



**LEGEND**

- CEILING SUPPLY AIR DIFFUSER 24/24
- CEILING SUPPLY AIR DIFFUSER 12/12
- CEILING RETURN AIR GRILLE 24/24
- THERMOSTAT
- TEMPERATURE SENSOR
- CARBON DIOXIDE SENSOR
- NEW DUCTWORK WITH ELECTRICAL LINING
- EXISTING DUCT TO REMAIN
- VOLUME DAMPER W/ REMOTE OPERATOR
- TYPE OF AIR DEVICE
- AIR QUANTITY (CFM)
- 4W 12" DIA. N. NECK SIZE, ROUND OR RECTANGULAR
- DIRECTION OF AIR FLOW
- X/Y INCHES SIDE OF DUCT SHOWING
- SAD - SUPPLY AIR DIFFUSER
- RET - RETURN AIR GRILLE
- TR - TOP REGISTER
- FD - FIRE DAMPER
- SD - SMOKE DAMPER
- FSD - FIRE / SMOKE DAMPER
- BD - BACKDRAFT DAMPER
- SD - SMOKE DETECTOR SUPPLY - PHOTOELECTRIC
- SD - SMOKE DETECTOR RETURN - IONIZATION
- (E) - EXISTING
- (R) - RELOCATE
- (N) - NEW
- FC - FLEXIBLE CONNECTION
- FIELD CONNECTION TO EXISTING OF ADEQUATE CAPACITY

**CONSULTANTS**

Professional Certification:  
I certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Georgia, license number 30569, expiration date December 31, 2018.

**ARCHITECTURAL SEAL**

**DATE ISSUE**

DATE	REVISION	NAME
04/07/17	PERMIT / OWNER	

**PROJECT NAME / LOCATION**

**five BELOW**  
FAYETTEVILLE PAVILION  
110 PAVILION PARKWAY, SPACE 110A  
FAYETTEVILLE, GA 30214

**PROJECT INFORMATION**

DATE: APRIL 07, 2017  
PROJECT NO. 170238  
DELIVERY TYPE: V-BOX

**DRAWN:**  
**CHECKED:**

**SHEET TITLE / NUMBER**

MECHANICAL PLAN

**M1.0**

**SPECIAL NOTE TO CONTRACTOR:** ENGINEER DID NOT VISIT SITE BOTH RESTROOMS ARE EXISTING TO REMAIN, EXHAUST FANS, AIR DEVICES AND DUCT ROUTING SHOWN ARE DIAGRAMMATIC (FIELD CONDITIONS WILL VARY) TO CONVEY INTENT FOR MINIMUM REQUIREMENTS, BALANCE AND REWORK EXISTING AIR DEVICES (PROVIDE NEW, AS DIRECTED BY SB CM) AND EXTEND NEW DUCTWORK AS REQUIRED. PRIOR TO BID, FIELD VERIFY SCOPE AND EXISTING CONDITIONS WITH SB CONSTRUCTION MANAGER AND SUBMIT RFI TO ENGINEER FOR CLARIFICATION, AS REQUIRED.

**NOTES:**

EMS SYSTEM PROVIDED (FURNISHED AND INSTALLED) BY POWERHOUSE AND COORDINATED WITH FIVE BELOW CPM.

LANDLORD SHALL PROVIDE ALL GAS METER AND ALL PIPING AND ELECTRICAL POWER TO THE ROOFTOP UNITS AND PROVIDE CONTROL WIRING.

CONCENTRIC DIFFUSERS ARE TO BE MINIMUM OF 12"-6" A.F.F. LANDLORD SHALL PROVIDE GAS PIPING AND ELECTRICAL POWER TO THE ROOFTOP UNITS AND PROVIDE CONTROL WIRING.

ALL DUCTWORK TO BE INSTALLED AT A MINIMUM OF 12"-6" A.F.F.

MECHANICAL CONTRACTOR TO PERFORM PREVENTATIVE MAINTENANCE ON EXISTING RTUS PRIOR TO TURNOVER AND SUBMIT TO FIVE BELOW WITH BALANCE RECORDS.

