

UNIT VENTILATOR SCHEDULE: PRE-PURCHASED BY OWNER													
DWG ID	ROOM	AAF HERMAN NELSON MODEL NUMBER	CFM	OA CFM	HEATING COIL DATA						ELECTRICAL DATA		REMARKS
					MBH	EAT	LAT	WPD	LWT	GPM	V/Hz/φ		
UV-1	101	UAVW6S07	600	200	31	52	101	160	130	2.0	1.4	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-2	102	UAVW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-3	103												
UV-4	104												
UV-5	105												
UV-6	106												
UV-7	107												
UV-8	108												
UV-9	109												
UV-10	110												
UV-11	111												
UV-12	201												
UV-13	202												
UV-14	203												
UV-15	204												
UV-16	205												
UV-17	206												
UV-18	207												
UV-19	208												
UV-20	209												
UV-21	210												
UV-22	211												
UV-23	212												
UV-24	213												
UV-25	301												
UV-26	302												
UV-27	303												
UV-28	TEACHERS	EXISTING TO REMAIN (ETR)	-	-	-	-	-	-	-	-	-	-	[9]
UV-29	305	UAHV6H13	1,100	360	61	52	103	160	130	4.0	2.5	1/3 HP, 120/1/60	[7] 2-ROW COIL, MEDIUM FAN SPEED
UV-30	306	UAHV6H13	1,100	360	61	52	103	160	130	4.0	2.5	1/3 HP, 120/1/60	[7] 2-ROW COIL, MEDIUM FAN SPEED
UV-31	307	UAHV6S13	1,100	340	49.0	52	99	160	130	3.0	1.5	1/3 HP, 120/1/60	[7] 2-ROW COIL, MEDIUM FAN SPEED
UV-32	308	UAW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/4 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-33	401	EXISTING TO REMAIN (ETR)	-	-	-	-	-	-	-	-	-	-	[9]
UV-34	401A	UAW6S07	600	200	31	52	101	160	130	2.0	1.4	1/4 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-35	402	UAW6S15	1,200	400	80	52	114	160	130	5.0	4.5	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-36	403 MUSIC	UAW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED [8]
UV-37	404	UAW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-38	405	UAW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-39	406 BAND	UAW6S07	600	200	31	52	101	160	130	2.0	1.4	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-40	GIRLS' SHOWER	UAHV6H13	1,100	1,100	120	7	108	160	130	8.0	5.6	1/3 HP, 120/1/60	[7] 3-ROW COIL, MEDIUM FAN SPEED
UV-41	GIRLS' LOCKER	UAHV6H10	890	890	96.5	7	107	160	130	6.5	8.4	1/3 HP, 120/1/60	[7] 3-ROW COIL, MEDIUM FAN SPEED
UV-42	CORRECTIVE	UAHV6H07	675	222	36	52	102	160	130	2.5	2.1	1/3 HP, 120/1/60	[7] 2-ROW COIL, MEDIUM FAN SPEED
UV-43	BOYS' LOCKER	UAHV6H13	1,100	1,100	120	7	108	160	130	8.0	5.6	1/3 HP, 120/1/60	[7] 3-ROW COIL, MEDIUM FAN SPEED
UV-44	WEIGHT ROOM	UAHV6H10	890	890	96.5	7	107	160	130	6.5	8.4	1/3 HP, 120/1/60	[7] 3-ROW COIL, MEDIUM FAN SPEED
UV-45	WEIGHT ROOM	UAHV6H10	890	890	96.5	7	107	160	130	6.5	8.4	1/3 HP, 120/1/60	[7] 2-ROW COIL, MEDIUM FAN SPEED
UV-46	OFFICE	UAW6S07	600	200	31	52	101	160	130	2.0	1.4	1/3 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED
UV-47	EXAM	EXISTING TO REMAIN (ETR)	-	-	-	-	-	-	-	-	-	-	[9]
UV-48	EXAM	EXISTING TO REMAIN (ETR)	-	-	-	-	-	-	-	-	-	-	[9]
UV-49	NURSE	UAW6S07	600	200	31	52	101	160	130	2.0	1.4	1/3 HP, 120/1/60	PROVIDE OA LOUVER
UV-50	ROOM 309	UAW6S13	1,000	340	49.0	52	99	160	130	3.0	1.5	1/4 HP, 120/1/60	2-ROW COIL, MEDIUM FAN SPEED

