FLOYD COUNTY HEALTH DEPARTMENT HVAC UPGRADES

PLAN LIST

ROME–FLOYD COUNTY
HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY
HEALTH DEPT. HVAC
UPGRADES

DRINKARD
ENGINEERING GROUP, INC.
119 SOUTH BROAD ST. ROME, GA 30161
PH. (706) 237-6013

GEORGIA REGISTERED PE#30394 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

	ISSUED FOR OWNER REVIEW	06/05/15
	ISSUED FOR BIDDING	08/28/15

DRAWING TITLE

TITLE SHEET

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M0-0

GENERAL HVAC NOTES

1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE LOCAL CODE OFFICE'S LATEST APPROVED VERSION OF THE INTERNATIONAL MECHANICAL CODE, THE INTERNATIONAL BLDG. CODE, THE STATE ENERGY CODE, NFPA 54, NFPA 90A, 101, UNDERWRITERS LABORATORIES AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
2. PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DUCTWORK SIZES, EQUIPMENT LOCATIONS, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ARCHITECT.
3. SUBMITTALS AND SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT AND MECHANICAL ENGINEER PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY MECHANICAL EQUIPMENT. THESE SHALL INCLUDE ALL EQUIPMENT SPECIFIED ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
4. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS, AND ELECTRICAL PLANS AND SPECIFICATIONS. SEE SPECIFICATIONS FOR DESCRIPTION OF INTERFACE WITH DIVISION 16 WORK.
5. ALL REQUIRED CONTROL WIRING NOT SHOWN ON ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS.
6. UNLESS OTHERWISE NOTED, STARTERS, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
7. INSTALL FIRE DAMPERS IN ALL RATED WALL, FLOOR, AND CEILING PENETRATIONS AS APPLICABLE. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED AREAS. PROVIDE ACCESS DOORS IN DUCT AT EACH FIRE DAMPER LOCATION. INSTALL SMOKE DAMPERS IN ALL DUCT PENETRATIONS THROUGH SMOKE RATED WALLS. WHERE DUCTS PENETRATE WALLS THAT CARRY BOTH SMOKE AND FIRE RATINGS, THE DAMPERS INSTALLED SHALL BE COMBINATION SMOKE AND FIRE DAMPERS. ALL DAMPERS SHALL BE U.L. 555 LABELED.
8. FIRE ALARM CONTRACTOR SHALL PROVIDE SMOKE DETECTORS FOR THE SUPPLY AIR TRUNKS OF ALL HVAC EQUIPMENT SUPPLYING GREATER THAN 2000 CFM TO ANY SPACE. PER IMC 606, DUCT SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM UPON ACTIVATION. PER IMC 606, DUCT SMOKE DETECTORS TO BE CONNECTED TO THE BUILDING FIRE ALARM PANEL AS APPLICABLE. IF THE OCCUPANCY DOES NOT REQUIRE A FIRE ALARM PANEL, THE ACTIVATION OF DUCT SMOKE DETECTORS SHALL ACTIVATE AN AUDIBLE AND VISIBLE SIGNAL IN AN APPROVED LOCATION. SIGNAL TO BE IDENTIFIED AS "AIR DUCT DETECTOR TROUBLE". HVAC UNITS MAY BE RESET AT FIRE ALARM PANEL.
9. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR ALL WIRING AND EQUIPMENT TO MONITOR SMOKE DETECTORS AND SHUT DOWN HVAC UNIT UPON SMOKE DETECTOR ACTIVATION. FIRE ALARM CONTRACTOR SHALL PROVIDE DUCT DETECTORS, AND MECHANICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING DETECTOR IN DUCT. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND OPERATION OF BUILDING FIRE ALARM SYSTEM.
10. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
11. SUPPLY, RETURN, EXHAUST, AND OUTDOOR AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AS RECOMMENDED IN SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS, LATEST EDITION. ALL JOINTS AND SEAMS IN SUPPLY AND RETURN SHEET METAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER TO SMACNA CLASS A, NO CLOTH DUCT TAPE IS ALLOWED.
12. ALL SHEET METAL SUPPLY, RETURN, AND VENTILATION AIR DUCT WORK SHALL BE INSULATED WITH 2" THICK FIBERGLASS, 1 LB PER CUFT. DUCT INSULATION WITH FOIL VAPOR BARRIER, U.L. LISTED, MINIMUM R-6 OR OTHERWISE AS REQUIRED BY LOCAL ENERGY CODES. EXHAUST DUCT WORK SHALL BE INSULATED WITH THE SAME WITHIN 10' OF EXTERIOR WALL OR ROOF OPENING.
13. ALL MECHANICAL EQUIPMENT SHALL BE LABELED WITH BAKELITE NAMEPLATE WITH 2" HIGH WHITE LETTERS ON A BLACK BACKGROUND. NAMEPLATE SHALL SHOW EQUIPMENT TAG USED ON THESE DRAWINGS. ELECTRICAL DISCONNECTS FOR EQUIPMENT SHALL BE LABELED TO MATCH EQUIPMENT SERVED.
14. ALL DUCTWORK SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT HANG FROM OR REST ON CEILING TILES OR CEILING STRUCTURE. DUCT SUPPORTS AND CONNECTION TO STRUCTURE SHALL BE AS PER SMACNA STANDARDS.
15. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT) OR EQUAL. PROVIDE THERMAFLEX M-KE R-6 (R-6 MINIMUM VALUE OR AS REQUIRED BY LOCAL ENERGY CODE) IN ATTICS AND OTHER UNCONDITIONED SPACES. AIR CONNECTORS ARE NOT ACCEPTABLE. SIZE TO MATCH DEVICE NECK, PROVIDE ROUND GALVANIZED STEEL DUCT RUN-OUTS TO PROVIDE A MAXIMUM FLEXIBLE DUCT LENGTH OF 5'-0". FLEXIBLE DUCTWORK SHALL BE ROUTED AS STRAIGHT AS POSSIBLE AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS AS REQUIRED TO CONNECT TO AIR DEVICE NECK.
16. BRANCH RUN-OUT DUCTS SHALL BE SAME SIZE AS DIFFUSER NECK IF NOT NOTED OTHERWISE.
17. SHEET METAL DUCTWORK SHOWN AS BEING INTERNALLY LINED SHALL BE LINED WITH 1" THICK, 3 LB/CUFT. DENSITY DUCT LINER, MINIMUM R-4 OR AS REQUIRED BY APPLICABLE ENERGY CODE, CERTAINTEED "TOUGHGARD" OR EQUAL BY JOHNS-MANVILLE OR KNAUF. LINE ALL DUCTWORK A MINIMUM OF 15'-0" DOWNSTREAM AND UPSTREAM (WHERE POSSIBLE) OF ALL AIR HANDLING UNITS, FAN COIL UNITS, AND TERMINAL UNITS. LEADING EDGE OF INSULATION SHALL HAVE SHEET METAL NOSING. DUCT THAT IS INTERNALLY INSULATED SHALL BE EXTERNALLY INSULATED AS WELL.
18. DUCTWORK DIMENSIONS SHOWN ON DRAWING ARE INSIDE CLEAR DIMENSIONS. CONRACTOR SHALL ADJUST TOTAL DUCT WORK DIMENSIONS TO ACHIEVE SHOWN INSIDE CLEAR DIMENSIONS.
19. DUCTWORK AND EQUIPMENT SHOWN IS DIAGRAMMATIC. COORDINATE AND ROUTE DUCTWORK TO MEET JOB REQUIREMENTS. LOCATION OF EQUIPMENT MUST BE COORDINATED WITH ALL DISCIPLINES BEFORE FINAL LOCATIONS ARE SELECTED. WEIGHTS OF EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH STRUCTURAL SYSTEMS MANAGERS BEFORE EQUIPMENT CAN BE MOVED INTO LOCATION OR INSTALLED.
20. ALL CONDENSATE DRAIN LINES FROM HVAC EQUIPMENT LOCATED INSIDE THE BUILDING SHALL BE TRAPPED AND SHALL DRAIN INTO BUILDING FLOOR DRAINS, ROOF DRAINS, OR STORM DRAINS. CONDENSATE SHALL BE INSULATED SCHEDULE 40 PVC (EXCEPT INSULATED TYPE L COPPER IN HVAC PLENUMS). CONDENSTATE SHALL BE PUMPED AS REQUIRED.
21. ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE, AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPE HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORD OF JOISTS.
22. ALL PIPE AND DUCT PENETRATIONS OF FIRE AND/OR SMOKE RATED ASSEMBLIES SHALL BE FIRESTOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE MANUFACTURED BY 3M COMPANY, CP25 CAULK, CP195 COMPOSITE PANEL, FS195 WRAP/STRIP, OR PSS 7900 SERIES SYTEMS AS RECOMMENDED BY MFG. FOR PARTICULAR APPLICATIONS, OR EQUIVALENT SYSTEM AS APPROVED BY LOCAL CODE OFFICIALS.
23. ANY WALL, FLOOR, OR CEILING SURFACE THAT IS DISTURBED DURING THE COURSE OF THIS WORK SHALL BE REPAIRED TO EXISTING OR LIKE-NEW CONDITION.
24. OUTSIDE HARDWARE FOR EXHAUST FANS SHALL BE PLACED IN A LOCATION SUITABLE TO OWNER. CONTRACTOR SHALL COORDINATE PLACEMENT WITH OWNER BEFORE FINAL INSTALLATION. OUTSIDE HARDWARE FOR EXHAUST FANS AND FRESH AIR INTAKES SHOULD BE CONSTRUCTED SO AS TO BE WEATHERTIGHT AND SHOULD INCLUDE INTEGRAL INSECT SCREENS.
25. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, ETC. TO FIT WITHIN THE SPACE ALLOWED BY ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.

HVAC LEGEND

SYMBOL – SINGLE LINE	SYMBOL – DOUBLE LINE	DESCRIPTION
BDD	BDD	BACKDRAFT DAMPER
		CELING DIFFUSER
		CEILING RETURN GRILLE
AB 200	AB 200	DIFFUSER TAG: TYPE "A", NECK SIZE 8", BALANCED FOR 200 CFM
EG-1 75	EG-1 75	GRILLE TAG: TYPE "EG-1", BALANCED FOR 75 CFM
D	D	DROP
16x12	16x12	DUCT SIZE – RECTANGULAR
10"ø	10"ø	DUCT SIZE – ROUND
		DUCT SMOKE DETECTOR
		DUCT TRANSITION
AHU 1	AHU 1	EQUIPMENT DESIGNATION
		FIRE DAMPER, HORIZONTAL
		FIRE DAMPER, VERTICAL
		FLEXIBLE DUCT
H	H	HUMIDISTAT
		LINED DUCT
MVD	MVD	MANUAL VOLUME DAMPER
MOD	MOD	MOTOR OPERATED DAMPER
		RETURN AIR DUCT TURNED DOWN
		RETURN AIR DUCT TURNED UP
R	R	RISE
1	1	REVISION TAG (#1)
		SIDEWALL SUPPLY REGISTER OR GRILLE
		SIDEWALL RETURN REGISTER OR GRILLE
		SMOKE DAMPER
		SUPPLY AIR DUCT TURNED DOWN
		SUPPLY AIR DUCT TURNED UP
T	T	THERMOSTAT, WALL-MOUNTED
		RECT. ELBOW WITH TURNING VANES
UC	UC	UNDER CUT (DOOR) 1"
		WALL LOUVER INTAKE
		WALL LOUVER EXHAUST
FC	FC	FLEXIBLE EQUIPMENT CONNECTOR
C	C	CARBON DIOXIDE SENSOR

HVAC ABBREVIATIONS

SYMBOL	DESCRIPTION
MBH	1000 BTU/HR
A/C	ABOVE CEILING
A/F	ABOVE FLOOR
AHU	AIR HANDLING UNIT
CD	CONDENSATE DRAIN
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE (IN. W.C.)
HP	HEAT PUMP
OA	OUTSIDE AIR
WL	WALL LOUVER
FC	FLEXIBLE EQUIPMENT CONNECTOR
EA	EXHAUST AIR
B/G	BELOW GRADE

AIR COOLED CHILLER SCHEDULE

TAG	NOMINAL TONS	DESIGN GPM	MIN/MAX GPM	EWT/LWT (DEG. F)	WATER ΔP (FT WG)	CONNECTIONS (IN.)		EER	WEIGHT (LBS.)	BASIS OF DESIGN	NOTES
						CHWS	CHWR				
CH-1,2	160	312.8	247/883	55/42	6.0	4	4	9.8	16,413	TRANE RTAC-185	1-6

NOTES:

1. BASIS OF DESIGN IS TRANE. EQUIVALENT MODELS BY CARRIER, DAIKIN-MCQUAY ARE ACCEPTABLE.
2. LOUVERED HAIL GUARDS.
3. LOW SOUND OPTIONS INCL. EXTRA COMPRESSOR SOUND BLANKETS.
4. LOW AMBIENT COOLING OPTIONS.
5. 15 HP PUMP WITH VFD FOR BALANCING.
6. 30% PROPYLENE GLYCOL.

AIR DISTRIBUTION EQUIPMENT SCHEDULE

TAG	DESCRIPTION	NOTES
A	STEEL SQUARE CONE DIFFUSER, FIXED AIR PATTERN, 4-WAY THROW, ROUND NECK, SIZED AS SHOWN, WHITE, LAY-IN FRAME, PRICE SCD.	1,2,3
B	STEEL DOUBLE DEFLECTION SUPPLY GRILLE, ADJUSTABLE PATTERN, 3/4" SPACING BETWEEN BLADES, SIZE AS SHOWN, FRONT BLADES PARALLEL TO SHORT DIMENSION, O.B. DAMPER WHEN DUCT MOUNTED, PRICE 520.	1,2,3
C	HEAVY WALL EXTRUDED ALUMINUM CUSTOM FLOW CONTINUOUS LINEAR SLOT DIFFUSER, 2-SLOTS, UNIT LENGTH AND NECK SIZE AS SHOWN ON PLANS, C/W INSULATED STEEL ENGINEERED PLENUM WITH SIDE DUCT CONNECTION, WHITE, PRICE AS.	1,2,3
D	1/2"X1/2"X1/2" ALUMINUM EGG CRATE RETURN GRILLE, LAY-IN FRAME, 24X12 OR 12X12 SIZE, PLENUM TYPE OR ROUND DUCT CONN. NECK AS SHOWN, PRICE 80.	1

NOTES

1. VERIFY MOUNTING TYPE WITH ARCHITECTURAL RCP.
2. SUPPLY DIFFUSERS AND GRILLES SHALL NOT COME SUPPLIED WITH VOLUME DAMPERS. MANUAL VOLUME DAMPERS SHALL BE INSTALLED AT BRANCH TAKE-OFFS NEAR TRUNK (SEE DETAIL SHEET).
3. BACK INSULATION SHALL BE INCLUDED ON ALL SUPPLY DIFFUSERS AND GRILLES.