ALL SHOWN LIGHT AND DASHED IS EXISTING AND ALL SHOWN SOLID AND HEAVY IS NEW UNLESS NOTED OTHERWISE.

TEMP SENSORS ARE INSTALLED IN THE DISCHARGE AIR DUCT (AIR LEAVING THE ROOFTOP AND ENTERING THE ROOM) PROVIDED & INSTALLED BY F.B.

ALLOCATE TIME AND MATERIALS REQUIRED TO VERIFY EXISTING CONDITIONS AND SCOPE (IE. LANDLORD/TENANT PROVIDED). PRIOR TO BID, SUBMIT AN RFI, IN WRITING, TO THE ARCHITECT DETAILING ANY DISCREPANCIES WHICH MAY AFFECT THE WORK AND THE CONTRACTOR'S ABILITY TO PROVIDE A COMPLETE MECHANICAL SYSTEM. FAILURE TO DO SO SHALL NOT RESULT IN ANY ADDITIONAL EXPENSE TO THE LANDLORD AND/OR TENANT.

ALL TRANSFER GRILLE ASSEMBLIES SHALL BE FIELD COORDINATED WITH OTHER TRADES AND VERIFIED WITH SB CM REGARDLESS OF WHAT IS SHOWN.

**1 MECHANICAL PLAN**

**ROOFTOP UNIT SCHEDULE (LANDLORD PROVIDED)**

UNIT:	FAN:	FILTER:	ELECTRICAL:	COOLING:	COND.	POWER EXHAUST:	GAS HEAT:
AC-1	300	1.0"	208-3-60	102	87	3/4	180
AC-2	1800	1.0"	208-3-60	220	176	220	176

REFRIGERANT - R410A

BASIS OF DESIGN (AC-1): ROOFTOP UNIT WITH DOWNFLOW, NOMINER, POWER EXHAUST, LOW AMBIENT HEAT, PRESSURE CONTROLS, SMOKE DETECTOR, ROOF CURB (REUSE EXISTING AND/OR PROVIDE ADAPTOR, IF ALLOWED), THRU-THE-BOTTOM SERVICE CONNECTIONS (AS REQUIRED PER FIELD CONDITIONS) AND 20 VAC GFCI UNPOWERED CONVENIENCE OUTLET, HIGH STATIC MOTOR.

**UNIT HEATER SCHEDULE (L.L. PROVIDED)**

UNIT:	ELECTRICAL:	GAS HEAT:
UH-1	120-1-60	1.9

REMARKS: BASIS OF DESIGN: SIZE 30" NATURAL GAS UNIT HEATER WITH SEPARATED COMBUSTION. OPTIONS TO INCLUDE: VERTICAL COMBUSTION KIT, THERMOSTAT AND HANGER KIT.

**DIFFUSER, REGISTER AND GRILLE SCHEDULE (L.L. PROVIDED)**

TYPE	DESCRIPTION
"SAD"	ALUMINUM CONSTRUCTION, SURFACE OR LAY-IN MOUNT, ROUND NECK CEILING DIFFUSER WITH REMOVABLE INNER CONE ASSEMBLY AND ADJUSTABLE VANES FOR CHANGING AIRFLOW DISCHARGE. PROVIDE WITH STANDARD WHITE FINISH AND MODEL #0-75 OPPOSED BLADE DAMPER AND MODEL "SB" SECTORING BAFFLE FOR AIRFLOW OTHER THAN 4-WAY BLOW. TITUS MODEL #TMS-AA OR APPROVED EQUIVALENT.
"RET"	ALUMINUM CONSTRUCTION RETURN AIR GRILLE WITH BLADES ON 3/4" CENTER, PARALLEL TO THE LONG DIMENSION AND SET AT 35 DEGREES. PROVIDE WITH STANDARD WHITE FINISH, LAY-IN BORDER FOR INSTALLATION IN CEILING OR SURFACE MOUNT BORDER SUITABLE FOR INSTALLATION IN DRYWALL TYPE CEILING. TITUS MODEL #350-FL OR APPROVED EQUIVALENT.
"TR"	ALUMINUM CONSTRUCTION, SURFACE MOUNTED, LOUVERED FACE DOUBLE DEFLECTION REGISTER. PROVIDE WITH STANDARD WHITE FINISH AND OPPOSED BLADE DAMPER. TITUS MODEL #300-FS OR APPROVED EQUIVALENT.