- [1] UV'S SHALL BE PRE-PURCHASED BY OWNER
- [2] PROVIDE CO2 SENSOR FOR DCV CONTROLS
- [3] PROVIDE MODULATING 2-WAY CONTROL VALVE.
- [4] "DIGITAL READY" CONFIGURATION TO ACCEPT DDC CONTROLS
- [5] UNITS SHALL BE 21-7/8" DEEP WITH ARRANGEMENT "AN" WITH A FULL ADAPTER BACK AND CLOSED PIPE TUNNEL
- [6] PROVIDE 1 SET OF FILTERS AT INSTALLATION AND 1 SET AT PROJECT COMPLETION
- [7] HORIZONTAL CONFIGURATION, CONNECT TO EXISTING DUCTWORK
- [8] BASE BID: DX COOLING COIL. ALTERNATE NO.1: OMIT DX COIL
- [9] PROVIDE 2-WAY VALVE & HYDRONIC CONNECTIONS TO EXISTING COIL
- [10] ELECTRICALLY COMMUTATED MOTOR (ECM)

FAN SCHEDULE													
NO.	SERVICE	TYPE	SONES	DRIVE	CFM	ESP	FAN RPM	HP	V/Ph/Hz	MANUFACTURER	MODEL	REMARKS	WEIGHT (LBS)
EF-8	MUSIC	OUTDOOR	12.8	DIRECT	1,100	0.40	1,725	1/4	120/1/60	GREENHECK	G-099-VG	-	68.0
EF-11	SHOP	OUTDOOR	9.5	DIRECT	800	0.40	1,725	1/6	120/1/60	GREENHECK	G-095-VG	-	57.0
EF-13	CHEMISTRY/ART	OUTDOOR	19.9	DIRECT	3,800	0.40	1,415	2.0	208/1/60	GREENHECK	G-163-VG	-	106.0
EF-14	1ST & 2ND FLOOR CLASSROOMS	OUTDOOR	28.0	DIRECT	5,200	0.40	1,725	2.0	208/1/60	GREENHECK	G-163-VG	-	106.0
EF-16	1ST & 2ND FLOOR CLASSROOMS	OUTDOOR	28.0	DIRECT	4,800	0.40	1,725	2.0	208/1/60	GREENHECK	G-163-VG	-	106.0

- [1] COORDINATE VOLTAGE AND HORSEPOWER WITH EC PRIOR TO ORDERING
- [2] PROVIDE ECM VARIABLE SPEED DC MOTOR
- [3] PROVIDE GRAVITY DAMPER AND ADAPTER CURB

APPENDUM 2

CABINET CONVECTOR SCHEDULE										
DWG ID	MANUFACTURER	MODEL NO.	HEATING COIL DATA			DIMENSIONS			REMARKS	
			BTU/Hr	GPM	WPD (FT)	L	H	D		
CC-1	NOT USED	-	-	-	-	-	-	-	-	
CC-2	NOT USED	-	-	-	-	-	-	-	-	
CC-3	BEACON MORRIS	SF-A	2,700	0.3	0.07	24	26	6	SLOPE TOP, FREE STANDING	
CC-4	BEACON MORRIS	SR-A	2,100	0.3	0.07	24	24	6	SEMI-RECESSED, FLOOR MOUNT	
CC-5	BEACON MORRIS	SF-A	3,000	0.3	0.07	28	26	6	SLOPE TOP, FREE STANDING	
CC-6	NOT USED	-	-	-	-	-	-	-	-	
CC-7	BEACON MORRIS	PW-A	3,500	0.3	0.07	36	26	6	SEMI-RECESSED, WALL MOUNT	
CC-8	NOT USED	-	-	-	-	-	-	-	-	
CC-9	NOT USED	-	-	-	-	-	-	-	-	
CC-10	BEACON MORRIS	SF-A	5,000	0.5	0.07	40	26	6	SLOPE TOP, FREE STANDING	
CC-11	BEACON MORRIS	PW-A	3,800	0.3	-	40	24	6	SEMI-RECESSED, WALL MOUNT	
CC-12	BEACON MORRIS	SF-A	5,800	0.5	0.07	48	26	6	SLOPE TOP, FREE STANDING	
CC-13	NOT USED	-	-	-	-	-	-	-	-	
CC-14	BEACON MORRIS	PW-A	6,500	0.5	0.07	52	26	6	SEMI-RECESSED, WALL MOUNT	
CC-15	BEACON MORRIS	SF-A	6,200	0.5	0.07	52	26	6	SLOPE TOP, FREE STANDING	
CC-16	BEACON MORRIS	SW-A	7,400	0.5	0.07	56	32	6	SLOPE TOP, WALL MOUNT	
CC-17	BEACON MORRIS	PW-A	7,700	0.5	0.07	60	26	6	SEMI-RECESSED, WALL MOUNT	

