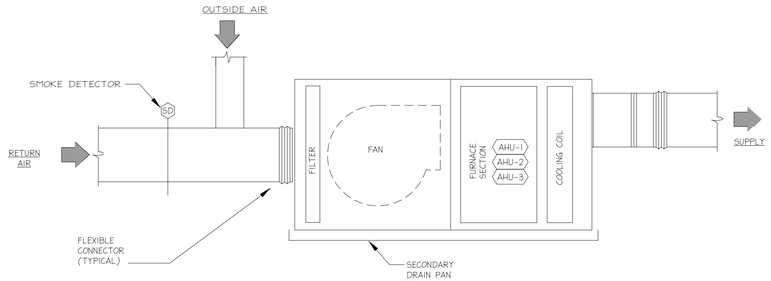
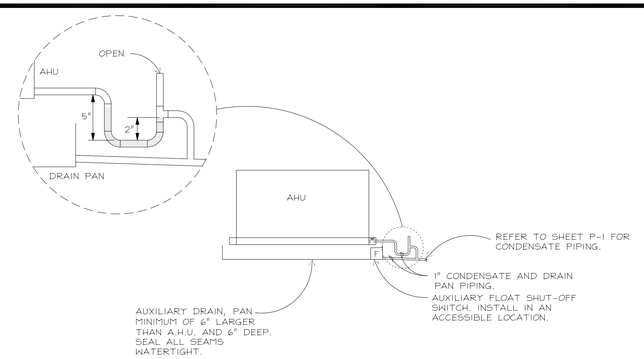
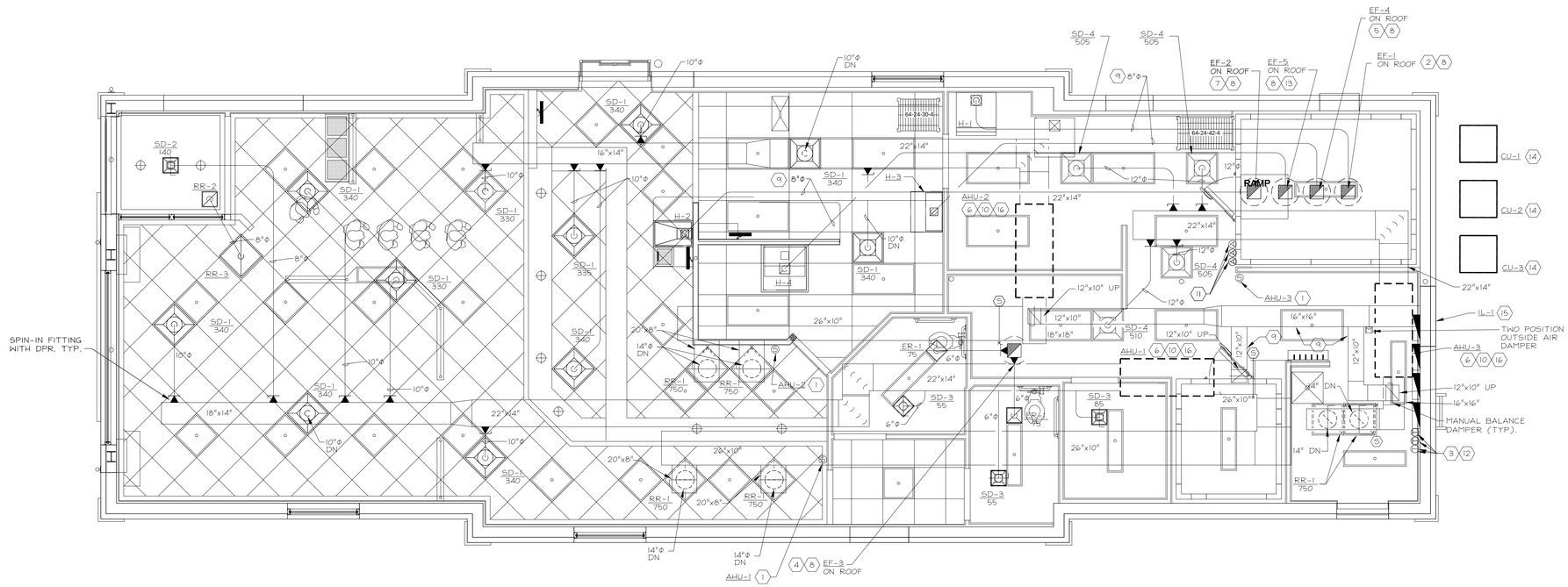