MINI-SPLIT HEAT PUMP SCHEDULE

TAG	BASIS OF DESIGN	SUPPLY AIR CFM	MAX. OA CFM	E.S.P. (IWG)	HT. PUMP CLG. CAP. (MBH)	COOLING EFFIC. (SEER)	HT. PUMP HTG. CAP. (MBH)	HEATING EFFIC. (HSPF)	AUX. ELEC. HEATERS KW/STAGES	ELECTRICAL	ODU/IDU WEIGHT (LBS)	NOTES
ODU/IDU-1	MITSUBISHI PUZ-A18NHA4/PLA-A18BA4	390-600	–	–	12/18	14.2	19/9.8	9.8	–	SEE DIV. 16	91/62	1,2,3
ODU/IDU-2	MITSUBISHI PUZ-A18NHA4/PLA-A18BA4	390-600	–	–	12/18	14.2	19/9.8	9.8	–	SEE DIV. 16	91/62	1,2,3
ODU/IDU-3	MITSUBISHI PUZ-A18NHA4/PLA-A18BA4	390-600	–	–	12/18	14.2	19/9.8	9.8	–	SEE DIV. 16	91/62	1,2,3
ODU/IDU-4	MITSUBISHI PUZ-A18NHA4/PLA-A18BA4	390-600	–	–	12/18	14.2	19/9.8	9.8	–	SEE DIV. 16	91/62	1,2,3
ODU/IDU-5	MITSUBISHI PUZ-A18NHA4/PLA-A18BA4	390-600	–	–	12/18	14.2	19/9.8	9.8	–	SEE DIV. 16	91/62	1,2,3

NOTES:

1. UNITS TO BE CONTROLLED BY SEVEN DAY PROGRAMMABLE THERMOSTATS, LOCATED AS SHOWN ON PLANS.
2. REFRIGERANT FOR NEW EQUIPMENT SHALL BE R-410A. NO R-22 IS ALLOWED.
3. BASIS OF DESIGN IS CARRIER. EQUIVALENT ALTERNATES BY TRANE, LENNOX ARE ACCEPTABLE.

PARALLEL FAN POWERED PIU SCHEDULE

TAG	BASIS OF DESIGN	UNIT SIZE	DESIGN VALVE CFM	MIN. VALVE CFM	FAN HEATING CFM	MAX NC RAD/DISCH	FAN HP	ELECTRIC HEAT			NOTES
								KW	STAGES	ΔT	
PIU 2-A13	PRICE FDV5	2008	600	0	300	25/37	1/8	4.3	1	35	1,2,3,4
PIU 2-B9	PRICE FDV5	3012	1350	0	700	24/–	1/4	10	1	35	1,2,3,4

NOTES

1. ELECTRIC HEATERS SELECTED AT 208/3/60. RE-SELECT UNITS IF OTHER VOLTAGES ARE REQUIRED. SEE DIVISION 16 FOR FINAL ELECTRICAL REQUIREMENTS.
2. FIBERGLASS 1" MERV-3 FILTER ON PLENUM INTAKE.
3. 3/4" FIBERGLASS INTERNAL LINER.
4. DDC CONTROLS BY OTHERS.

GENERAL SCOPE OF WORK

1. PERFORM TAB ON EXISTING ERU-1, ERU-2 AND REPORT FINDINGS TO ENGINEER.
2. INSTALL TWO NEW CHILLERS, CHILLED WATER PIPING, AND ACCESSORIES. CHILLERS ARE FULLY REDUNDANT.
3. REMOVE EXISTING CONDENSING UNITS ON ROOF, ALONG WITH MATCHING DX COILS IN ERU-1 AND ERU-2. REPLACE THESE WITH 42 DEGREE CHILLED WATER COILS AS SHOWN ON PLANS.
4. ADD RETURN AIR TRANSFER OPENING IN UPSTAIRS MECHANICAL ROOM.
5. REPLACE RUPTURED HIGH PRESSURE TRUNK LINE ON LOWER FLOOR.
6. INSTALL NEW RTU-1 ON ROOF TO SERVE UPPER FLOOR DENTAL/SPECIALTY AREAS CURRENTLY SERVED BY ERU-1 FROM LOWER FLOOR. INSTALL NEW EXHAUST FAN ON ROOF TO SERVE EXISTING EXHAUST AIR NEEDS IN THESE AREAS. MAKE DUCT SYSTEM MODIFICATIONS AS SHOWN.
7. INSTALL ONE NEW PIU WITH ELECTRIC HEAT IN DENTAL/SPECIALTY AREA, AND RELOCATE THREE EXISTING PIUS.
8. INSTALL FIVE MINI-SPLIT HEAT PUMPS IN UPPER FLOOR ADMIN. OFFICES, AND MODIFY PIU AIR FLOW TO PROVIDE VENTILATION AIR FLOW ONLY IN THESE AREAS.
9. INSTALL CCI CONTROLS ON ALL NEW EQUIPMENT IN THE PROJECT. CCI HAS EXISTING CONTROLS IN THE BUILDING.
10. REPLACE ALL SPACE SENSORS IN BUILDING WITH NEW STYLE SIEMENS WITH LCD DISPLAY (CCI).
11. PERFORM FINAL TAB ON ENTIRE BUILDING, WATERSIDE AND AIRSIDE, AND REPORT FINDINGS TO ENGINEER. CREATE A LIST OF FAULTY EQUIPMENT WHERE TAB IS UNABLED TO BE ACCURATELY PERFORMED AND PROVIDE LIST TO OWNER.

FLOYD COUNTY GEORGIA — THE ENCHANTED LAND — WHERE THE PIEDMONT MEETS AND THE MOUNTAINS RISE

ROME-FLOYD COUNTY HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

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GEORGIA REGISTERED PE#030399 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

	ISSUED FOR OWNER REVIEW	06/05/15
	ISSUED FOR BIDDING	08/28/15

DRAWING TITLE

HVAC NOTES & SCHEDULES

PROJECT NO.	SCALE		
705-1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M0-1

CENTRAL CHILLED WATER AIR HANDLING UNIT SCHEDULE

TAG	LOCATION	FAN SECTION					CHILLED WATER COOLING COIL							ELECTRIC HEATING COIL					ELEC.	OPER. WEIGHT (LBS.)	BASIS OF DESIGN	NOTES
		CFM	E.S.P.	TYPE	H.P.	MIN. O.A. CFM	CAPACITY (MBH) TOT./SENS.	GPM	ΔP (FT WG)	EAT (WB/DB)	LAT (WB/DB)	EWT/LWT	MINIMUM FACE AREA	CAPACITY (KW)	GPM	ΔP (FT WG)	EAT/LAT	EWT/LWT				
RTU-1	ROOF	7,500	2.0	FORWARD CURVED	10	1,200	288.1/206.7	62.4	6.8	80/67	55/54	52/42	15.63 SQ.FT.	–	–	–	20/47.4	–	SEE DIV. 16	3,543	TRANE CLIMATE CHANGER, SIZE 17	1,2,3,4,5,6,7,8,9,10,11,12

NOTES:

1. BASIS OF DESIGN IS TRANE. EQUIVALENT SYSTEMS BY CARRIER, DAIKIN–MCQUAY ARE ACCEPTABLE.
2. VFD SUPPLY FAN WITH BYPASS FOR VAV OPERATION.
3. PREMIUM EFFICIENCY FAN MOTORS
4. 2" PLEATED MERV–8 FILTERS
5. E.S.P. CALCULATION INCLUDES DUCT SYSTEM, ZONE DAMPERS, AND DIFFUSERS ONLY.
6. INSULATION: R–13 DOUBLE WALL SEALED PANEL
7. 6" TALL INTEGRAL BASE RAIL
8. LEVEL II THERMAL BREAK
9. GALVANIZED PANEL EXTERIOR AND INTERIOR FINISH
10. 304 STAINLESS STEEL DRIP PAN
11. CHILLED WATER TO BE 30% PROPYLENE GLYCOL
12. UNIT TO BE CONTROLLED BY EXISTING DDC SYSTEM (CCI).

SEMCO
A Fläkt Woods Company

Fluid Selection Program
Version 3.9.7 KG

General Information
Project Name : Floyd County Health Dept - Rome GA
Coil Item No. : ERU-1 CHWTR Sensible
Coil Tag :
Date : 06/05/2015 2:47:50 pm
Model No : CWC08C10-33x78R

Coil Construction
Coils/Bank : 3
Fin Type : 58 1.50 x 1.3 Waffle
Fin Height : 33 inch
Fin'd Length : 78 inch
Rows Deep : 8
Fins/Inch : 10
Circuiting : Custom (15 Feeds)
Tube Material : Copper
Tube Thick : 0.025 inch
Fin Material : Aluminum
Fin Thick : 0.0060 inch
Allow OppEnd : No

Airside
Airflow : 25700 SCFM
Altitude : 0 Feet
Ent. DB/WB : 75.8 / 63.4 °F
Cap Req'd : Btu/Hr
LDB/LWB Req'd : 52.6 / 52.1 °F

Fluid Side
Fluid : 30% Propylene
Ent Fluid Temp : 42 °F
Lvg FLuid Temp : °F
Fluid Flow Rate : 132 GPM

Coil Performance
Model No. : CWC08C10-33x78R
Rows / FPI : 8 / 10
Circuiting : Custom (15 Feeds)
Total Cap : 844,143 Btu/Hr
Sens Cap : 659,215 Btu/Hr
Lvg DB/WB : 52.3 / 52.1 °F
Face Velocity : 479.3 SFPM
Standard APD : 0.83 in. w.c.
Lvg Fluid : 55.5 °F
Fluid Flow : 132.0 GPM
Fluid PD : 17.12 ft H2O
Fluid Velocity : 3.32 FPS
Conn Size : (1) 2.00"
Dry Weight : 482 Lbs

Additional Construction Notes
Coil Coating : None
Casing Mat'l : Galvanized Steel
Casing Type : Flanged
Conn. Mat'l : Copper
Conn. Type : MPT

Special Notes:

1800 East Pointe Drive * Columbia, MO 65201 * PH:(888)473-6264
PH:(573)443-1481 * Fax:(573)886-5408 * Email: sales.semco@flaktwoods.com * www.semcohvac.com

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Fluid Selection Program
Version 3.9.7 KG

General Information
Project Name : Floyd County Health Dept - Rome GA
Coil Item No. : ERU-1 CHWTR Latent
Coil Tag :
Date : 06/05/2015 2:49:26 pm
Model No : CWC08C10-33x78R

Coil Construction
Coils/Bank : 3
Fin Type : 58 1.50 x 1.3 Waffle
Fin Height : 33 inch
Fin'd Length : 78 inch
Rows Deep : 8
Fins/Inch : 10
Circuiting : Custom (15 Feeds)
Tube Material : Copper
Tube Thick : 0.025 inch
Fin Material : Aluminum
Fin Thick : 0.0060 inch
Allow OppEnd : No

Airside
Airflow : 25700 SCFM
Altitude : 0 Feet
Ent. DB/WB : 65.7 / 62.2 °F
Cap Req'd : Btu/Hr
LDB/LWB Req'd : 52.6 / 52.1 °F

Fluid Side
Fluid : 30% Propylene
Ent Fluid Temp : 42 °F
Lvg FLuid Temp : °F
Fluid Flow Rate : 135 GPM

Coil Performance
Model No. : CWC08C10-33x78R
Rows / FPI : 8 / 10
Circuiting : Custom (15 Feeds)
Total Cap : 760,504 Btu/Hr
Sens Cap : 384,560 Btu/Hr
Lvg DB/WB : 52.0 / 52.0 °F
Face Velocity : 479.3 SFPM
Standard APD : 0.90 in. w.c.
Lvg Fluid : 53.9 °F
Fluid Flow : 135.0 GPM
Fluid PD : 17.98 ft H2O
Fluid Velocity : 3.39 FPS
Conn Size : (1) 2.00"
Dry Weight : 482 Lbs

Additional Construction Notes
Coil Coating : None
Casing Mat'l : Galvanized Steel
Casing Type : Flanged
Conn. Mat'l : Copper
Conn. Type : MPT

Special Notes:

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NEW CHILLED WATER COIL: ERU-1

SEMCO
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Fluid Selection Program
Version 3.9.7 KG

General Information
Project Name : Floyd County Health Dept - Rome GA
Coil Item No. : ERU-2 CHWTR Sensible
Coil Tag :
Date : 06/05/2015 2:55:57 pm
Model No : CWC08C10-33x78R

Coil Construction
Coils/Bank : 3
Fin Type : 58 1.50 x 1.3 Waffle
Fin Height : 33 inch
Fin'd Length : 78 inch
Rows Deep : 8
Fins/Inch : 10
Circuiting : Custom (15 Feeds)
Tube Material : Copper
Tube Thick : 0.025 inch
Fin Material : Aluminum
Fin Thick : 0.0060 inch
Allow OppEnd : No

Airside
Airflow : 25699 SCFM
Altitude : 0 Feet
Ent. DB/WB : 75.5 / 63.1 °F
Cap Req'd : Btu/Hr
LDB/LWB Req'd : 52.6 / 52.1 °F

Fluid Side
Fluid : 30% Propylene
Ent Fluid Temp : 42 °F
Lvg FLuid Temp : °F
Fluid Flow Rate : 128 GPM

Coil Performance
Model No. : CWC08C10-33x78R
Rows / FPI : 8 / 10
Circuiting : Custom (15 Feeds)
Total Cap : 820,726 Btu/Hr
Sens Cap : 651,514 Btu/Hr
Lvg DB/WB : 52.3 / 52.1 °F
Face Velocity : 479.2 SFPM
Standard APD : 0.82 in. w.c.
Lvg Fluid : 55.6 °F
Fluid Flow : 128.0 GPM
Fluid PD : 16.21 ft H2O
Fluid Velocity : 3.22 FPS
Conn Size : (1) 2.00"
Dry Weight : 482 Lbs

Additional Construction Notes
Coil Coating : None
Casing Mat'l : Galvanized Steel
Casing Type : Flanged
Conn. Mat'l : Copper
Conn. Type : MPT

Special Notes:

1800 East Pointe Drive * Columbia, MO 65201 * PH:(888)473-6264
PH:(573)443-1481 * Fax:(573)886-5408 * Email: sales.semco@flaktwoods.com * www.semcohvac.com

