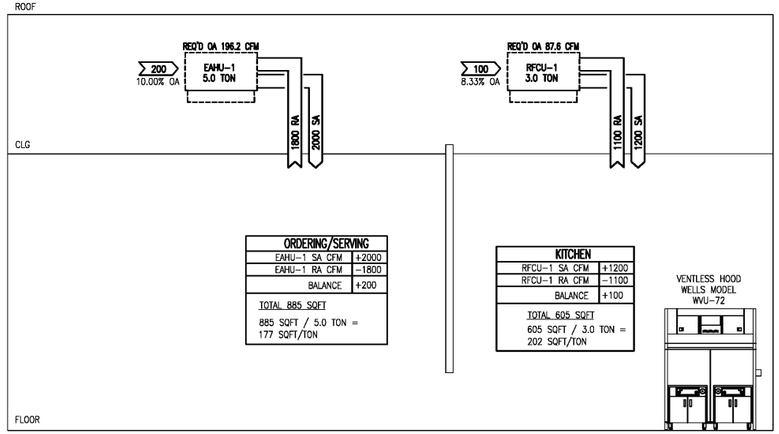
BUILDING AIR BALANCE DIAGRAM



TOTAL BUILDING BALANCE	
SERV/ORDER BALANCE	+200
KITCHEN BALANCE	+100
BALANCE	+300
1530 SQFT 1530 SQFT / 8.0 TON = 192 CFM PER SQFT TON	

NOTE:
TYPE I HOODS SHALL BE DESIGNED AND INSTALLED TO AUTOMATICALLY ACTIVATE THE EXHAUST FAN WHENEVER COOKING OPERATIONS OCCUR. THE ACTIVATION OF THE EXHAUST FAN SHALL OCCUR THROUGH AN INTERLOCK WITH THE COOKING APPLIANCES, BY MEANS OF HEAT SENSORS OR BY MEANS OF OTHER APPROVED METHODS.

FAN SCHEDULE

KEY: CENT.–CENTRIFUGAL; PROP.–PROPELLER; F.C.–FORWARD CURVE;
B.I.–BACKWARD INCLINED; A.F.–AIR FOIL

TAG	MODEL	TYPE	LOCATION	CFM	TOTAL S.P. (IN H_2O)	FAN RPM	CFM/WATT	HP	DIRECT	GRAVITY DAMPER	ELECTRICAL DATA FLA	ELECTRICAL DATA VOLTS / PHASE	WEIGHT (LBS)	REMARKS
EF-1	COOK GN-740	CENT	CEILING MTD	800	0.125	1625	2.2	1/2	X	X	–	115 / 1	100	1,2

NOTES:
1. PROVIDE WITH HANGING VIBRATION ISOLATION KIT, DISCONNECT.
2. INTERLOCK WITH KITCHEN HOOD SO FAN RUNS DURING OPERATIONAL HOURS.

AIR DISTRIBUTION DEVICE SCHEDULE

NOTES:
1. SYMBOL KEY –
FIRST LETTER: S–SUPPLY, R–RETURN, E–EXHAUST, T–TRANSFER.
SECOND LETTER: D–DIFFUSER, R–REGISTER, G–GRILLE
2. BORDER STYLE – REFER TO REFLECTED CEILING PLAN
3. DAMPERS –
OPERABLE FROM FACE OB: OPPOSED BLADE

TAG	MODEL NO. (BASED ON PRICE)	SIZE FACE	SIZE NECK	MAX. CFM	MOUNTING SIDE-WALL	MOUNTING CEIL-ING	MOUNTING DUCT	MATERIAL STEEL	MATERIAL ALUM.	NOTE	REMARKS
RD-1	82DAL	24/24	22/22	2100		●			●	1,2,3,4	CEILING RECESSED LAY-IN
SD-1	ASCD	12/12	6"ø	0–70		●			●	1,2,3,4,5	SEE PLAN FOR CEILING TYPE
			8"ø	75–170							
SD-2	ASCD	24/24	10"ø	175–300		●			●	1,2,3,4,5	SEE PLAN FOR CEILING TYPE
			12"ø	305–500							
SD-3	PDS	24/24	10"ø	175–300		●			●	2,4,5	SEE PLAN FOR CEILING TYPE
			12"ø	305–500							
SD-4	PDR	24/24	10"ø	175–300		●			●	2,4,5	SEE PLAN FOR CEILING TYPE
			12"ø	305–500							
SD-5	ASCD	20/20	10"ø	175–300		●			●	1,2,3,4,5	SEE PLAN FOR CEILING TYPE