**YORK NATIONAL ACCOUNT**

YORK NATIONAL ACCOUNTS HVAC EQUIPMENT PACKAGE

FIVE BELOW HAS A NATIONAL HVAC AGREEMENT WITH YORK INTERNATIONAL. THE HVAC EQUIPMENT SHALL BE PURCHASED BY THE INSTALLING CONTRACTOR. THE HVAC MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND ACCEPTING THE EQUIPMENT, VERIFYING PROPER QUANTITIES, PROVIDING TEMPORARY STORAGE, LABOR, 1ST YEAR LABOR WARRANTY, FOR QUESTIONS REGARDING TECHNICAL SPECIFICATIONS CONTACT YORK NATIONAL ACCOUNTS @ 800-481-8738, FAX 866-406-9876. FOR ALL OTHER INQUIRIES, PLEASE CONTACT CESAR JOAO, NATIONAL ACCOUNT SALES MANAGER, AT 732-921-2104 FAX 866-406-9876 EMAIL: CESAR.M.JOAO@YI.COM

**VENTILATION CALCS**

Room Name	Area (sq ft)	People Outdoor Air Rate, Rp (cfm/person)	Area Outdoor Air Rate, Ra (cfm/ft2)	Rp + Ra * sf (cfm)	Corrected (cfm)	Occupant Density (#/1000R2)	Exhaust Air cfm/fix # fix cfm	System
Sales	7700	7.5	0.12	1787	1787	15	-	(E) AC-2
Office	80	5	0.06	9	9	-	-	AC-1
Corridor	400	-	0.06	24	24	-	-	AC-1
Restroom	-	-	-	-	-	75	1	75
Restroom	-	-	-	-	-	75	1	75
Stockroom	2050	-	0.12	247	247	-	-	AC-1

282 CFM CODE MINIMUM OSA AC-1  
1787 CFM CODE MINIMUM OSA (E) AC-2

**EXHAUST FAN SCHEDULE (LANDLORD PROVIDED)**

TAG	LOCATION	SERVICE	SP W.C.	PM	DIRECT	TYPE	FEEL	WATTS	VOLTAGE PH / HZ	MANUFACTURER MODEL NO.	NOTES:
EF-75	TOILET ROOM	EXHAUST	125"	-	DIRECT	-	-	-	120V/180	DAYTON 1UBH7	1,2,3
EF-200	TOILET ROOM	EXHAUST	200	-	BI	-	-	-	120V/180	DAYTON SAE72	1,2,3

NOTES:  
1) SHALL BE MOUNTED IN CEILING WITH VIBRATION ISOLATORS.  
2) SHALL BE CONTROLLED BY IT SWITCH.  
3) FAN SHALL BE PROVIDED WITH LOW BACKDRAFT DAMPER.

**THERMOSTAT SCHEDULE (L.L. PROVIDED)**

TEMPERATURE THERMOSTAT BY LANDLORD'S MECHANICAL CONTRACTOR.

THERMOSTAT SHALL BE LOCATED AS SHOWN ON PLANS AND MOUNTED AT 6'-0" AFF. UNIT SHALL BE REPLACED AT A LATER DATE AS PART OF TENANT'S EMS SYSTEM.

**SMOKE DETECTOR TEST STATION (L.L. PROVIDED)**

REMOTE TEST STATION WITH AUDIBLE AND VISUAL ALARM FOR DUCT SMOKE DETECTOR AS REQUIRED BY CODE OR LOCAL JURISDICTION MANUFACTURED BY SIMPLEX MODEL 4096-9842.

**2 MECHANICAL SCHEDULES**