- [1] HEATING PERFORMANCE BASED ON 160°F EWT AND 30°F DROP
- [2] PROVIDE BALANCING VALVE W/ TEST PORTS.
- [3] PROVIDE 2-WAY CONTROL VALVE
- [4] PROVIDE DDC CONTROLS.
- [5] REFER TO DETAILS ON DRAWING M-2.2

CABINET UNIT HEATER SCHEDULE											
DWG ID	MANUFACTURER	MODEL NO.	HEATING COIL DATA				DIMENSIONS			REMARKS	ELECTRICAL DATA
			CFM	MBH	GPM	WPD (FT)	L	H	D		
CUH-1	BEACON MORRIS	RW1-1130-04	430	24.0	1.6	0.30	47	27	9.5	INVERTED FLOW, RECESSED WALL MOUNT, 2-ROW COIL	1/10 HP, 120/1/60
CUH-2	BEACON MORRIS	RW1-1130-10	1,060	35.0	2.3	1.00	66	27	9.5	INVERTED FLOW, RECESSED WALL MOUNT, 1-ROW COIL	1/10 HP & 1/15 HP, 120/1/60
CUH-3	BEACON MORRIS	C-1180-04	430	24.0	1.6	0.30	47	27	9.5	CEILING EXPOSED, 1-ROW COIL	1/10 HP, 120/1/60
CUH-4	BEACON MORRIS	C-1180-10	1,060	35.0	2.3	1.00	66	27	9.5	CEILING EXPOSED, 1-ROW COIL	1/10 HP & 1/15 HP, 120/1/60
CUH-5	BEACON MORRIS	RW1-1130-02	230	14.7	1.0	0.10	35	25	9.5	INVERTED FLOW, RECESSED WALL MOUNT	1/15 HP, 120/1/60
CUH-6	BEACON MORRIS	FI-1050-10	1,060	35.0	2.3	1.00	66	27	9.5	INVERTED FLOW, FLOOR MOUNTED, 1-ROW COIL	1/10 HP & 1/15 HP, 120/1/60
CUH-7	BEACON MORRIS	W-1060-10	1,060	35.0	2.3	1.00	66	27	9.5	WALL MOUNT PROVIDE DUCT COLLARS, 1-ROW	1/10 HP & 1/15 HP, 120/1/60

- [1] HEATING PERFORMANCE BASED ON 160°F EWT AND 30°F DROP, 70°F EAT
- [2] PROVIDE BALANCING VALVE W/ TEST PORTS.
- [3] PROVIDE 2-WAY CONTROL VALVE
- [4] PROVIDE DDC CONTROLS.