SEMCO
A Fläkt Woods Company

Fluid Selection Program
Version 3.9.7 KG

General Information
Project Name : Floyd County Health Dept - Rome GA
Coil Item No. : ERU-2 CHWTR Latent
Coil Tag :
Date : 06/05/2015 2:54:02 pm
Model No : CWC08C10-33x78R

Coil Construction
Coils/Bank : 3
Fin Type : 58 1.50 x 1.3 Waffle
Fin Height : 33 inch
Fin'd Length : 78 inch
Rows Deep : 8
Fins/Inch : 10
Circuiting : Custom (15 Feeds)
Tube Material : Copper
Tube Thick : 0.025 inch
Fin Material : Aluminum
Fin Thick : 0.0060 inch
Allow OppEnd : No

Airside
Airflow : 25699 SCFM
Altitude : 0 Feet
Ent. DB/WB : 65.4 / 62.0 °F
Cap Req'd : Btu/Hr
LDB/LWB Req'd : 52.6 / 52.1 °F

Fluid Side
Fluid : 30% Propylene
Ent Fluid Temp : 42 °F
Lvg FLuid Temp : °F
Fluid Flow Rate : 135 GPM

Coil Performance
Model No. : CWC08C10-33x78R
Rows / FPI : 8 / 10
Circuiting : Custom (15 Feeds)
Total Cap : 752,240 Btu/Hr
Sens Cap : 379,599 Btu/Hr
Lvg DB/WB : 51.9 / 51.9 °F
Face Velocity : 479.2 SFPM
Standard APD : 0.90 in. w.c.
Lvg Fluid : 53.8 °F
Fluid Flow : 135.0 GPM
Fluid PD : 17.99 ft H2O
Fluid Velocity : 3.39 FPS
Conn Size : (1) 2.00"
Dry Weight : 482 Lbs

Additional Construction Notes
Coil Coating : None
Casing Mat'l : Galvanized Steel
Casing Type : Flanged
Conn. Mat'l : Copper
Conn. Type : MPT

Special Notes:

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NEW CHILLED WATER COIL: ERU-2

PIPING LABEL COLOR GUIDE

PIPING SYSTEM FLUID	LABEL COLOR	TEXT COLOR
NATURAL GAS	SAFETY YELLOW	WHITE
PROPANE GAS	SAFETY YELLOW	WHITE
COMPRESSED AIR	SAFETY BLUE	WHITE
CHILLED WATER	SAFETY GREEN	WHITE
HEATING HOT WATER	SAFETY GREEN	WHITE
STEAM	SAFETY GREEN	WHITE
DOMESTIC COLD WATER	SAFETY GREEN	WHITE
DOMESTIC HOT WATER	SAFETY GREEN	WHITE
FIRE PROTECTION FLUIDS	SAFETY RED	WHITE

SIZE OF LEGEND LETTERS

PIPE OR PIPE COVERING OUTER DIAM. (IN.)	LENGTH OF COLOR FIELD (IN.)	SIZE OF LETTERS (IN.)
3/4" TO 1–1/4"	8"	1/2"
1–1/2" TO 2"	8"	3/4"
2–1/2" TO 6"	12"	1–1/4"
8" TO 10"	24"	2–1/2"
OVER 10"	32"	3–1/2"

NOTES:

1. LABEL TEXT SHOULD MATCH FLUIDS IN TABLE, AND SHOULD INCLUDE FLOW ARROWS INDICATING DIRECTION OF FLUID FLOW.
2. IF FLUIDS MAY FLOW IN TWO DIRECTIONS, ARROWS SHOULD INDICATE SUCH.
3. APPLY LABELS SO THAT THEY ARE EASILY READABLE BY OCCUPANTS OR EMPLOYEES. FOR EASE OF READING, LABELS SHOULD BE APPLIED ON BOTTOM OF PIPES THAT ARE ABOVE OCCUPANT LEVEL, ON TOP OF PIPES THAT ARE BELOW OCCUPANT LEVEL, AND ON SIDE OF PIPES THAT ARE AT OR NEAR OCCUPANT LEVEL.
4. FOR PIPES SMALLER THAN 3/4", USE PERMANENTLY ENGRAVED LABELS AFFIXED TO PIPES.
5. APPLY LABELS NEAR VALVES, BRANCHES, WHERE A CHANGE IN DIRECTION OCCURS, AT ENTRY AND RE–ENTRY POINTS THRU WALLS, FLOORS, ROOFS, AND ON STRAIGHT SEGMENTS WITH SPACING BETWEEN LABELS THAT ALLOWS FOR EASY INDENTIFICATION.
6. PIPING SYSTEMS CONVEYING GASEOUS CONTENTS SHALL HAVE SYSTEM DESIGN PRESSURE INDICATED ON THE LABEL IN ADDITION TO SYSTEM FLUID AND DIRECTIONAL ARROWS.
7. NATURAL AND PROPANE GAS LABELS ON NON–STEEL PIPING SHALL BE APPLIED AT INTERVALS NOTE EXCEEDING 5 FEET.
8. THESE LABELING GUIDELINES DO NOT APPLY TO MEDICAL GAS AND VACUUM SYSTEMS. FOR THESE TYPES OF SYSTEMS, REFER TO THE LOCAL CODE OFFICIALS' LATEST ACCEPTED VERSION OF NFPA 99.

EXHAUST FAN SCHEDULE

TAG	BASIS OF DESIGN	CFM	E.S.P.	WEIGHT (LBS)	SONES	OPER. HP	MOTOR HP	PWR	CONTROL	NOTES
EF–1	GREENHECK G–103–B	700	0.25	46	4.9	0.06	1/6	SEE DIV. 16	DDC "OCCUPIED"	1,2,3,4

NOTES

1. OUTSIDE HARDWARE FOR EXHAUST FANS SHOULD BE CONSTRUCTED SO AS TO BE WEATHERTIGHT.
2. SPEED CONTROLLER
3. BACKDRAFT DAMPER
4. ROOF CURB

PIPING LEGEND

SYMBOL	DESCRIPTION	ABBREVIATION
—CHWS—	CHILLED WATER SUPPLY	CHWS
—CHWR—	CHILLED WATER RETURN	CHWR
—CWS—	CONDENSER WATER SUPPLY	CWS
—CWR—	CONDENSER WATER RETURN	CWR
—HWS—	HEATING WATER SUPPLY	HWS
—HWR—	HEATING WATER RETURN	HWR
— CD —	CONDENSATE DRAIN	CD
— LPS —	LOW PRESSURE STEAM	LPS
—MPS—	MEDIUM PRESSURE STEAM	MPS
—HPS—	HIGH PRESSURE STEAM	HPS
— LPC —	LOW PRESSURE STEAM CONDENSATE RETURN	LPC
—MPC—	MEDIUM PRESSURE STEAM CONDENSATE RETURN	MPC
—HPC—	HIGH PRESSURE STEAM CONDENSATE RETURN	HPC
—MPC—	FUEL OIL SUPPLY	MPC
—HPC—	FUEL OIL RETURN	HPC
	GATE VALVE	— —
	GLOBE VALVE	— —
	ANGLE GATE VALVE	— —
	3–WAY VALVE	— —
	CONTROL VALVE	— —
	SWING CHECK VALVE	— —
	NON–SLAM (LIFT) CHECK VALVE	— —
	TRIPLE DUTY VALVE	— —
SD	SUCTION DIFFUSER	— —
	TRIPLE DUTY VALVE	— —
	BUTTERFLY VALVE	— —
	BALANCING VALVE	— —
	BALL VALVE	— —
	TRIPLE DUTY VALVE	— —
	AUTOMATIC FLOW CONTROL VALVE	— —
	RELIEF VALVE	— —
	MANUAL AIR VENT	MAV
	HOSE END DRAIN VALVE	— —
	COMBINATION TEMP/PRESSURE TEST PORT	— —
	SOLENOID VALVE	— —
	UNION	— —
	FLEXIBLE CONNECTOR	— —
AS	AIR SEPARATOR	— —
	PRESSURE REDUCING VALVE	— —
	BLIND FLANGE/CAP	— —
	PIPING CONNECTION ON TOP	— —
	PIPING CONNECTION ON BOTTOM	— —
	ELBOW TURNED DOWN	— —
	ELBOW TURNED UP	— —
	REDUCER, CONCENTRIC	— —
	REDUCER, ECCENTRIC	— —
	TEE	— —
	ANCHOR	— —
	ALIGNMENT GUIDE	— —
FS	FLOW SWITCH	— —
	FLOW METER	— —
PG	PRESSURE GAUGE	— —
PS	PRESSURE SWITCH	— —
	PUMP	— —
	STRAINER WITH BLOWDOWN	— —
T	THERMOMETER	— —
	GAUGE COCK	— —
	STEAM TRAP	— —
	STEAM CONTROL VALVE	— —

FLOYD COUNTY
WHERE THE RIVERS MEET AND THE MOUNTAINS BEGIN

ROME–FLOYD COUNTY HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY HEALTH DEPT. HVAC UPGRADES

DRINKARD ENGINEERING GROUP, INC.
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PH. (706) 237-6013

GEORGIA REGISTERED PROFESSIONAL ENGINEER PE030394 JEFFREY A. DRINKARD
08/28/15

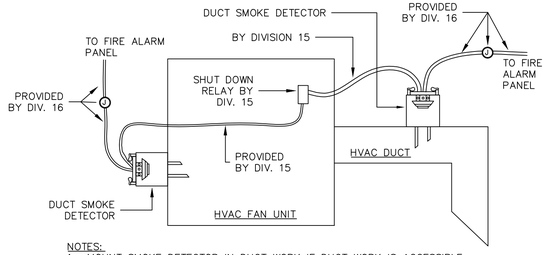
General Notes

	ISSUED FOR OWNER REVIEW	06/05/15
	ISSUED FOR BIDDING	08/28/15

DRAWING TITLE
HVAC NOTES & SCHEDULES

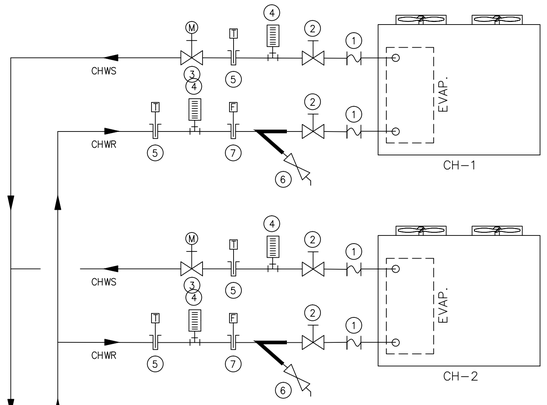
PROJECT NO.		SCALE	
705–1403		AS SHOWN	
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.
M0-2



NOTES:
1. MOUNT SMOKE DETECTOR IN DUCT WORK IF DUCT WORK IS ACCESSIBLE.
2. MOUNT SMOKE DETECTOR IN THE SUPPLY PORTION OF THE AIR HANDLING UNIT IF THE DUCT WORK IS NOT ACCESSIBLE.
3. SMOKE DETECTOR FURNISHED BY DIVISION 16, MOUNTED BY DIVISION 15 AND WIRED BY DIVISION 16.

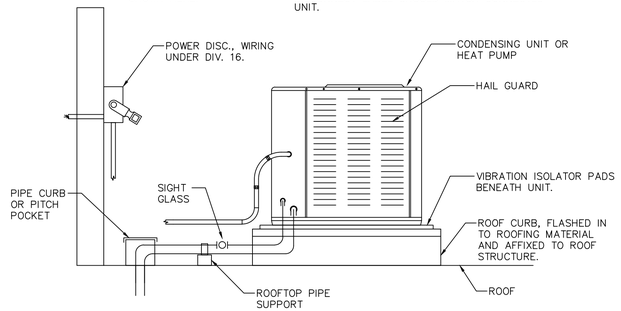
DE-20 TYPICAL HVAC/FIRE ALARM INTERFACE



TYP. BRANCH PIPING DIAGRAM, CHILLERS
1. FLEXIBLE CONNECTOR
2. BUTTERFLY VALVE FOR MANUAL SHUT-OFF
3. BUTTERFLY VALVE FOR DDC SHUT-OFF WITH MANUAL WHEEL FOR MANUAL SHUT-OFF
4. STEM THERMOMETER, 9" SCALE, 0-100 DEGREE RANGE, TERICE INDUSTRIAL TYPE.
5. CHW TEMPERATURE WELL & PROBE FOR DDC
6. STRAINER
7. FLOW SWITCH (IF NOT INSTALLED ON CHILLER)

NOTE: CHILLERS ARE INSTALLED TO BE FULLY REDUNDANT SYSTEMS. ONLY ONE CHILLER/PUMP SYSTEM IS DESIGNED TO RUN AT A TIME.

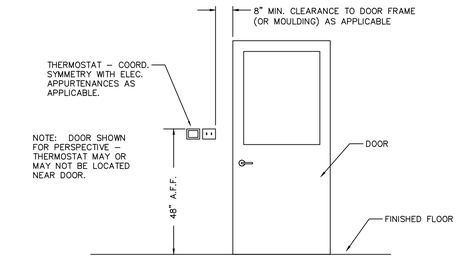
DE-25B PARALLEL CHILLER PIPING DIAGRAM



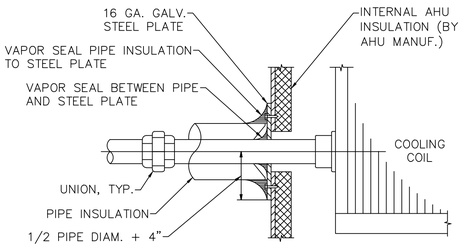
DE-13A TYP. ROOFTOP MOUNT SPLIT DX CONDENSER DETAIL

TYP. PIPING DIAGRAM, CHILLED WATER COIL
1. CHILLED WATER COOLING COIL
2. 3-WAY COOLING CONTROL VALVE, SUPPLIED BY CONTROLS CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR (TYPICAL).
3. FLOW METER WITH BALANCING COCK
4. STRAINER WITH BLOW-DOWN VALVE
5. BALL VALVE (2" AND SMALLER) OR BUTTERFLY VALVE (2-1/2' AND LARGER)
6. AIR VENT - INSTALL AT ALL RISES, DROPS, AND HIGH POINTS IN THE PIPING SYSTEM.
7. STEM THERMOMETER, 9" SCALE, 0-100 DEGREE RANGE, TERICE INDUSTRIAL TYPE.

