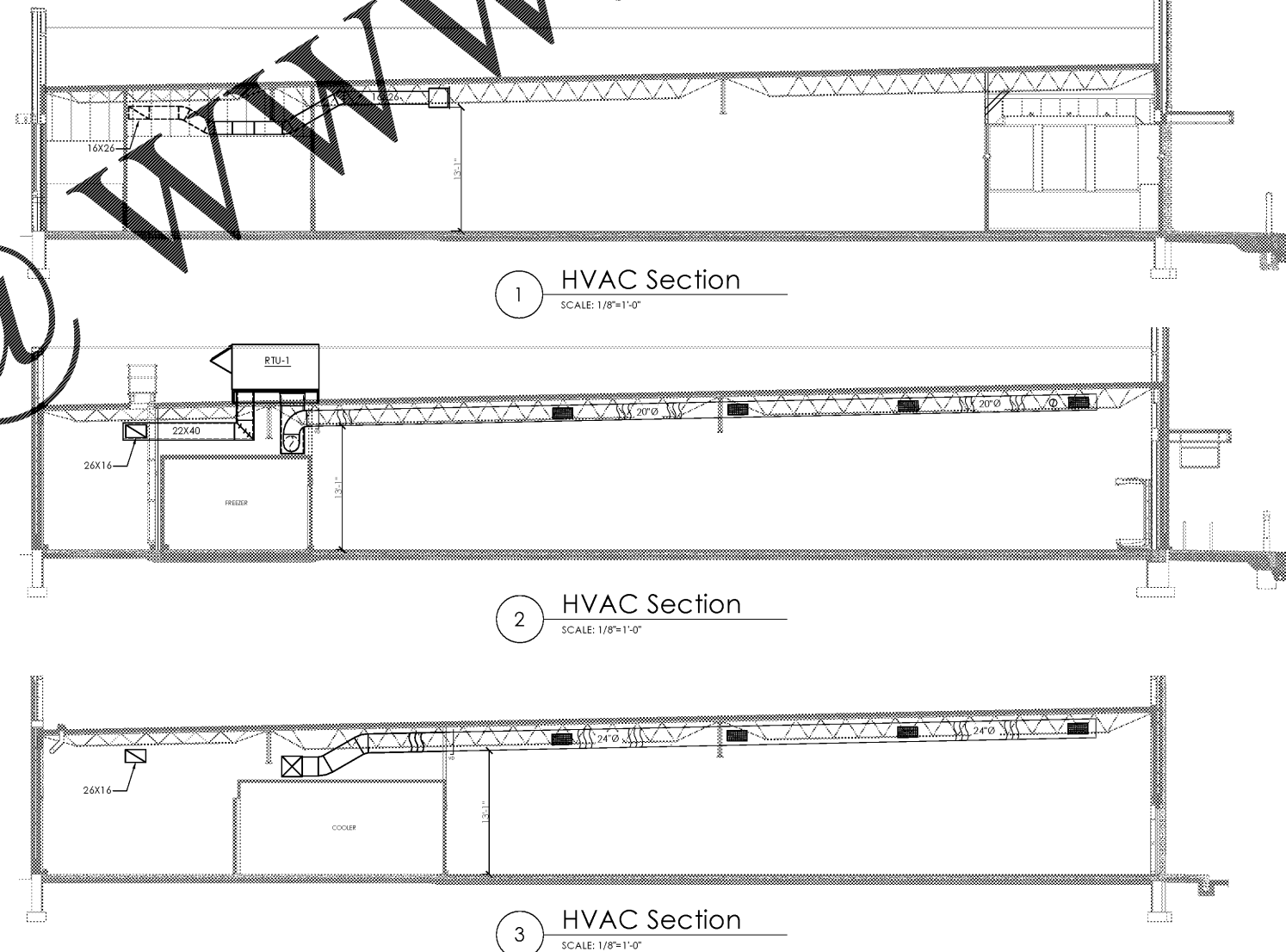
- CONTROLLED FROM WALL SWITCH PROVIDED AND WIRED BY DIVISION 16.
- PROVIDE SPEED CONTROLLER MOUNTED ON EXHAUST DUCT ABOVE CEILING.
- PROVIDE WITH 14" HIGH INSULATED ROOF CURB.
- CONTROLLED BY SIEMENS ENERGY MANAGEMENT SYSTEM.
- PROVIDE WITH BACK DRAFT DAMPER.
- FAN PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR. SUPPORT FAN FROM BUILDING STRUCTURE WITH BEAM CLAMP AND AIRCRAFT CABLE. INSTALL AT 1'-0" BELOW ROOF DECK AND PER MANUFACTURER'S RECOMMENDATIONS.
- FAN SHALL RUN CONTINUOUSLY. WIRING PROVIDED BY DIVISION 16. FACTORY SHALL PRESET FAN SPEED TO MAXIMUM.
- FAN TO BE FIELD PAINTED TO MATCH BUILDING STRUCTURE. PROTECT ALL MOVING PARTS PRIOR TO PAINTING.