HYDRONIC COIL SCHEDULE																
DWG ID	AHU	MANUFACTURER	MODEL NO.	COIL DATA			WATER SIDE DATA			AIR SIDE DATA						
				DIMENSIONS (W" x H")	ROWS	FPI	MBH	EWT	LWT	GPM	WPD	CFM	PD	EAT	LAT	REMARKS
HC-1	AHU-1	MCQUAY	5WH1002B	36.0 x 84.5	2	10	621	160	130	54.5	11.3	12,250	0.25	45	91	-
HC-2	AHU-2	MCQUAY	5WH1002B	36.0 x 84.5	2	10	621	160	130	54.5	11.3	12,250	0.25	45	91	-
HC-3	AHU-3	MCQUAY	5WH1002B	30.0 x 79.0	2	10	445	160	130	40.0	7.6	8,400	0.20	45	93	-
HC-4	AHU-4	MCQUAY	5WH1002B	24.0 x 50.0	2	10	235	160	130	22.0	2.6	5,000	0.27	45	88	-
HC-5	AHU-5	MCQUAY	5WH1002B	24.0 x 50.0	2	10	235	160	130	22.0	2.6	5,000	0.27	45	88	-
HC-6	AHU-6	MCQUAY	5WH0902B	30.0 x 79.0	2	9	239	160	130	17.0	1.6	4,700	0.07	55	102	-

- [1] HEATING PERFORMANCE BASED ON 160°F EWT AND 30°F DROP
- [2] PROVIDE BALANCING VALVE W/ TEST PORTS.
- [3] PROVIDE 2-WAY CONTROL VALVE
- [4] PROVIDE DDC CONTROLS.

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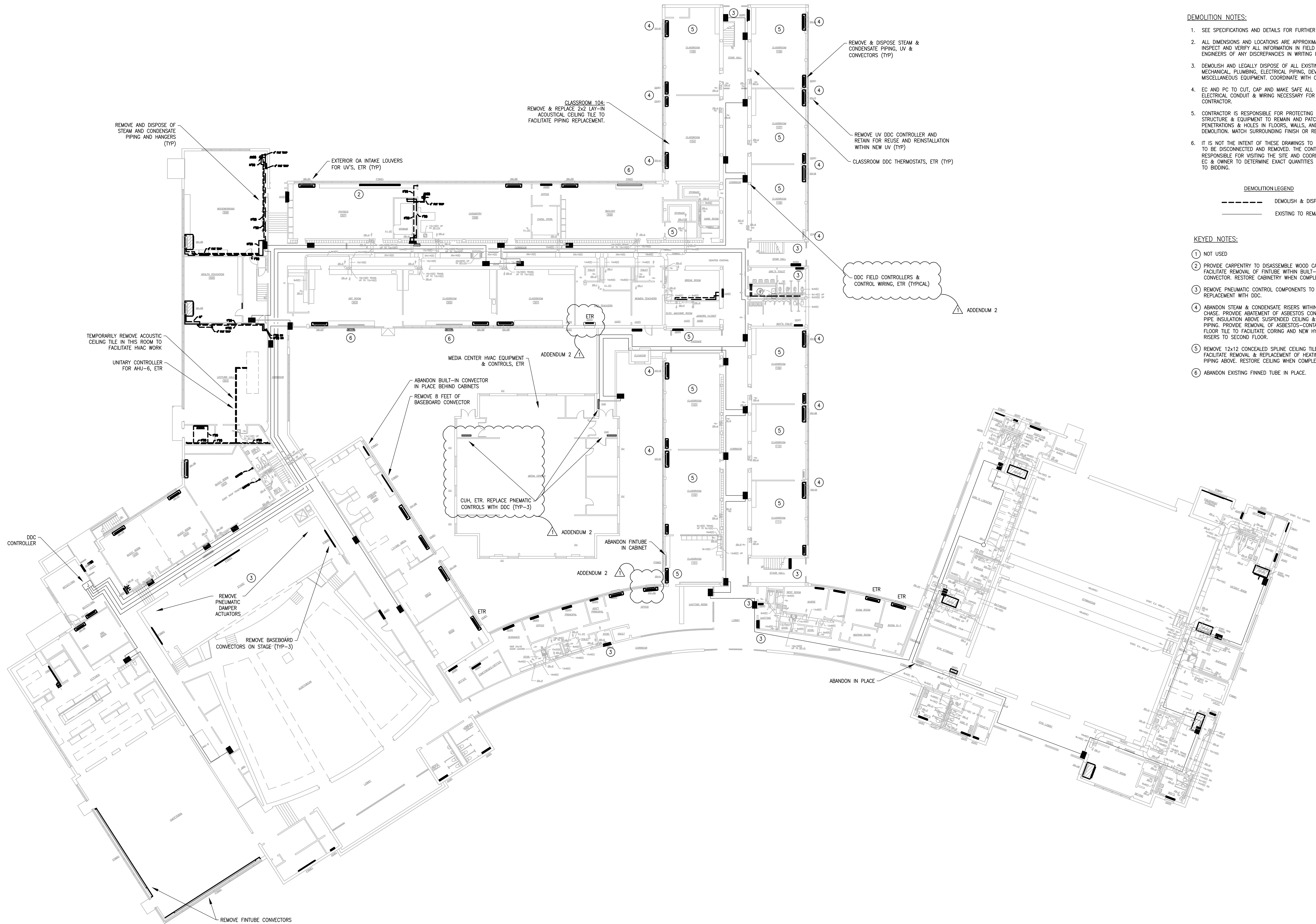
HEATING & VENTILATING SYSTEM UPGRADE
 WEST MIDDLE SCHOOL
 70 SHAWSHOEN ROAD
 ANDOVER, MA 01810