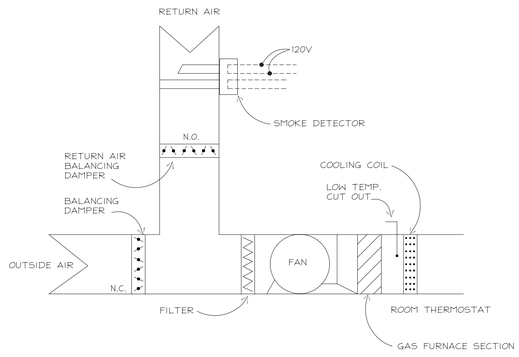
AHU DETAIL
NTS



AHU CONDENSATE TRAP
NTS



HVAC PLAN
1/4"=1'-0"



NOTE:
VERIFY ACTUAL COIL CONNECTIONS WITH UNIT MANUFACTURER.

CONTROL DIAGRAM
NTS

SYMBOLS & ABBREVIATIONS LEGEND

T	THERMOSTAT
S	SENSOR
A	ANNUNCIATOR
H	HUMIDISTAT
S	DUCT SMOKE DETECTOR
	DUCT OFFSET
	SUPPLY DUCT - UP
	SUPPLY DUCT - DN
	RA OR EXH DUCT UP
	RA OR EXH DUCT DN
	ELBOW TURNING VANES
	FIRE DAMPER (F.D.)
	MANUAL BALANCE DAMPER
	TRANSITION
	SUPPLY DIFFUSER
	RETURN GRILLE
X"ϕ	ROUND DUCT
	EXHAUST GRILLE
	SPIN-IN FITTING
	SPIN-IN FITTING W/ MAN BAL DPR
AB	ABOVE
A/C	AIR CONDITIONING
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT
BDD	BACKDRAFT DPR.
BEL	BELOW
BLDG	BUILDING
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONT	CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
CUH	CABINET UNIT HEATER
DIFF	DIFFUSER
DISC	DISCONNECT
DN	DOWN
DPR	DAMPER
EA	EACH
EC	ELECTRICAL CONTRACTOR
EX	EXISTING
EXH	EXHAUST
F DPR	FIRE DAMPER
FLEX	FLEXIBLE
FLR	FLOOR
GC	GENERAL CONTRACTOR
HC	HEATING CONTRACTOR
HP	HORSEPOWER
MAX	MAXIMUM
MCA	MAX CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOCP	MAX OVERCURRENT PROTECTION
MTD	MOUNTED
NTS	NOT TO SCALE
OA	OUTSIDE AIR
PC	PLUMBING CONTRACTOR
RA	RETURN AIR
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
TV	TURNING VANES
TYP	TYPICAL
WH	WATER HEATER
W/	WITH

CODED NOTES

(15) 48"x"24" OUTDOOR AIR INTAKE LOUVER. MECHANICAL CONTRACTOR TO INSTALL IN EXISTING WALL OPENING. ADJUST WALL OPENING AND TRANSITION DUCTWORK AS REQUIRED FOR NEW LOUVER, PATCH AND REPAIR AS NEEDED.

(16) AHU TO BE LOCATED ON MEZZANINE. AHU TO BE FLOOR MOUNTED PER MANUFACTURER'S RECOMMENDATION. REFER TO TE STRUCTURAL DRAWING FOR ADDITIONAL INFORAMTION.