NOTES:
1. PROVIDE WITH OPPOSED BLADE DAMPER AT EACH DEVICE.
2. MAX NC LEVEL 30.
3. PROVIDE SQUARE TO ROUND NECK ADAPTOR.
4. SEE ARCHITECTURAL DRAWINGS FOR PAINT AND FINISH.
5. PROVIDE 4–WAY AIR THROW PATTERN UNLESS OTHERWISE NOTED OR INDICATED.

THERMOSTAT SCHEDULE

MARK	SERVICE & LOCATION	OCCUPIED COOLING	OCCUPIED HEATING	UNOCCUPIED COOLING	UNOCCUPIED HEATING
T-EAHU-1	SERVING/ORDERING	75	70	78	60
T-EFCU-1	KITCHEN	75	70	78	60

NOTES:
1. CONTRACTOR SHALL COORDINATE EXACT OPERATIONAL TIMES WITH OWNER/MANAGER PRIOR TO PROGRAMMING.
2. CONTRACTOR MUST VERIFY THAT HUMIDITY CONTROLS AND SENSORS FUNCTIONS PER MANUFACTURERS SPECIFICATIONS. SET TO 50% RH IN THE SPACE.

BUILDING AIR BALANCE SCHEDULE

MARK	OUTSIDE AIR	EXHAUST
EF-1		-0
EAHU-1	+200	
EFCU-1	+100	
TOTAL:	300	0
BUILDING BALANCE		300

CONTROL SEQUENCE OF OPERATIONS: EAHU/EFCU (ELECTRIC/ ELECTRIC HEAT)

DAY CYCLE – COOLING
1. SUPPLY AIR FAN SHALL RUN CONTINUOUSLY.
2. OUTSIDE AIR DAMPER SHALL BE IN MINIMUM POSITION.
3. THERMOSTAT SHALL CYCLE COMPRESSOR(S) TO MAINTAIN ROOM SET TEMPERATURE.

DAY CYCLE – HEATING
1. SUPPLY AIR FAN SHALL RUN CONTINUOUSLY.
2. OUTSIDE AIR DAMPER SHALL BE IN MINIMUM POSITION.
3. THERMOSTAT SHALL CYCLE HEATER TO ACHIEVE ROOM SET TEMPERATURE.

MORNING WARM–UP
1. SUPPLY AIR FAN SHALL RUN CONTINUOUSLY.
2. OUTSIDE AIR DAMPER SHALL BE IN CLOSED POSITION.
3. THERMOSTAT SHALL CYCLE RTU TO REACH ROOM SET TEMPERATURE.
4. WHEN SET TEMPERATURE IS REACHED COOLING OR HEATING CYCLE SHALL COMMENCE.

NIGHT SETBACK
1. ALL HOODS AND EXHAUST FANS SHALL BE DE–ENERGIZED.
2. OUTSIDE AIR DAMPER SHALL BE IN CLOSED POSITION.
3. THERMOSTAT SHALL CYCLE EITHER COOLING OR HEATING AND SUPPLY AIR FAN TO MAINTAIN ROOM SET TEMPERATURE.

SMOKE DETECTOR
1. WHEN SMOKE DETECTOR IS ACTIVATED SUPPLY AIR FAN SHALL SHUTDOWN.
2. FIRE ALARM SHALL BE SIGNALED.
3. SUPPLY AIR FAN SHALL BE MANUALLY RESET.