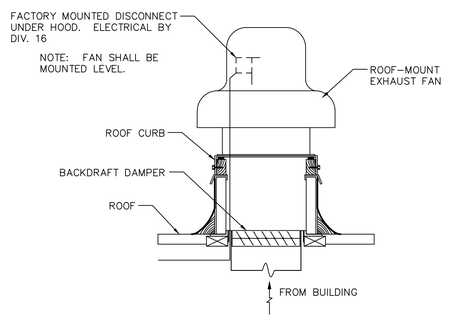
DP-7B CHW COIL PIPING DIAGRAM - THREE WAY VALVE



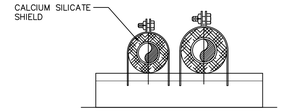
DE-15 TYP. THERMOSTAT OR WALL SENSOR INSTALLATION DETAIL



DP-16 CHILLED WATER INSULATION DETAIL AT AHU COIL

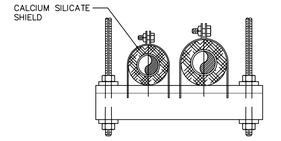


DE-7B ROOF MOUNT DOWNBLAST EXHAUST FAN DETAIL



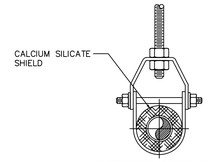
SURFACE MOUNT

NOTES:
1. SIZE STRUT TO ADEQUATELY SUPPORT LOAD (REFER TO MANUF. CATALOG)
2. SIZE CALCIUM SILICATE SHIELD TO FIT PIPE AND INSULATION THICKNESS.
3. SIZE CLAMP TO FIT CALCIUM SILICATE SHIELDS.
4. BOLT OR WELD STRUT TO STRUCTURE BELOW.



SUSPENDED TRAPEZE MOUNT

NOTES:
1. SIZE STRUT TO ADEQUATELY SUPPORT LOAD (REFER TO MANUF. CATALOG)
2. SIZE CALCIUM SILICATE SHIELD TO FIT PIPE AND INSULATION THICKNESS.
3. SIZE CLAMP TO FIT CALCIUM SILICATE SHIELDS.
4. AFFIX TO STRUCTURE ABOVE PER MANUF. RECOMMENDATIONS.



SUSPENDED CLEVIS HANGER

NOTES:
1. SIZE HANGER TO ADEQUATELY SUPPORT LOAD (REFER TO MANUF. CATALOG)
2. SIZE CALCIUM SILICATE SHIELD TO FIT PIPE AND INSULATION THICKNESS.
3. SIZE HANGER TO FIT CALCIUM SILICATE SHIELDS.
4. AFFIX TO STRUCTURE ABOVE PER MANUF. RECOMMENDATIONS.

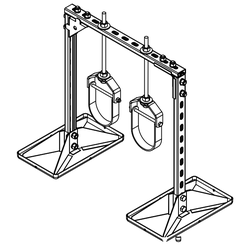
HANGER SPACING CHART

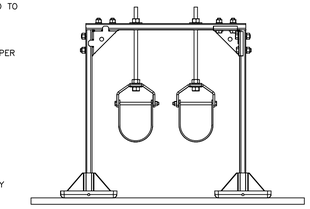
PIPE SIZE	ROD DIAM.	MAX. SPACING
1/2" - 1-1/4"	3/8"	7'
1-1/2"	3/8"	9'
2"	3/8"	10'
2-1/2"	1/2"	11'
3"	1/2"	12'
3-1/2"	1/2"	13'
4"	5/8"	14'
5"	5/8"	16'
6"	3/4"	17'
8"	3/4"	19'
10"	7/8"	22'
12"	7/8"	23'
14"	1"	25'
16"	1"	27'

NOTE: ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH PIPE CLAMPS, AND SHALL BE PROTECTED BY 3" SHIELD INSIDE CLAMPS.

NOTE: ALL PIPE INSULATION LOCATED OUTSIDE OF BUILDING SHALL BE PROTECTED BY EMBOSSED METAL JACKETING.

DP-8 TYP. PIPE HANGER DETAILS





ROOFTOP PIPES SHALL BE SUPPORTED BY ROOF TOP CLEVIS TYPE PIPE SUPPORT, MIRO 6-H OR EQUIVALENT.

ROME-FLOYD COUNTY HEALTH DEPARTMENT
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DRINKARD
ENGINEERING GROUP, INC.
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PH. (706) 237-6013

GEORGIA REGISTERED PE#30394 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD
08/28/15

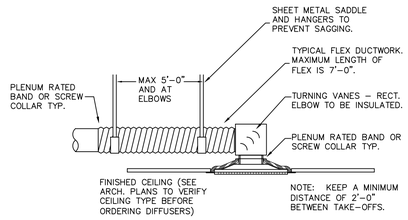
General Notes

	ISSUED FOR OWNER REVIEW	06/05/15
	ISSUED FOR BIDDING	08/28/15

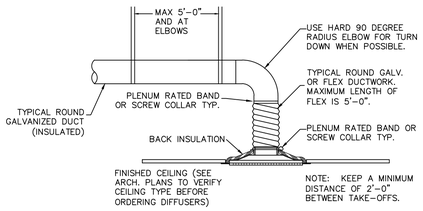
DRAWING TITLE
HVAC DETAILS

PROJECT NO.	SCALE		
705-1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.
M0-3

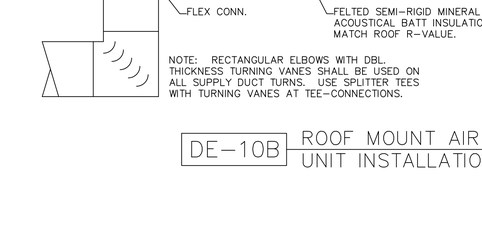


LOW CLEARANCE BRANCH DUCT DETAIL

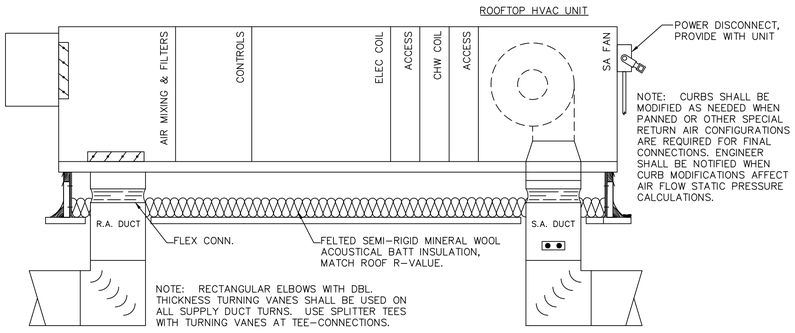


BRANCH DUCT DETAIL

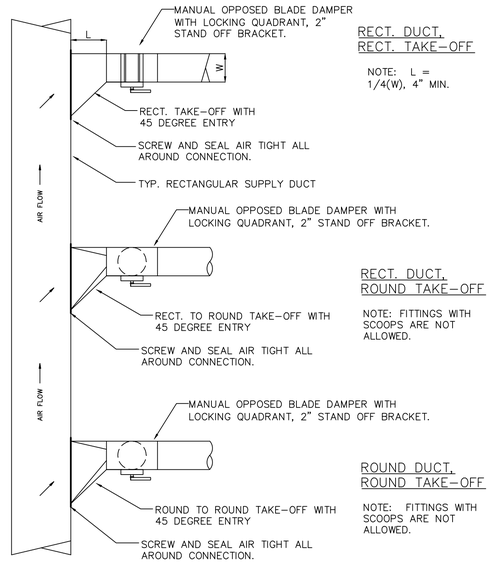
DD-3 BRANCH RUN-OUT DETAIL



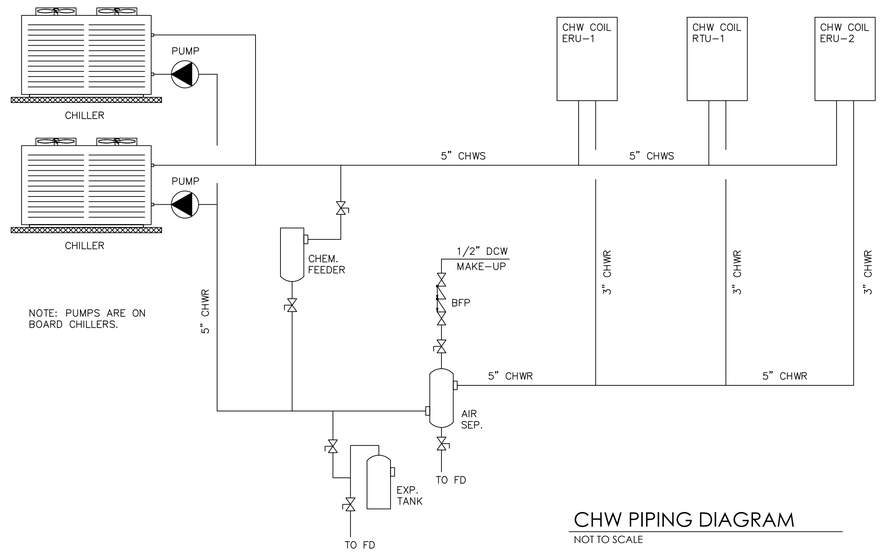
DE-12A TYP. FAN-POWERED PARALLEL PIU W/ELEC. HEAT DETAIL



DE-10B ROOF MOUNT AIR HANDLING UNIT INSTALLATION DETAIL



DD-2A BRANCH DUCT TAKE-OFF DETAILS



CHW PIPING DIAGRAM

NOT TO SCALE

ROME-FLOYD COUNTY HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

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GEORGIA REGISTERED PE#30394 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

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DRAWING TITLE

HVAC DETAILS

PROJECT NO.	SCALE		
705-1403	AS SHOWN		
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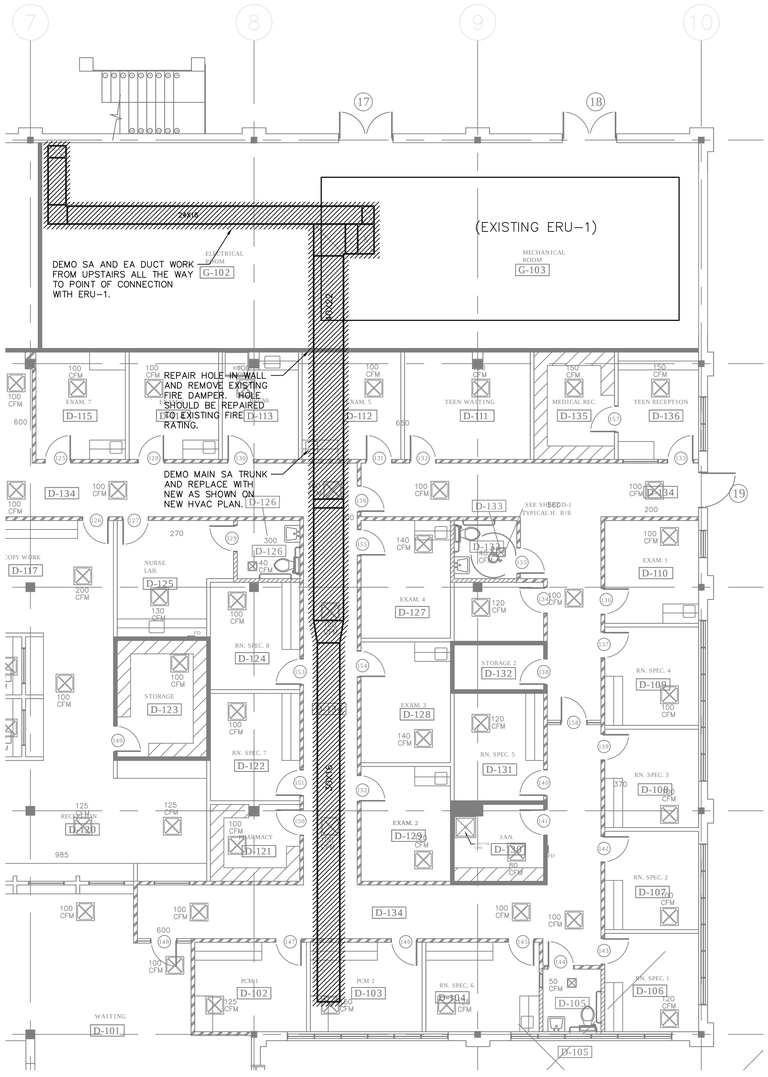
	JD	JD	08/28/15

DRAWING NO.

M0-4



LOWER FLOOR HVAC DEMOLITION PLAN

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

ROME–FLOYD COUNTY
HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY HEALTH DEPT. HVAC UPGRADES

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ENGINEERING GROUP, INC.
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PH. (706) 237-6013

GEORGIA REGISTERED PE#30394 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

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DRAWING TITLE

LOWER FLOOR HVAC DEMOLITION PLAN

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

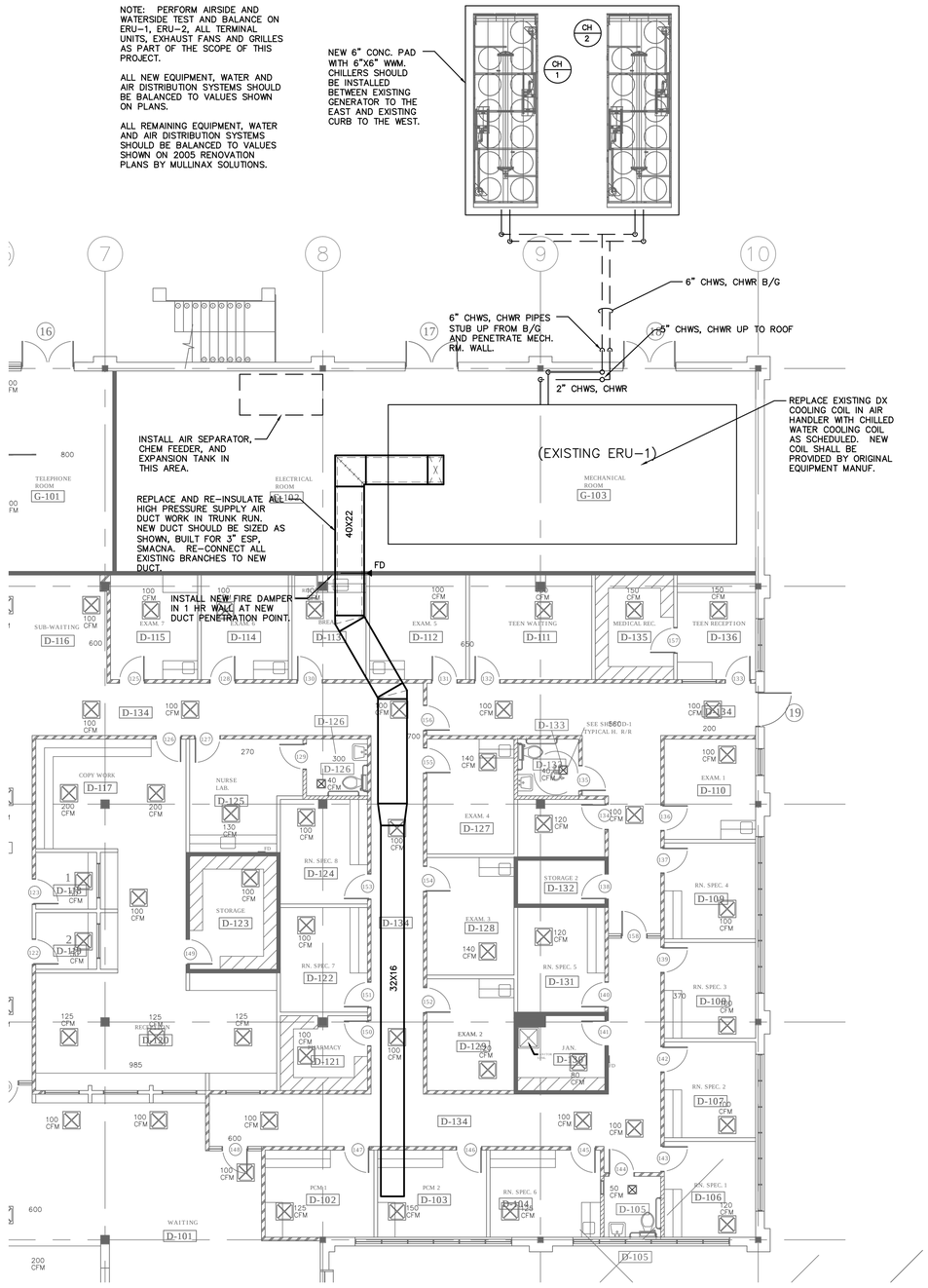
DRAWING NO.