GENERAL NOTES

1. PROVIDE 1-YEAR WARRANTY ON WORKMANSHIP.
2. INSULATED FLEXIBLE DUCT MAY BE USED IN MAXIMUM LENGTHS OF 5'-0" PER BRANCH RUN. THE BALANCE OF THE RUN SHALL BE HARD PIPE WITH 2" INSULATED SLEEVE. FLEXIBLE DUCT SHALL BE OWENS CORNING INL. OR EQUAL WITH A MINIMUM R-VALUE OF 5.
3. SPIN-IN FITTING WITH DAMPER SHALL BE FLEXAIRE RF OR METALAIRE MBSD. TYPICAL OF ALL BRANCH DUCT RUNS. MANUAL BALANCE DAMPERS SHALL BE IN AN ACCESSIBLE LOCATION. COORDINATE WITH GENERAL CONTRACTOR.
4. DUCTWORK DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS. DUCTWORK SHOWN IS TO BE INSULATED WITH 2" DUCT WRAP, INCLUDING THE TOP OF THE DIFFUSERS. THE INSULATION SHALL HAVE A MINIMUM R-VALUE OF 5.
5. COMPLETED INSTALLATIONS SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES INCLUDING, BUT NOT LIMITED TO THE LATEST EDITIONS OF THE FOLLOWING: STATE BUILDING CODE, NFPA-90A, NFPA-96 AND NFPA-101.
6. ALL SUPPLY AND RETURN AIR DUCTS AND THE TOP OF THE DIFFUSERS ARE TO BE INSULATED.
7. HVAC CONTRACTOR TO PROVIDE A COMPLETE BALANCE OF THE HVAC SYSTEM WHILE IN THE PRESENCE OF A TIM HORTONS REPRESENTATIVE WITH A COMPLETE BALANCE REPORT. REPORT TO INCLUDE AIR BALANCE OF ALL ROOFTOP UNITS, EXHAUST FANS, REGISTERS AND DIFFUSERS TO SPECIFIED CFM'S. THE CONTRACTOR IS TO TEST THE COMPLETE OPERATION AND SEQUENCES OF OPERATION FOR ALL HVAC EQUIPMENT.
8. ALL DUCTWORK IS TO BE INSTALLED PER SMACNA SPECIFICATIONS.
9. ALL 90 DEGREE BENDS IN SUPPLY AIR DUCTS TO HAVE TURNING VANES.
10. HVAC SYSTEM DESIGNED TO MEET OUTSIDE TEMP. OF 93 DEGREES F SUMMER AND 0 DEGREES F WINTER. SEE SPECIFICATIONS FOR REQUIREMENTS UNDER OTHER TEMPERATURE CONDITIONS.
11. ALL ROOFTOP UNITS SHALL HAVE A 5 YEAR COMPRESSOR AND A 10 YEAR HEAT EXCHANGER WARRANTY.
12. ALL DUCTWORK TO BE RUN ABOVE THE SUSPENDED CEILING, WHENEVER POSSIBLE ALL DUCTWORK RUNNING PARALLEL TO THE ROOF JOIST SHALL BE RAISED UP AND RUN BETWEEN THE JOISTS.
13. HVAC CONTRACTOR TO RECEIVE AND SET CONDENSING UNITS FOR FREEZERS AND COOLERS ON MEZZANINE AND FURNISH AND INSTALL MOUNTING RAILS.
14. HVAC CONTRACTOR TO SEE ARCHITECTURAL SHEET A4 FOR LOCATION OF ROOF MOUNTED EQUIPMENT, CURBS, AND RAILS.
15. RETURN DUCTWORK FROM AHU UNITS TO BE LINED, PINNED AND GLUED WITH 1" INSULATION PER INDUSTRY STANDARDS. IT SHALL HAVE A MINIMUM INSTALLED R-VALUE OF 5.
16. SUPPLY AND RETURN AIR DUCT CONNECTIONS FROM AIR HANDLING UNITS TO BE ISOLATED FROM UNIT VIBRATION WITH FLEXIBLE DUCT CONNECTORS.
17. HVAC CONTRACTOR SHALL PROVIDE ALL LOW VOLTAGE CONTROL WIRING. SEE TEMPERATURE AND LIGHTING CONTROL SCHEMATIC FOR ADDITIONAL REQUIREMENTS.
18. SEE ARCHITECTURAL REFLECTED CEILING PLAN ON SHEET A5 FOR MORE INFORMATION.
19. SLOPE THE EXHAUST FAN DUCTWORK BACK TOWARD THE HOOD TO KEEP MOISTURE FROM BUILDING UP IN THE DUCTWORK.