EXISTING AHU-CU/ FCU SCHEDULES (FOR INFORMATION ONLY)

TAG	EAHU-1/ ECU-1	RFCU-1
MANUFACTURER	CARRIER	MAGIC AIRE
MODEL NUMBER	FB4ANF060/38CKC060	48-BWH-4
NOMINAL TONNAGE	5.0	3.0
SUPPLY CFM	2000	1200
RETURN CFM	1800	1100
MINIMUM OUTDOOR AIR (C.F.M.)	200	100
PERCENT OF OA	10	8.3
MCS / MOCP	21.4/50	7.3/20.0
WEIGHTS (LBS)	---	---
REMARKS	1 THRU 4	1 THRU 4

ERTU NOTES:

1. EXISTING AHU-1/OCU-1 ARE TO REMAIN AND BE REUSED. RFCU-1 IS TO BE RELOCATED TO AREA SHOWN ON MECHANICAL PLANS. MECHANICAL CONTRACTOR TO CHEMICALLY CLEAN COILS, PERFORM AN OIL SAMPLE TEST ON AIR COMPRESSOR TO VERIFY CONDITION, REPLACE BELTS, VERIFY ALL CONTROLS ARE FUNCTIONAL AND MAKE SURE ALL EQUIPMENT IS IN PROPER OPERATING CONDITION. REPLACE ANY DEFECTIVE PARTS OF EQUIPMENT. GREASE AND/OR REPLACE IF REQUIRED, FAN BEARINGS, CHECK SHAFT FOR SCORING AND CHECK MOTORS FOR PROPER AMPERAGE DRAW. CLEAN OR REPLACE CONDENSATE DRAIN LINE AS REQUIRED. REBALANCE FANS TO CFM SHOWN ON SCHEDULE. FURNISH UNIT WITH THREE SETS OF STANDARD FILTERS. CONTRACTOR TO REPLACE FILTERS JUST PRIOR TO AIR BALANCE AND ONCE AGAIN AFTER FINAL STORE CLEANING IS COMPLETE. REPORT IN WRITING ANY PROBLEMS WHICH WOULD REQUIRE REPLACEMENT OF RTU INSTEAD OF REUSE TO THE TENANT'S CONSTRUCTION MANAGER.
2. CONTRACTOR TO VERIFY DUCT SMOKE DETECTOR EXISTS IN THE SUPPLY AND RETURN AIR DUCTWORK FOR THE EXISTING AHU-1 AND EXISTING FCU-1 AND IS IN PROPER WORKING CONDITION. IF THERE IS NO SMOKE DETECTOR PROVIDE NEW AS REQUIRED. FIRE ALARM ALARM CONTRACTOR SHALL PROVIDE A DUCT SMOKE DETECTOR FOR THE SUPPLY AND RETURN THAT IS COMPATIBLE WITH THE FIRE ALARM. MECHANICAL SHALL INSTALL DETECTORS AND ALL WIRING CONNECTIONS. POWER WIRING AND FIRE ALARM INTERFACE WIRING FROM DETECTOR TO FIRE ALARM PANEL BY ELECTRICAL CONTRACTOR. UNIT SHALL SHUT DOWN UPON DETECTION OF SMOKE. IF FIRE ALARM IS NOT INSTALLED IN THE BUILDING THE MECHANICAL CONTRACTOR SHALL PROVIDE THE DUCT SMOKE DETECTORS AND SHALL PROVIDE VISUAL AND AUDIBLE ALARM. SMOKE DETECTOR SHALL BE COMPLIANT WITH LOCAL CODES. UPGRADE SMOKE DETECTION EQUIPMENT AS REQUIRED. FIELD VERIFY EXACT CONDITION PRIOR TO BID. REPORT ANY DISCREPANCIES REPLACEMENTS REQUIREMENTS TO OWNER'S REPRESENTATIVE.
3. GC TO VERIFY FLOAT SWITCH IS INSTALLED IN DRAIN PAN FOR EAHU-1 AND EFCU-1, IF ONE IS NOT INSTALLED, INSIDE ALL EQUIPMENT DRAIN PANS. ON DOWN-FLOW UNITS AND ALL OTHER COILS THAT DO NOT HAVE A SECONDARY DRAIN AND DO NOT HAVE A MEANS TO INSTALL AN AUXILIARY DRAIN PAN, A WATER-LEVEL MONITORING DEVICE SHALL BE INSTALLED INSIDE THE PRIMARY DRAIN PAN. THIS DEVICE SHALL BE INTERLOCKED WITH UNIT FOR COMPLETE SHUT DOWN THE FAN AND COIL IN THE EVENT THAT THE PRIMARY DRAIN BECOMES RESTRICTED. EXTERNALLY INSTALLED DEVICES AND DEVICES INSTALLED IN THE DRAIN LINE SHALL NOT BE PERMITTED.
4. ALL EXISTING THERMOSTATS AND SENSORS SHALL BE CLEAN AND REFURBISH TO "LIKE NEW" CONDITION, VERIFY EXISTING THERMOSTATS AND SENSORS ARE IN GOOD WORKING CONDITION. FIELD VERIFY & COORDINATE THERMOSTAT LOCATION AND CONDITION PRIOR TO COMMENCEMENT OF WORK. TEST AND REPAIR/REPLACE THERMOSTAT AS REQUIRED. REPORT IN WRITING ANY PROBLEMS WHICH WOULD REQUIRE REPLACEMENT OF THERMOSTAT INSTEAD OF REUSE TO THE TENANT'S CONSTRUCTION MANAGER PRIOR TO BID.