M1-1

NOTE: PERFORM AIRSIDE AND WATERSIDE TEST AND BALANCE ON ERU-1, ERU-2, ALL TERMINAL UNITS, EXHAUST FANS AND GRILLES AS PART OF THE SCOPE OF THIS PROJECT.

ALL NEW EQUIPMENT, WATER AND AIR DISTRIBUTION SYSTEMS SHOULD BE BALANCED TO VALUES SHOWN ON PLANS.

ALL REMAINING EQUIPMENT, WATER AND AIR DISTRIBUTION SYSTEMS SHOULD BE BALANCED TO VALUES SHOWN ON 2005 RENOVATION PLANS BY MULLINAX SOLUTIONS.



NEW HVAC PLAN - LOWER FLOOR

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

ROME-FLOYD COUNTY HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY HEALTH DEPT. HVAC UPGRADES

DRINKARD
ENGINEERING GROUP, INC.
119 SOUTH BROAD ST. ROME, GA 30161
PH. (706) 237-6013

GEORGIA REGISTERED PE#30994 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

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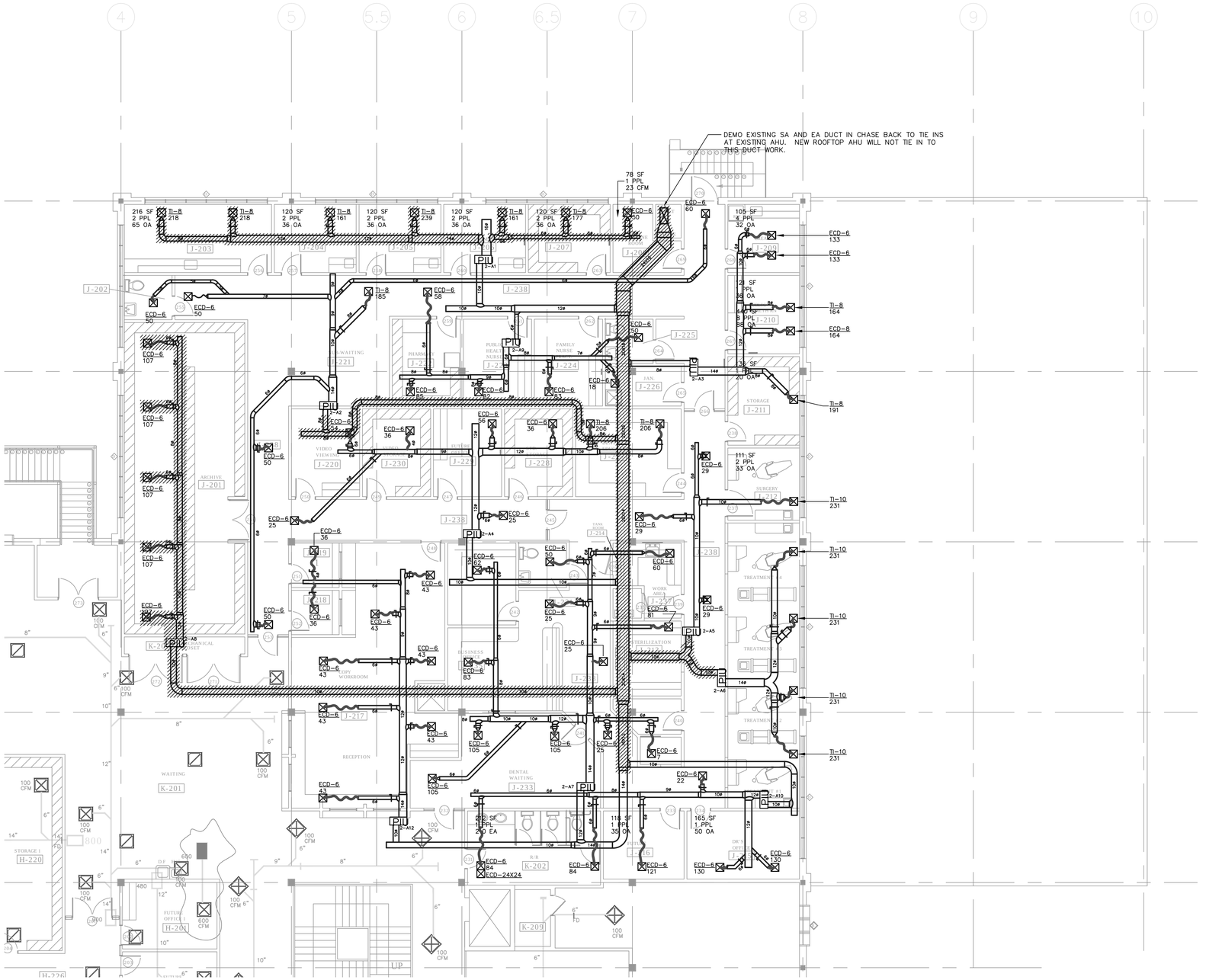
DRAWING TITLE

LOWER FLOOR NEW HVAC PLAN

PROJECT NO.	SCALE		
705-1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M1-2



DEMO EXISTING SA AND EA DUCT IN CHASE BACK TO TIE INS AT EXISTING AHU. NEW ROOFTOP AHU WILL NOT TIE IN TO THIS DUCT WORK.

HVAC DEMO PLAN - UPPER FLOOR DENTAL & SPECIALTY

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

ROME-FLOYD COUNTY
HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY HEALTH DEPT. HVAC UPGRADES

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PH. (706) 237-6013

PE030294
JEFFREY A. DRINKARD
08/28/15

General Notes

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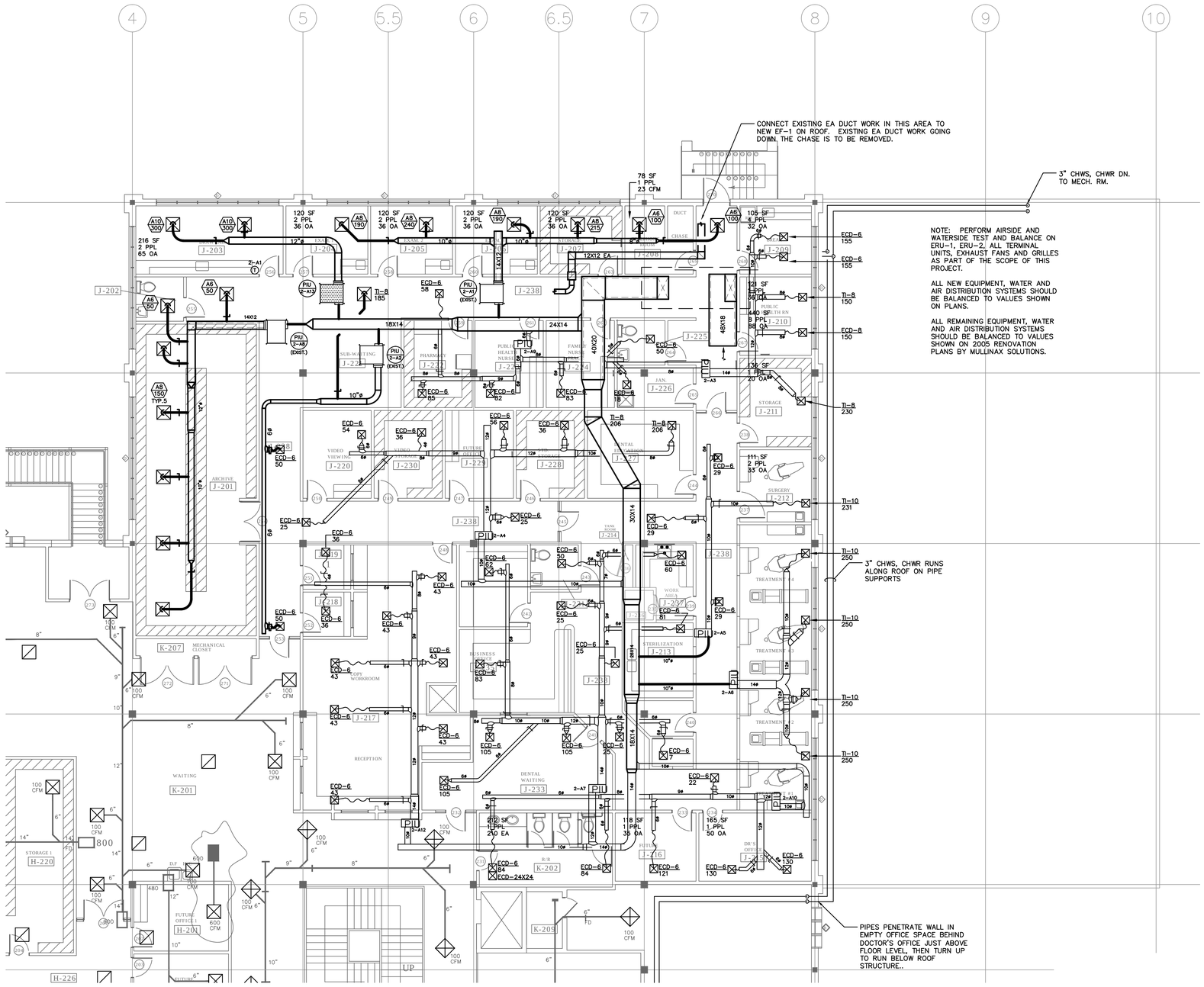
DRAWING TITLE
HVAC DEMOLTION PLAN - UPPER FLOOR DENTAL & SPECIALTY

PROJECT NO. 705-1403		SCALE AS SHOWN	
APPROVED	CHECKED JD	DRAWN JD	DATE 08/28/15

DRAWING NO.
M2-1



NEW HVAC PLAN - UPPER FLOOR DENTAL & SPECIALTY

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

ROME–FLOYD COUNTY
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08/28/15

General Notes

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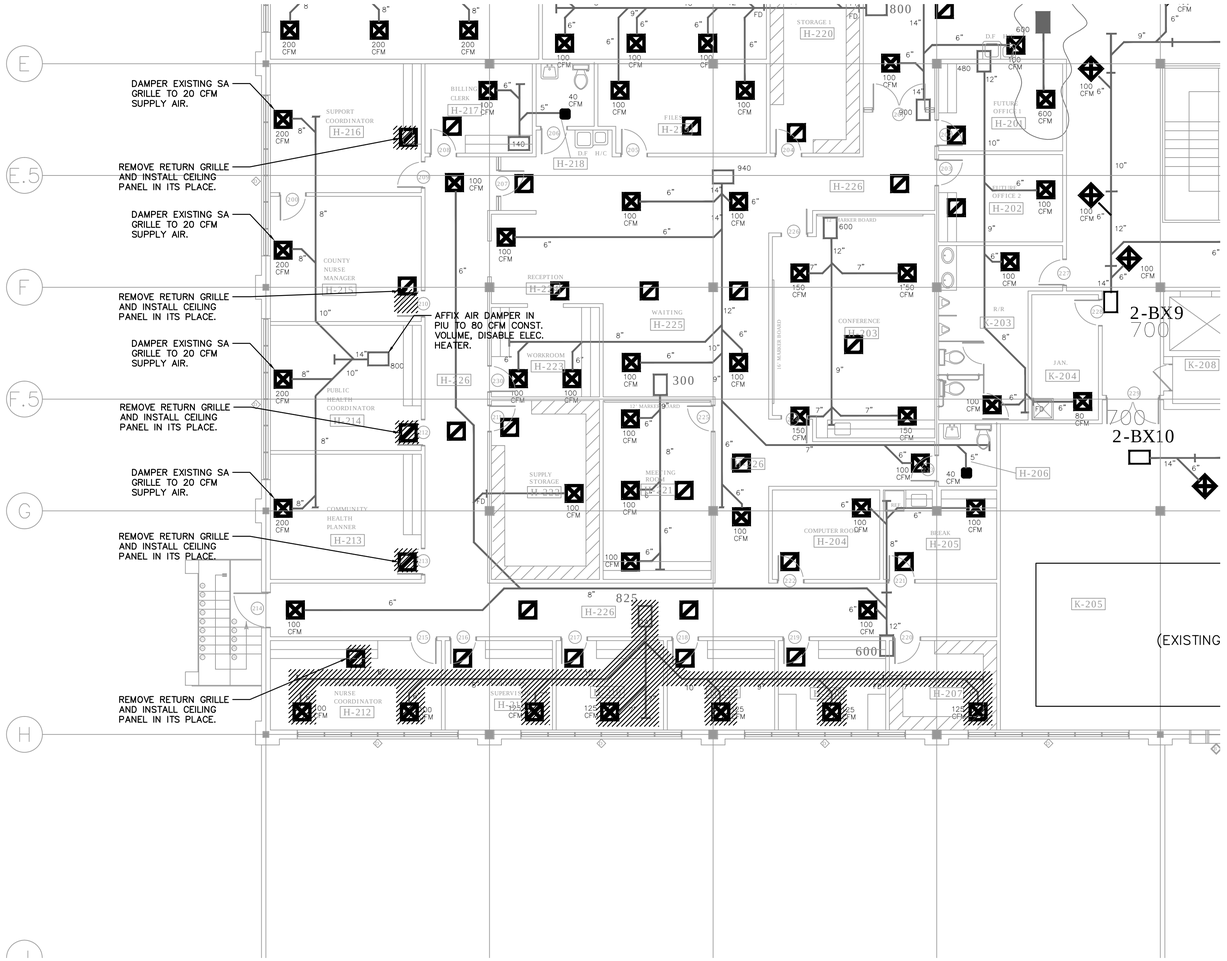
NEW HVAC PLAN - UPPER FLOOR DENTAL & SPECIALTY