CODED NOTES

(1) REMOTE SENSOR FOR AHU'S AT 5'-0" AFF. COORDINATE WITH OWNER PRIOR TO ROUGH-IN. EXTEND CONTROL WIRING TO THERMOSTAT LOCATED IN CONTROL PANEL.

(2) 8"ϕ EXHAUST DUCT UP TO EXHAUST FAN (EF-1). TRANSITION AT THE HOOD AND FAN AS REQUIRED. DUCT TO BE ALUMINUM.

(3) TCS/BASYS THERMOSTAT MODEL #SZ 1031 WITH REMOTE SENSORS (SEE NOTE #1 FOR SENSOR LOCATION) FOR RTU'S. THERMOSTAT LOCATED IN CONTROL PANEL.

(4) 8"ϕ EXHAUST DUCT UP TO EXHAUST FAN (EF-3). TRANSITION AS REQUIRED.

(5) 8"ϕ EXHAUST DUCT UP TO EXHAUST FAN (EF-4). TRANSITION AT THE HOOD AND FAN AS REQUIRED. DUCT TO BE ALUMINUM.

(6) 22"x14" SUPPLY AND 16"x16" RETURN DUCT TO AIR HANDLING UNIT WITH FLEX CONNECTION. TRANSITION AS REQUIRED.

(7) 8"ϕ EXHAUST DUCT UP TO EXHAUST FAN (EF-2). TRANSITION AT THE HOOD AND FAN AS REQUIRED. DUCT TO BE ALUMINUM.

(8) SEE ROOF PLAN IN ARCHITECTURAL SET FOR ADDITIONAL INFORMATION. COORDINATE LOCATION WITH OTHER TRADES. EXHAUST AIR TO BE LOCATED A MINIMUM OF TEN FEET FROM THE NEAREST OUTSIDE AIR INTAKE. EQUIPMENT TO BE LOCATED A MINIMUM OF TEN FEET FROM THE ROOF EDGE.

(9) RUN DUCTWORK AS HIGH AS POSSIBLE. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE WITH OTHER TRADES.

(10) DUCT SMOKE DETECTOR FACTORY INSTALLED IN THE AIR HANDLER UNIT RETURN AIR. UPON ACTIVATION THE SMOKE DETECTOR SHALL SHUT DOWN THE AHU AND ACTIVATE A VISIBLE OR AUDIBLE SIGNAL IN AN APPROVED LOCATION AND SHALL BE IDENTIFIED AS AN AIR DUCT DETECTOR.

(11) REMOTE ANNUNCIATOR (VISIBLE AND/OR AUDIBLE) FOR AHU DUCT SMOKE DETECTORS TO BE FURNISHED WITH FACTORY SUPPLIED DUCT SMOKE DETECTORS AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FURNISH WITH REMOTE RESET. ANNUNCIATORS ARE TO BE LOCATED IN A LOCATION APPROVED BY THE LOCAL AUTHORITIES. WIRING AND FINAL CONNECTIONS OF THE UNIT ARE TO BE BY THE ELECTRICAL CONTRACTOR.

(12) THE THERMOSTATS COME AS PART OF THE ELECTRICAL SWITCH GEAR CABINET. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO CONNECT TO THOSE THERMOSTATS IN THE CABINET. THE ELECTRICAL CONTRACTOR IS TO PURCHASE AND INSTALL THE ELECTRICAL SWITCH GEAR CABINET.

(13) 8"ϕ EXHAUST DUCT UP TO EXHAUST FAN (EF-5). TRANSITION AT THE HOOD AND FAN AS REQUIRED. DUCT TO BE ALUMINUM.

(14) LOCATE NEW CONDENSING UNIT ON EXISTING CONCRETE PAD. FURNISH AND INSTALL REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. ELECTRICAL CONTRACTOR TO PROVIDE ALL ELECTRICAL CONNECTIONS AND DISCONNECT.

REVISIONS:

* INDICATES NO REVISION TO THIS SHEET

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HVAC PLAN

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SAI # 08138

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M1