| DIFFUSER/REGISTER/GRILLE SCHEDULE | | | | | | | | | | |
|-----------------------------------|----------|----------|-----------|-----------|-----------------|------------------|---------|--------------|---------|--|
| ID | SERVES | TYPE | FACE SIZE | NECK SIZE | CONST. MATERIAL | CEILING MOUNTING | MAX. NC | MANUFACTURER | REMARKS | |
| D-1 | SUPPLY | DIFFUSER | 24X24 | SEE PLANS | STEEL | T-BAR | 20 | TMSA | (1) | |
| R-1 | RETURN | PERF. | 24X24 | 12X12 | STEEL | T-BAR | 20 | TITUS PAR | (1) | |
| R-2 | SUPPLY | REGISTER | 24X12 | 24X12 | ALUMINUM | DUCT | 20 | TITUS S300FL | (2) | |
| R-3 | RETURN | GRILLE | 48X24 | 48X24 | STEEL | GWB | 20 | TITUS 350ZRL | (2) | |
| R-4 | TRANSFER | GRILLE | 48X12 | 48X12 | STEEL | GWB | 20 | TITUS 350 RL | (2) | |
| E-1 | EXHAUST | PERF. | 12X12 | 12X12 | STEEL | T-BAR | 20 | TITUS PAR | (1) | |

- COORDINATE CEILING TYPE WITH ARCHITECTURAL CEILING PLAN.
- PROVIDE PRIMED FINISH. REGISTERS/GRILLES TO BE PAINTED IN THE FIELD.

| GAS FIRED UNIT HEATER SCHEDULE | | | | | | | | | |
|--------------------------------|----------|------------|------|-----------------|-----|-----|---------|-----------------|---------|
| ID | LOCATION | TYPE | INHP | OUTPUT CAP. MBH | CFM | HP | VOLTAGE | MANUFACTURER | REMARKS |
| UH-1 | BACKROOM | POWER UNIT | 75.0 | 60.0 | 950 | 1/8 | 120/1 | LENNOX LF24-75A | (1) |
| UH-2 | BACKROOM | VENT | 75.0 | 60.0 | 950 | 1/8 | 120/1 | LENNOX LF24-75A | (1) |

- CONTROLLED BY THE SIEMENS ENERGY MANAGEMENT SYSTEM. THE TEMPERATURE SETPOINT SHALL BE 60°F.



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

2 HVAC Section
SCALE: 1/8"=1'-0"

3 HVAC Section
SCALE: 1/8"=1'-0"

| SYMBOLS & ABBREVIATIONS | |
|-------------------------|----------------------------------|
| | DUCT UP |
| | DUCT DOWN |
| | TEMPERATURE SENSOR |
| | HUMIDISTAT |
| | SMOKE DUCT DETECTOR |
| | DISCHARGE AIR TEMPERATURE SENSOR |
| | SINGLE BLADE VOLUME DAMPER |
| | OPPOSED BLADE VOLUME DAMPER |
| | DUCTWORK WITH 1" INTERNAL LINING |
| | 12X12 SHEETMETAL ACCESS DOOR |
| | FIRE DAMPER WITH ACCESS DOOR |
| | ROUND CONCENTRIC TAKEOFF |
| | BELL MOUTH TAKEOFF |
| | BOD |
| | EF |
| | RTU |
| | UH |
| | VAV |
| | FCU |
| | HP |

DUCT SMOKE DETECTOR SYSTEM SPECIFICATION
DUCT SMOKE DETECTOR SHALL BE SYSTEM SENSOR MODEL D4120 SERIES 4 WIRE PHOTOELECTRIC HOUSING SHALL BE UL LISTED. PROVIDE REMOTE TEST STATION WITH KEY, RTS151KEY. REMOTE TEST STATION SHALL BE INSTALLED BY MECHANICAL CONTRACTOR. SHALL PROVIDE AND INSTALL WALL MOUNTED SMOKE DETECTOR.

REFRIGERATION DRAWINGS
REFRIGERATION DRAWINGS ARE UNDER A SEPARATE CONTRACT AND WILL BE SUBMITTED AT A LATER DATE AS A REVISION TO APPROVED PLANS (RTAP). LICENSED MECHANICAL ENGINEER TO DESIGN REFRIGERATION PLANS TO CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES.

| | |
|---------------------|----------|
| Issued: | Date: |
| A Permit Set | 12/05/17 |
| B Client Review Set | 05/03/18 |
| C Bid Set | 05/11/18 |
| D | |
| Revisions: | Date: |
| 1 | |
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| 8 | |
| 9 | |

DO NOT SCALE PLANS
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Seal

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Mecklenburg County
Project Name & Location:

| | |
|---------------------------|-------------|
| HVAC Sections & Schedules | |
| Drawing Name: | Project No. |
| Prototype Rls. 09/07/17 | 40452-13 |
| Type: LHSD-V8 | H-201 |
| Scale: As Noted | Drawing No. |

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