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M2-2



HVAC DEMO PLAN - UPPER FLOOR ADMIN. AREA

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

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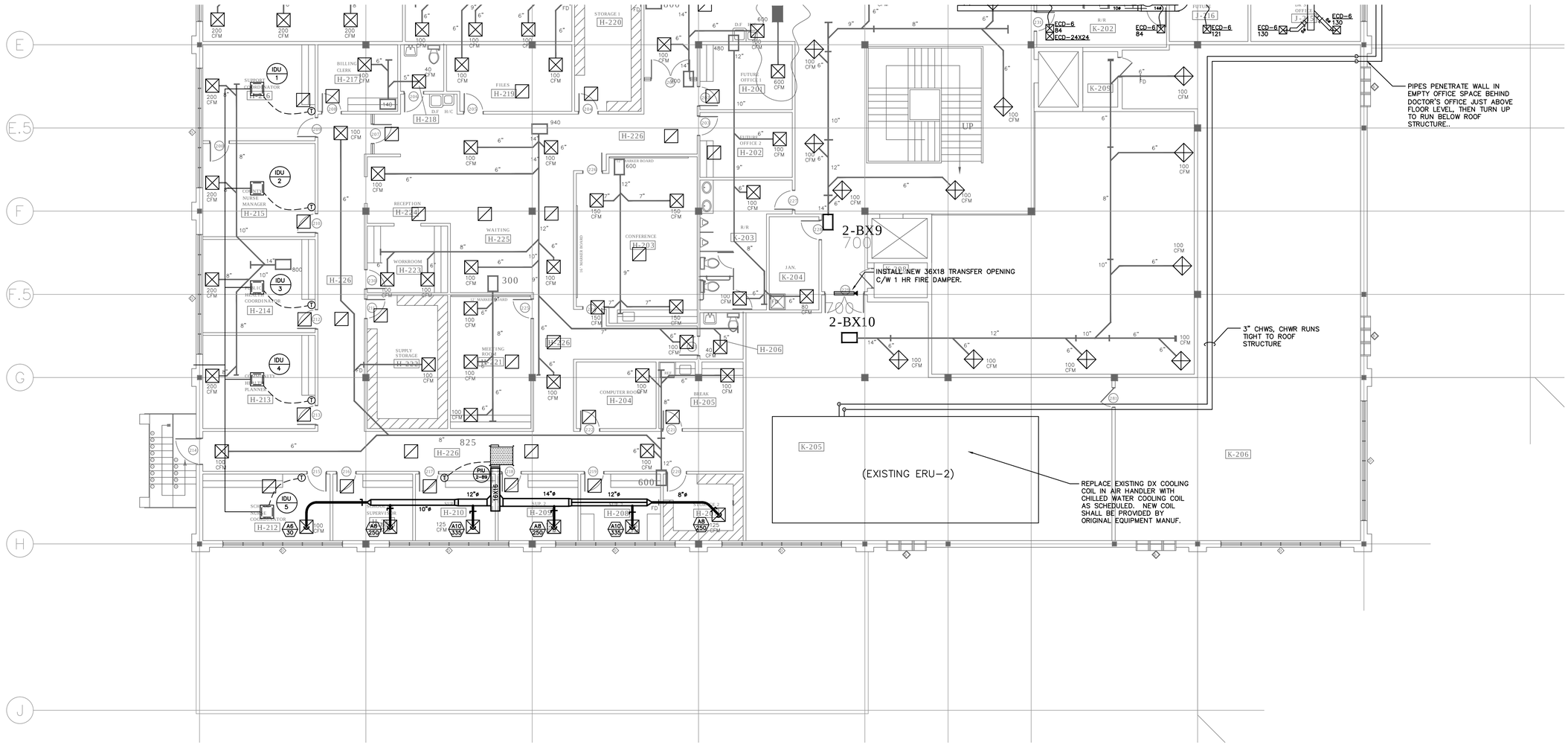
HVAC DEMO PLAN - UPPER FLOOR ADMIN. AREA

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M2-3



NEW HVAC PLAN - UPPER FLOOR ADMIN. AREA

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

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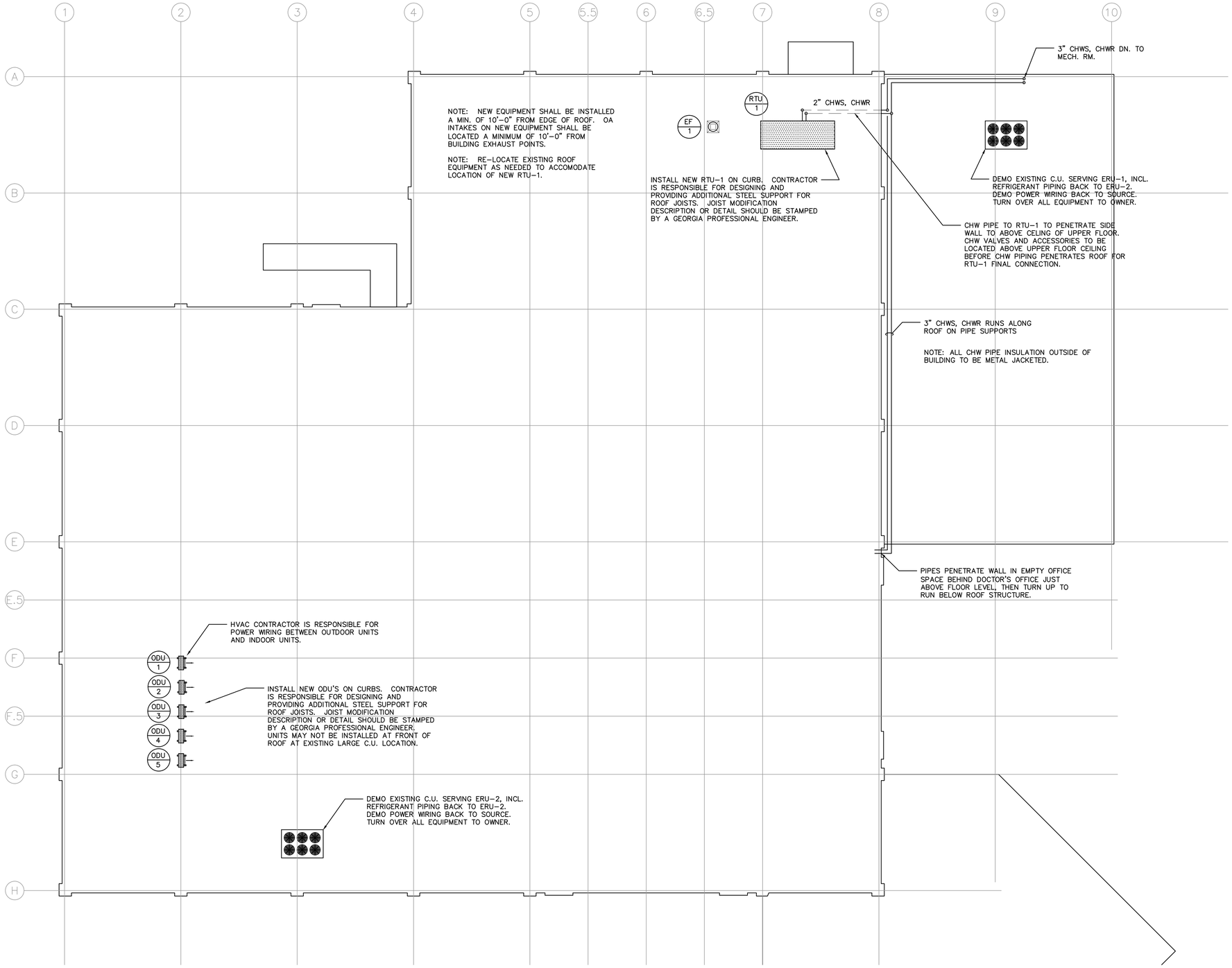
PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	JD	JD	08/28/15

DRAWING NO.

M2-4



HVAC ROOF PLAN

SCALE: 3/32" = 1'-0"

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08/28/15

General Notes

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DRAWING TITLE

HVAC ROOF PLAN

PROJECT NO.		SCALE	
705-1403		AS SHOWN	
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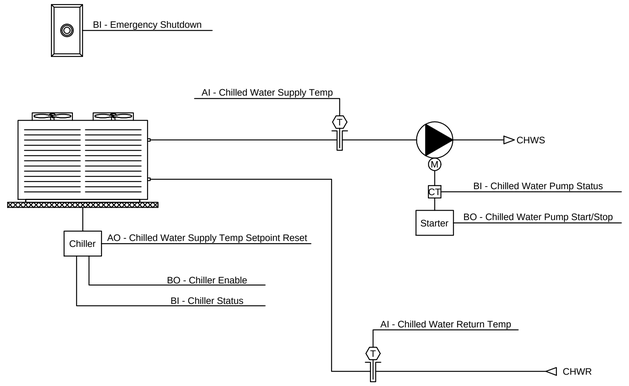
	JD	JD	08/28/15

DRAWING NO.

M3-1



EQUIPMENT CONTROL SCHEMATIC – AIR COOLED CHILLER AND PUMP

	HARDWARE POINTS				SOFTWARE POINTS						
ZONE	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	SHOW ON GRAPHIC
CHW SUPPLY TEMP.	X								X		X
CHW RETURN TEMP.	X								X		X
CHW SUPPLY TEMP RESET SETPOINT		X							X		X
EMERGENCY SHUTDOWN			X						X	X	X
CHW PUMP STATUS			X						X		X
CHILLER STATUS			X						X		X
CHW PUMP START/STOP				X							X
CHILLER ENABLE				X							X
OUTSIDE AIR TEMP.					X						X
CHW PUMP FAILURE										X	
CHW PUMP RUNNING IN HAND										X	
CHW PUMP RUNTIME EXCEEDED										X	
CHILLER FAILURE										X	
CHILLER RUNNING IN HAND										X	
CHILLER RUNTIME EXCEEDED										X	
HIGH CHW SUPPLY TEMP.										X	
LOW CHW SUPPLY TEMP.										X	

OPERATING SEQUENCE – AIR COOLED CHILLER & PUMP

Chiller – Run Conditions:
The chiller shall be enabled to run whenever:
- A definable number of chilled water coils need cooling
- AND the outside air temperature is greater than 50°F (adj.).

To prevent short cycling, the chiller shall run for and be off for minimum adjustable times (both user definable), unless shutdown on safeties or outside air conditions.

The chiller shall run subject to its own internal safeties and controls.

Emergency Shutdown:
The chiller shall shut down and an alarm generated upon receiving an emergency shutdown signal status.

Chilled Water Pump:
The chilled water pump shall run anytime the chiller is called to run. The chilled water pump shall also run for freeze protection whenever the outside air temperature is less than a user definable setpoint (adj.). The pump shall be commanded by the chiller's controls, and monitored for on/off condition by the DDC system. Pump status shall be displayed on the chiller status screen in the DDC.

The chilled water pump shall start prior to the chiller being enabled and shall stop only after the chiller is disabled. The chilled water pump shall therefore have:
- A user adjustable delay on start.
- AND a user adjustable delay on stop.

The delay times shall be set appropriately to allow for orderly chilled water system start–up, shutdown and sequencing.

Alarms shall be provided as follows:
- Chilled Water Pump Failure: Commanded on, but the status is off.
- Chilled Water Pump Running in Hand: Commanded off, but the status is on.
- Chilled Water Pump Runtime Exceeded: Status runtime exceeds a user definable limit.

Chiller:
The chiller shall be enabled at a user adjustable time after pump statuses are proven on. The chiller shall therefore have a user adjustable delay on start.

The delay time shall be set appropriately to allow for orderly chilled water system start–up, shutdown and sequencing.

The chiller shall run subject to its own internal safeties and controls.

Alarms shall be provided as follows:
- Chiller Failure: Commanded on, but the status is off.
- Chiller Running in Hand: Commanded off, but the status is on.
- Chiller Runtime Exceeded: Status runtime exceeds a user definable limit.

Chilled Water Supply Temperature Setpoint:
The chilled water supply temperature setpoint shall have the ability to be reset based on outside air temperature. However, the user shall have the ability to enable/disable this feature. When disabled, the chilled water temperature supply setpoint shall be constant, per chiller equipment schedule.

When setpoint reset is enabled, the chilled water supply temperature setpoint shall reset upwards by adding from 0°F (adj.) to 10°F (adj.) to the current setpoint as outside air temperature drops from 75°F (adj.) to 50°F (adj.)

Chilled Water Temperature Monitoring:
The following temperatures shall be monitored and displayed on the chiller status screen in the DDC:
- Chilled water supply.
- Chilled water return.

Alarms shall be provided as follows:
- High Chilled Water Supply Temp: If the chilled water supply temperature is greater than 55°F (adj.).
- Low Chilled Water Supply Temp: If the chilled water supply temperature is less than 38°F (adj.).