OUTSIDE AIR CALCULATIONS

ROOM NUMBER & NAME	AREA SQ. FT.	NO. OF PEOPLE	REQ'D OA CFM/PERSON	REQ'D OA CFM/SQ FT	TOTAL OSA	TOTAL OSA EAHU-1/EFCU-1
SERVING/ORDERING	885	12	7.50	0.12	196.20	196.20
KITCHEN	605	2	7.50	0.12	87.60	87.60
TOTALS	REQUIRED OUTSIDE AIR					283.80
	PROVIDE OUTSIDE AIR					300

NOTES:
1. ESTIMATED MAXIMUM OCCUPANCY AND REQUIRED OUTSIDE AIR BASED ON THE 2012 INTERNATIONAL MECHANICAL CODE W/ 2015 GEORGIA AMENDMENTS.
2. OUTSIDE AIR PROVIDED BY LANDLORD'S DEDICATED OUTSIDE AIR UNIT TO EACH TENANT.

FIELD DUCT SIZING CHART

FLEXIBLE DUCT SIZE	FLEXIBLE DUCT DESIGN AIRFLOW	ROUND METAL PIPE SIZE	ROUND METAL PIPE DESIGN AIRFLOW
5"ø	50 CFM	5"ø	50 CFM
6"ø	75 CFM	6"ø	85 CFM
7"ø	110 CFM	7"ø	125 CFM
8"ø	160 CFM	8"ø	180 CFM
9"ø	225 CFM	9"ø	240 CFM
10"ø	300 CFM	10"ø	325 CFM
12"ø	480 CFM	12"ø	525 CFM
14"ø	700 CFM	14"ø	750 CFM
16"ø	1000 CFM	16"ø	1200 CFM
18"ø	1300 CFM	18"ø	1500 CFM
20"ø	1700 CFM	20"ø	2000 CFM

UL LISTING:
U-181 / ETL CLASS 1 AIR DUCT
STANDARD CODE:
NFPA 90A AND 90B, BOCA, SBBC
HUD/FHA, MIN PROPERTY STD.
FLAME SPREAD.....LESS THAN 25
SMOKE DEVELOPE.....LESS THAN 50

MIN R8.0 FOR ATTIC/UNCONDITION SPACE.
MIN R6.0 FOR RETURN CONDITIONED SPACE.

MANUFACTURER IS TO BE USED AS A BASIS FOR DESIGN. EQUAL IS APPROVED.

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SEAL:
THIS DOCUMENT IS **'NOT FOR CONSTRUCTION'** UNLESS THE ARCHITECT OR ENGINEER'S SIGNATURE AND SEAL APPEAR BELOW.

NO	DATE	REMARKS
2	01.04.18	ISSUED/RELEASED FOR CONSTRUCTION
1	12.20.17	LANDLORD COMMENTS

REVISIONS

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PROJECT NO: 2017.0221
DATE: 12.08.2017

M2.1
MECHANICAL SCHEDULES

CHECKED: AS DRAWN: PH