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GEORGIA REGISTERED PE#30394 PROFESSIONAL ENGINEER JEFFREY A. DRINKARD

08/28/15

General Notes

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DRAWING TITLE
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PROJECT NO.	SCALE		
705–1403	AS SHOWN		
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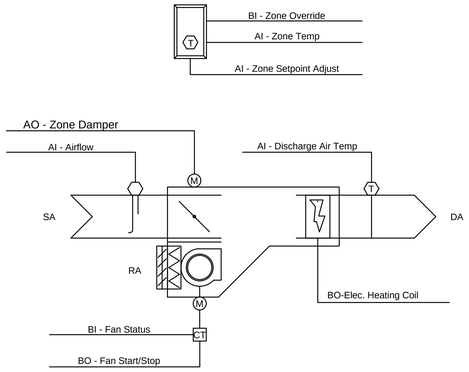
DRAWING NO.
M4-1



EQUIPMENT CONTROL SCHEMATIC – PARALLEL PIU WITH ELECTRIC REHEAT

	HARDWARE POINTS				SOFTWARE POINTS						
ZONE	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	SHOW ON GRAPHIC
ZONE TEMP	X								X		X
ZONE SETPT ADJUST	X										X
AIRFLOW	X								X		X
DISCH. AIR TEMP	X								X		X
ZONE DAMPER		X									X
REHEAT COIL				X					X		X
ZONE OVERRIDE			X						X		X
FAN STATUS			X						X		X
FAN START/STOP				X							X
% OF TIME SATISFIED					X				X		
AIRFLOW SETPT.					X				X		X
HEATING MODE						X			X		
SCHEDULE								X			
HEATING SETPT.									X		X
COOLING SETPT.									X		X
HIGH ZONE TEMP.										X	
LOW ZONE TEMP.										X	
HIGH DISCH. AIR TEMP.										X	
LOW DISCH. AIR TEMP.										X	
FAN FAILURE										X	
FAN IN HAND										X	
FAN RUNTIME EXCEEDED										X	
FILTER CHANGE REQ'D.										X	X

OPERATING SEQUENCE – PARALLEL PIU WITH ELECTRIC REHEAT

Run Conditions – Scheduled:
The unit shall run according to a user definable time schedule in the following modes:
- Occupied Mode: The unit shall maintain
- A 74°F (adj.) cooling setpoint
- A 70°F (adj.) heating setpoint.

- Unoccupied Mode (night setback): The unit shall maintain
- A 85°F (adj.) cooling setpoint.
- A 55°F (adj.) heating setpoint.

Alarms shall be provided as follows:
- High Zone Temp: If the zone temperature is greater than the cooling setpoint by a user definable amount (adj.).
- Low Zone Temp: If the zone temperature is less than the heating setpoint by a user definable amount (adj.).

Zone Setpoint Adjust:
The occupant shall be able to adjust the zone temperature heating and cooling setpoints at the zone sensor.

Zone Optimal Start:
The unit shall use an optimal start algorithm for morning start–up. This algorithm shall minimize the unoccupied warm–up or cool–down period while still achieving comfort conditions by the start of scheduled occupied period.

Zone Unoccupied Override:
A timed local override control shall allow an occupant to override the schedule and place the unit into an occupied mode for an adjustable period of time. At the expiration of this time, control of the unit shall automatically return to the schedule.

Reversing Variable Volume Terminal Unit – Flow Control:
The unit shall maintain zone setpoints by controlling the airflow through one of the following:

Occupied:
- When zone temperature is greater than its cooling setpoint, the zone damper shall modulate between the minimum occupied airflow (adj.) and the maximum cooling airflow (adj.) until the zone is satisfied.
- When the zone temperature is between the cooling setpoint and the heating setpoint, the zone damper shall maintain the minimum required zone ventilation (adj.).
- When zone temperature is less than its heating setpoint, the controller shall enable heating to maintain the zone temperature at its heating setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the minimum occupied airflow (adj.) and the maximum heating airflow (adj.) until the zone is satisfied.

Unoccupied:
- When the zone is unoccupied the zone damper shall control to its minimum unoccupied airflow (adj.).
- When the zone temperature is greater than its cooling setpoint, the zone damper shall modulate between the minimum unoccupied airflow (adj.) and the maximum cooling airflow (adj.) until the zone is satisfied.
- When zone temperature is less than its unoccupied heating setpoint, the controller shall enable heating to maintain the zone temperature at the setpoint. Additionally, if warm air is available from the AHU, the zone damper shall modulate between the minimum unoccupied airflow (adj.) and the auxiliary heating airflow (adj.) until the zone is satisfied.

Fan Control – Parallel:
The fan shall run whenever the zone controller calls for heat. The fan shall run for a minimum user definable time (adj.). If the AHU is not running, the zone damper will close completely to prevent the unit fan from blowing air back into the supply duct.

Electric Reheat Coil:
The controller shall measure the zone temperature and modulate the reheating coil valve open on dropping temperature to maintain its heating setpoint.

Reheating – High Discharge Air Temperature Limit:
The controller shall measure the discharge air temperature and limit reheating if the discharge air temperature is more than 15°F (adj.) above the zone temperature.

Discharge Air Temperature:
The controller shall monitor the discharge air temperature.

Alarms shall be provided as follows:
- High Discharge Air Temp: If the discharge air temperature is greater than 120°F (adj.).
- Low Discharge Air Temp: If the discharge air temperature is less than 40°F (adj.).

Fan Status:
The controller shall monitor the fan status.

Alarms shall be provided as follows:
- Fan Failure: Commanded on, but the status is off.
- Fan in Hand: Commanded off, but the status is on.
- Fan Runtime Exceeded: Fan status runtime exceeds a user definable limit (adj.).

Filter Hours:
The controller shall monitor the fan runtime.

Alarms shall be provided as follows:
- Filter Change Required: Filter has been in use for more than 2200 hrs (adj.).

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General Notes

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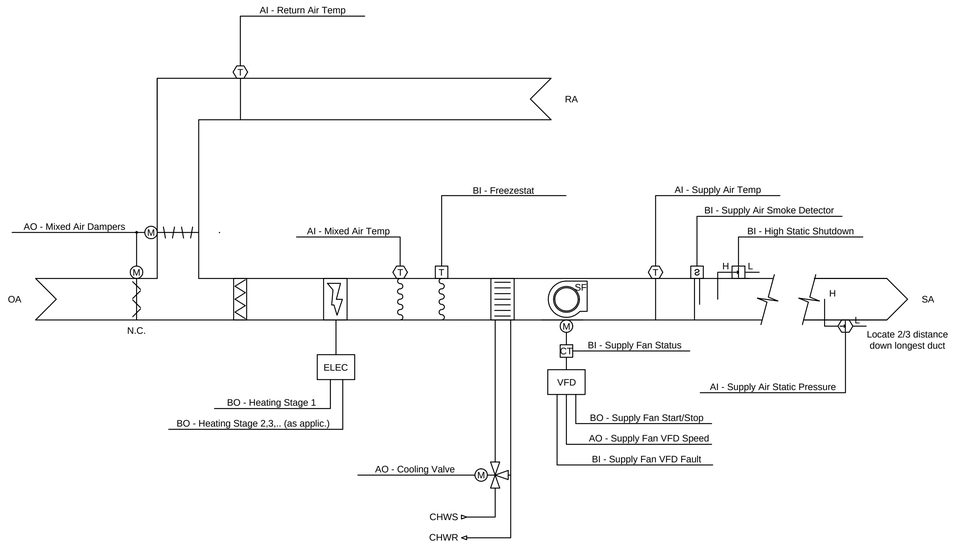
M4-2



EQUIPMENT CONTROL SCHEMATIC – VAV AIR HANDLING UNIT (CHW COOLING, ELECTRIC PRE–HEAT)

	HARDWARE POINTS				SOFTWARE POINTS						
ZONE	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	SHOW ON GRAPHIC
S.A. STATIC PRESS.	X								X	X	X
MIXED AIR TEMP.	X								X		X
RETURN AIR TEMP.	X								X		X
SUPPLY AIR TEMP	X								X		X
SUPPLY FAN VFD SPEED		X							X		X
PRE–HEAT COIL				X					X		X
COOLING VALVE		X							X		X
MIXED AIR DAMPERS		X							X		X
FREEZESTAT			X						X	X	X
HIGH STATIC SHUTDOWN			X						X	X	X
R.A. SMOKE DETECTOR (N/A)			–						–	–	–
S.A. SMOKE DETECTOR			X						X	X	X
SUPPLY FAN VFD FAULT			X							X	X
SUPPLY FAN STATUS			X						X		X
SUPPLY FAN START/STOP				X					X		X
DEMAND LIMIT LEVEL					X						X
S.A. STATIC PRESS. SETPT.					X				X		X
PRE–HEAT MIXED AIR TEMP. SETPOINT					X				X		X
ECONOMIZER MIXED AIR TEMP. SETPOINT					X				X		X
SUPPLY AIR TEMP. SETPOINT					X				X		X
EMERGENCY SHUTDOWN						X			X	X	X
SCHEDULE								X			
HIGH SUPPLY AIR STATIC PRESSURE										X	
LOW SUPPLY AIR STATIC PRESSURE										X	
SUPPLY FAN FAILURE										X	
SUPPLY FAN IN HAND										X	
SUPPLY FAN RUNTIME EXCEEDED										X	
HIGH SUPPLY AIR TEMP.										X	
LOW SUPPLY AIR TEMP.										X	
HIGH MIXED AIR TEMP.										X	
LOW MIXED AIR TEMP.										X	
HIGH RETURN AIR TEMP.										X	
LOW RETURN AIR TEMP.										X	

OPERATING SEQUENCE – VAV AIR HANDLING UNIT (CHW COOLING, ELECTRIC PRE–HEAT)

Run Conditions – Scheduled:
The unit shall run based upon an operator adjustable schedule.

Emergency Shutdown:
The unit shall shut down and generate an alarm upon receiving an emergency shutdown signal.

Freeze Protection:
The unit shall shut down and generate an alarm upon receiving a freezestat status.

High Static Shutdown:
The unit shall shut down and generate an alarm upon receiving an high static shutdown signal.

Return and Supply Air Smoke Detection:
The unit shall shut down and generate an alarm upon receiving a return or supply air smoke detector status.

AHU Optimal Start:
The unit shall start prior to scheduled occupancy based on the time necessary for the zones to reach their occupied setpoints. The start time shall automatically adjust based on changes in outside air temperature and zone temperatures.

Supply Fan:
The supply fan shall run anytime the unit is commanded to run, unless shutdown on safeties. To prevent short cycling, the supply fan shall have a user definable (adj.) minimum runtime.

Alarms shall be provided as follows:
- Supply Fan Failure: Commanded on, but the status is off.
- Supply Fan in Hand: Commanded off, but the status is on.
- Supply Fan Runtime Exceeded: Status runtime exceeds a user definable limit (adj.).

Supply Air Duct Static Pressure Control:
The controller shall measure duct static pressure and shall modulate the supply fan VFD speed to maintain a duct static pressure setpoint of 2 in H2O (adj.). The supply fan VFD speed shall not drop below 30% (adj.).

Alarms shall be provided as follows:
- High Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) greater than setpoint.
- Low Supply Air Static Pressure: If the supply air static pressure is 25% (adj.) less than setpoint.
- Supply Fan VFD Fault.

Heating:
The controller shall measure the mixed air temperature and modulate the preheating coil to maintain its setpoint 5°F (adj.) less than the supply air temperature setpoint.

Preheating shall be enabled whenever:
- Outside air temperature is less than 60°F (adj.).
- AND the economizer (if present) is disabled.
- AND the supply fan status is on.

The preheating coil shall energize for freeze protection whenever:
- Mixed air temperature drops from 40°F to 35°F (adj.).
- OR the freezestat (if present) is on.

Cooling:
The controller shall measure the supply air temperature and enable cooling stages to maintain its cooling setpoint.

The cooling shall be enabled whenever:
- Outside air temperature is greater than 60°F (adj.).
- AND the economizer (if present) is disabled or fully open.
- AND the supply fan status is on.
- AND the heating (if present) is not active.

Alarms shall be provided as follows:
- High Supply Air Temp: If the supply air temperature is 5°F (adj.) greater than setpoint.

Low Supply Air Temperature Alarm:
The controller shall alarm if the supply air temperature is less than 45°F (adj.).

Economizer:
The controller shall measure the mixed air temperature and modulate the economizer dampers in sequence to maintain a setpoint 2°F (adj.) less than the supply air temperature setpoint. The outside air dampers shall maintain a minimum adjustable position of 10% (adj.) open whenever occupied.

The economizer shall be enabled whenever:
- Outside air temperature is less than 65°F (adj.).
- AND the outside air temperature is less than the return air temperature.
- AND the supply fan status is on.

The economizer shall close whenever:
- Mixed air temperature drops from 40°F to 35°F (adj.).
- OR the freezestat (if present) is on.
- OR on loss of supply fan status.

The outside and exhaust air dampers shall close and the return air damper shall open when the unit is off. If Optimal Start Up is available the mixed air damper shall operate as described in the occupied mode except that the outside air damper shall modulate to fully closed.

Minimum Outside Air Ventilation – Fixed Percentage:
The outside air dampers shall maintain a minimum adjustable position during building occupied hours and be closed during unoccupied hours.

Mixed Air Temperature:
The controller shall monitor the mixed air temperature and use as required for economizer control (if present) or preheating control (if present).

Alarms shall be provided as follows:
- High Mixed Air Temp: If the mixed air temperature is greater than 90°F (adj.).
- Low Mixed Air Temp: If the mixed air temperature is less than 45°F (adj.).

Return Air Temperature:
The controller shall monitor the return air temperature and use as required for setpoint control or economizer control (if present).

Alarms shall be provided as follows:
- High Return Air Temp: If the return air temperature is greater than 90°F (adj.).
- Low Return Air Temp: If the return air temperature is less than 45°F (adj.).

Supply Air Temperature:
The controller shall monitor the supply air temperature.

Alarms shall be provided as follows:
- High Supply Air Temp: If the supply air temperature is greater than 120°F (adj.).
- Low Supply Air Temp: If the supply air temperature is less than 45°F (adj.).

FLOYD COUNTY

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08/28/15

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EQUIPMENT CONTROL SEQUENCES

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
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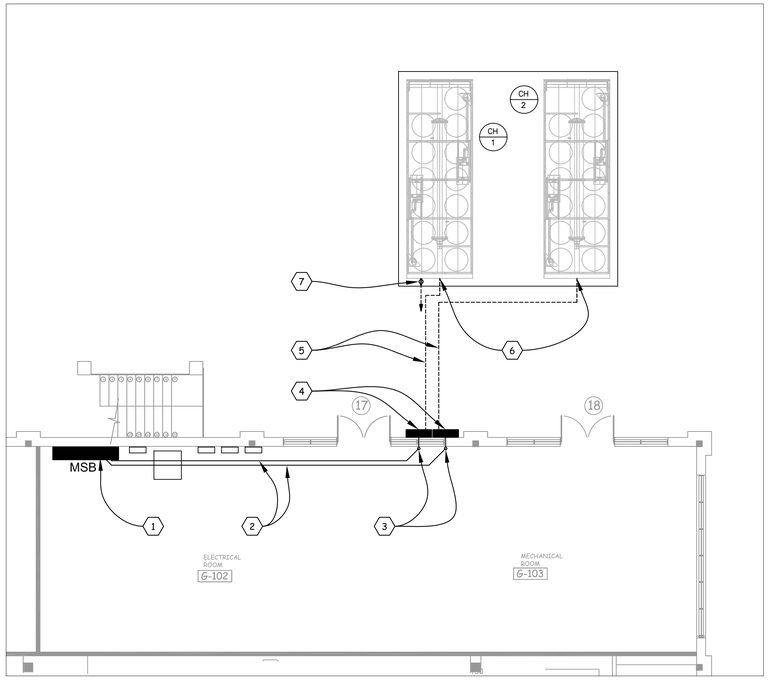
M4-3



NEW HVAC POWER PLAN - LOWER FLOOR

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

KEYED NOTES

1	INSTALL 2-600A FRAME WITH 500A TRIPS, 3 POLE BREAKERS. MATCH EXISTING BREAKERS.
2	INSTALL 2-3" EMT WITH 3-600 KCM & #2G EACH ON WALL BELOW DUCT
3	INSTALL CONDUITS DOWN INSIDE WALL & THROUGH WALL INTO BACK OF SWITCHES
4	INSTALL 2-600A, 600V, 3 POLE NON-FUSED NEMA 3R DISCONNECT SWITCHES ON WALL & LABEL CH-1 & CH-2
5	INSTALL 2-3-1/2" SCHEDULE 80 PVC WITH 3-600KCM & #2G EACH DOWN WALL & 24" BELOW GRADE WITH 4" CONCRETE COVER TO CHILLERS
6	INSTALL RIGID GALVANIZED METAL CONDUIT ELBOWS OUT OF THE GROUND AND LIQUID-TIGHT-FLEXIBLE METAL CONDUIT TO UNITS AND MAKE FINAL CONNECTIONS
7	INSTALL 20A, 125V, GFI, WEATHER-PROOF-WHILE-IN-USE RECEPTACLE & CONNECT TO EXISTING RECEPTACLE CIRCUIT IN BUILDING WITH 2-#12 & #12G IN 3/4" PVC CONDUIT

FURNISH COORDINATION STUDY (SIMPLIED GRAFT METHOD) & ADJUST EXISTING MAIN BREAKER TRIP UNIT & NEW 600A BREAKER TRIP UNITS AS REQUIRED TO ACHIEVE SUBSTANTIAL SELECTIVITY

ROME–FLOYD COUNTY
HEALTH DEPARTMENT
16 EAST 12TH STREET SW
ROME, GA 30161

RYAN DAVIS, FACILITIES DIRECTOR

FLOYD COUNTY HEALTH DEPT. HVAC UPGRADES

DRINKARD
ENGINEERING GROUP, INC.
119 SOUTH BROAD ST. ROME, GA 30161
PH. (706) 237-6013

GEORGIA REGISTERED NO. 011018 PROFESSIONAL ENGINEER WESLEY F TURNER

08/28/15

General Notes

	ISSUED FOR OWNER REVIEW	06/05/15
	ISSUED FOR BIDDING	08/28/15

DRAWING TITLE

CHILLER POWER PLAN

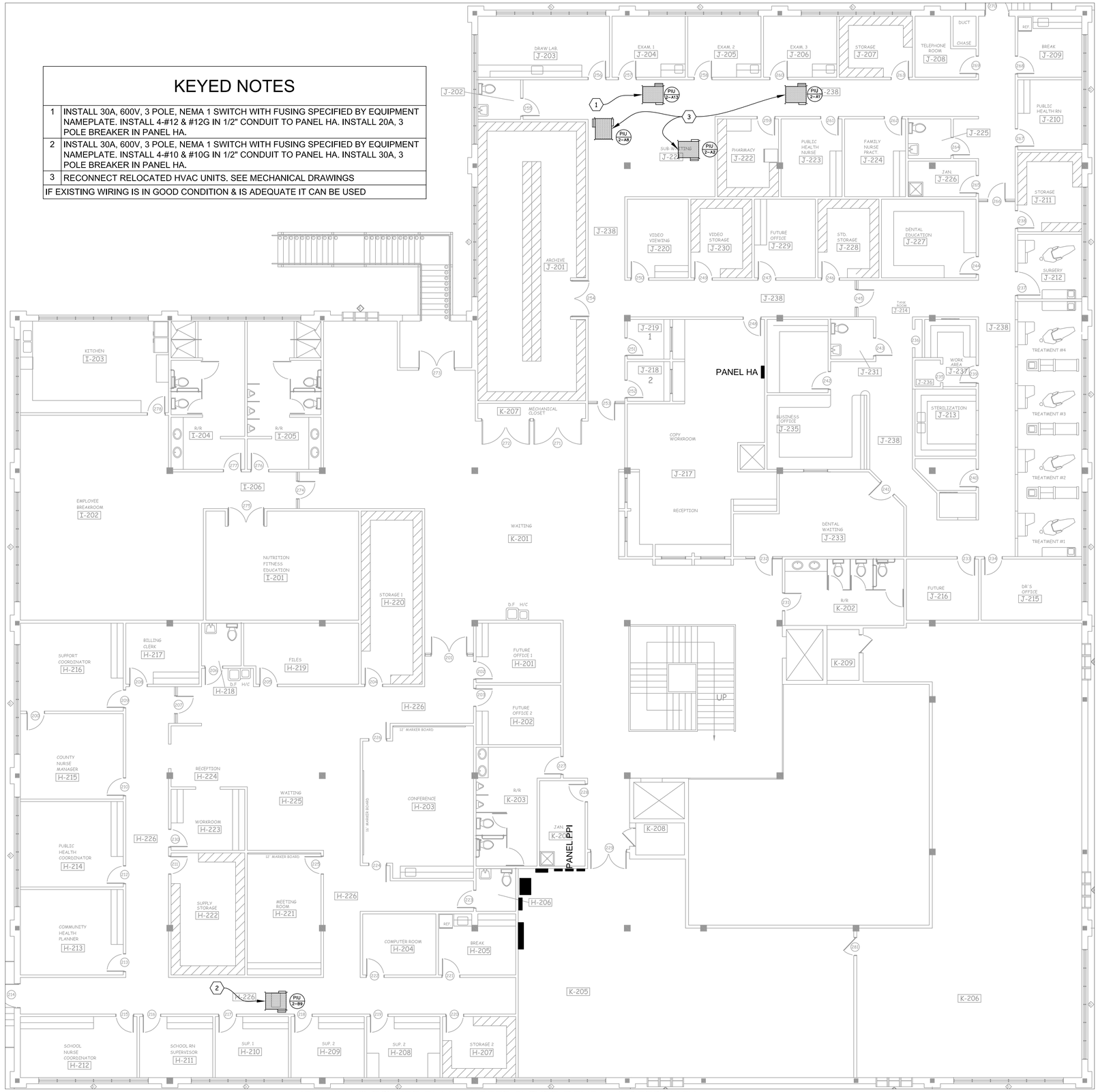
PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	WT	WT	08/28/15

DRAWING NO.

E1-0

KEYED NOTES

1	INSTALL 30A, 600V, 3 POLE, NEMA 1 SWITCH WITH FUSING SPECIFIED BY EQUIPMENT NAMEPLATE. INSTALL 4-#12 & #12G IN 1/2" CONDUIT TO PANEL HA. INSTALL 20A, 3 POLE BREAKER IN PANEL HA.
2	INSTALL 30A, 600V, 3 POLE, NEMA 1 SWITCH WITH FUSING SPECIFIED BY EQUIPMENT NAMEPLATE. INSTALL 4-#10 & #10G IN 1/2" CONDUIT TO PANEL HA. INSTALL 30A, 3 POLE BREAKER IN PANEL HA.
3	RECONNECT RELOCATED HVAC UNITS. SEE MECHANICAL DRAWINGS
IF EXISTING WIRING IS IN GOOD CONDITION & IS ADEQUATE IT CAN BE USED	



NEW HVAC POWER PLAN - UPPER FLOOR DENTAL & SPECIALTY

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

ROME–FLOYD COUNTY HEALTH DEPARTMENT
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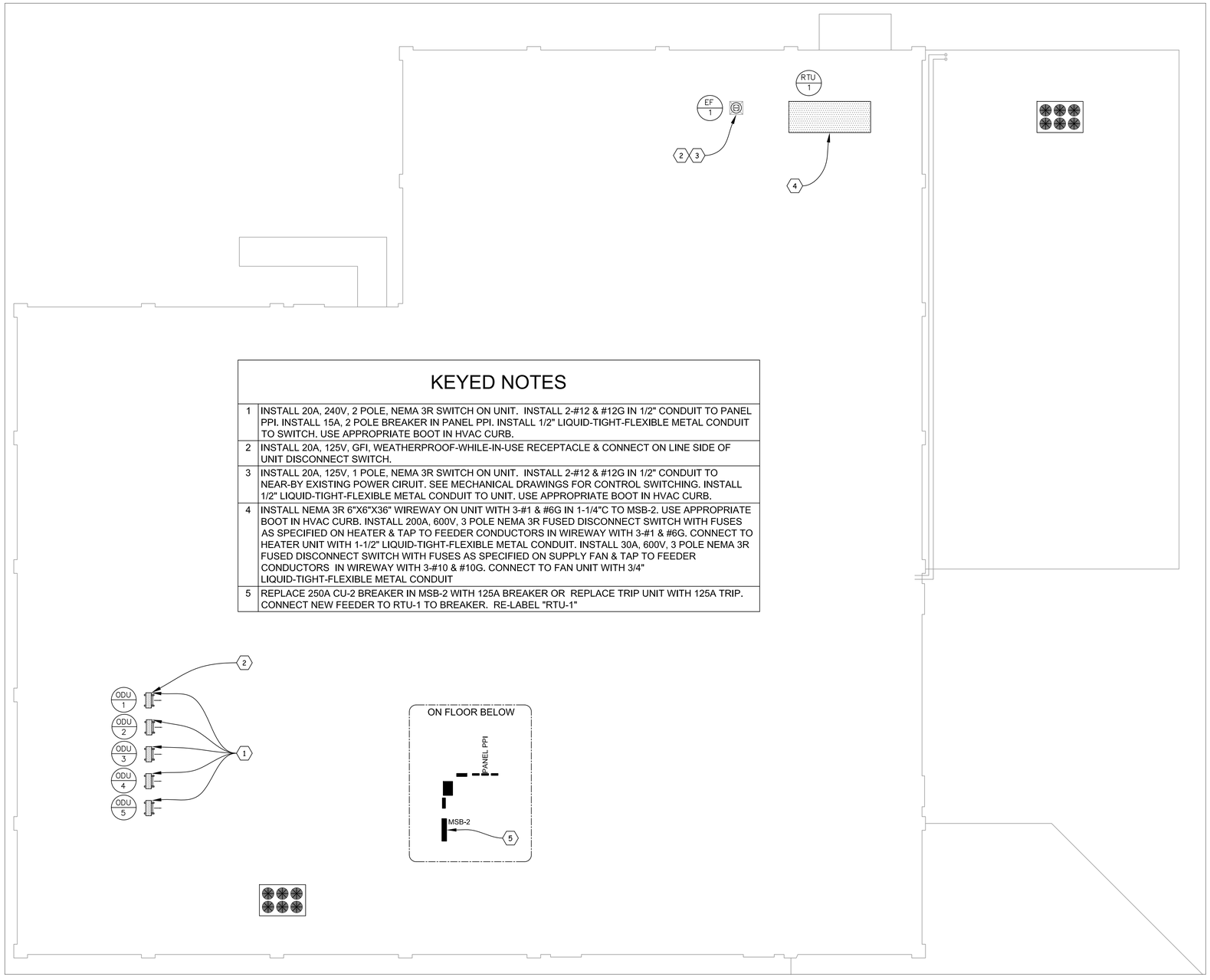
UPPER FLOOR HVAC POWER PLAN

PROJECT NO.	SCALE		
705–1403	AS SHOWN		
APPROVED	CHECKED	DRAWN	DATE
	WT	WT	08/28/15

DRAWING NO.

E2-0



KEYED NOTES

1	INSTALL 20A, 240V, 2 POLE, NEMA 3R SWITCH ON UNIT. INSTALL 2-#12 & #12G IN 1/2" CONDUIT TO PANEL PPI. INSTALL 15A, 2 POLE BREAKER IN PANEL PPI. INSTALL 1/2" LIQUID-TIGHT-FLEXIBLE METAL CONDUIT TO SWITCH. USE APPROPRIATE BOOT IN HVAC CURB.
2	INSTALL 20A, 125V, GFI, WEATHERPROOF-WHILE-IN-USE RECEPTACLE & CONNECT ON LINE SIDE OF UNIT DISCONNECT SWITCH.
3	INSTALL 20A, 125V, 1 POLE, NEMA 3R SWITCH ON UNIT. INSTALL 2-#12 & #12G IN 1/2" CONDUIT TO NEAR-BY EXISTING POWER CIRUIT. SEE MECHANICAL DRAWINGS FOR CONTROL SWITCHING. INSTALL 1/2" LIQUID-TIGHT-FLEXIBLE METAL CONDUIT TO UNIT. USE APPROPRIATE BOOT IN HVAC CURB.
4	INSTALL NEMA 3R 6"X6"X36" WIREWAY ON UNIT WITH 3-#1 & #6G IN 1-1/4"C TO MSB-2. USE APPROPRIATE BOOT IN HVAC CURB. INSTALL 200A, 600V, 3 POLE NEMA 3R FUSED DISCONNECT SWITCH WITH FUSES AS SPECIFIED ON HEATER & TAP TO FEEDER CONDUCTORS IN WIREWAY WITH 3-#1 & #6G. CONNECT TO HEATER UNIT WITH 1-1/2" LIQUID-TIGHT-FLEXIBLE METAL CONDUIT. INSTALL 30A, 600V, 3 POLE NEMA 3R FUSED DISCONNECT SWITCH WITH FUSES AS SPECIFIED ON SUPPLY FAN & TAP TO FEEDER CONDUCTORS IN WIREWAY WITH 3-#10 & #10G. CONNECT TO FAN UNIT WITH 3/4" LIQUID-TIGHT-FLEXIBLE METAL CONDUIT
5	REPLACE 250A CU-2 BREAKER IN MSB-2 WITH 125A BREAKER OR REPLACE TRIP UNIT WITH 125A TRIP. CONNECT NEW FEEDER TO RTU-1 TO BREAKER. RE-LABEL "RTU-1"

HVAC POWER ROOF PLAN

SCALE: 3/32" = 1'-0"

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E3-0