MECHANICAL
 SCHEDULES

SCALE:
 AS NOTED
 DATE:
 05/08/13
 ISSUE:
 BID SET

 DRAWN BY:
 BC
 CHECKED BY:
 GC

M-0.2



DEMOLITION NOTES:

- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.
- ALL DIMENSIONS AND LOCATIONS ARE APPROXIMATE. CONTRACTOR TO INSPECT AND VERIFY ALL INFORMATION IN FIELD AND INFORM THE ENGINEERS OF ANY DISCREPANCIES IN WRITING IMMEDIATELY.
- DEMOLISH AND LEGALLY DISPOSE OF ALL EXISTING UNUSED MECHANICAL, PLUMBING, ELECTRICAL PIPING, DEVICES, SUPPORTS, AND MISCELLANEOUS EQUIPMENT. COORDINATE WITH OWNER.
- EC AND PC TO CUT, CAP AND MAKE SAFE ALL POTABLE PIPING, AND ELECTRICAL CONDUIT & WIRING NECESSARY FOR REMOVAL BY THIS CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING STRUCTURE & EQUIPMENT TO REMAIN AND PATCHING ALL PENETRATIONS & HOLES IN FLOORS, WALLS, AND CEILINGS DUE TO DEMOLITION. MATCH SURROUNDING FINISH OR REPLACE.
- IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT TO BE DISCONNECTED AND REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND COORDINATING W/ THE PC, EC & OWNER TO DETERMINE EXACT QUANTITIES AND LOCATIONS PRIOR TO BIDDING.

DEMOLITION LEGEND

- DEMOLISH & DISPOSE
- EXISTING TO REMAIN

KEYED NOTES:

- NOT USED
- PROVIDE CARPENTRY TO DISASSEMBLE WOOD CABINETS TO FACILITATE REMOVAL OF FINITUBE WITHIN BUILT-IN CONNECTOR. RESTORE CABINETS WHEN COMPLETE.
- REMOVE PNEUMATIC CONTROL COMPONENTS TO FACILITATE REPLACEMENT WITH DDC.
- ABANDON STEAM & CONDENSATE RISERS WITHIN EXISTING CHASE. PROVIDE ABATEMENT OF ASBESTOS CONTAINING PIPE INSULATION ABOVE SUSPENDED CEILING & REMOVE PIPING. PROVIDE REMOVAL OF ASBESTOS-CONTAINING FLOOR TILE TO FACILITATE CORING AND NEW HYDRONIC RISERS TO SECOND FLOOR.
- REMOVE 12x12 CONCEALED SPLINE CEILING TILE TO FACILITATE REMOVAL & REPLACEMENT OF HEATING SYSTEM PIPING ABOVE. RESTORE CEILING WHEN COMPLETE.
- ABANDON EXISTING FINNED TUBE IN PLACE.

1 FIRST FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/16" = 1'-0"

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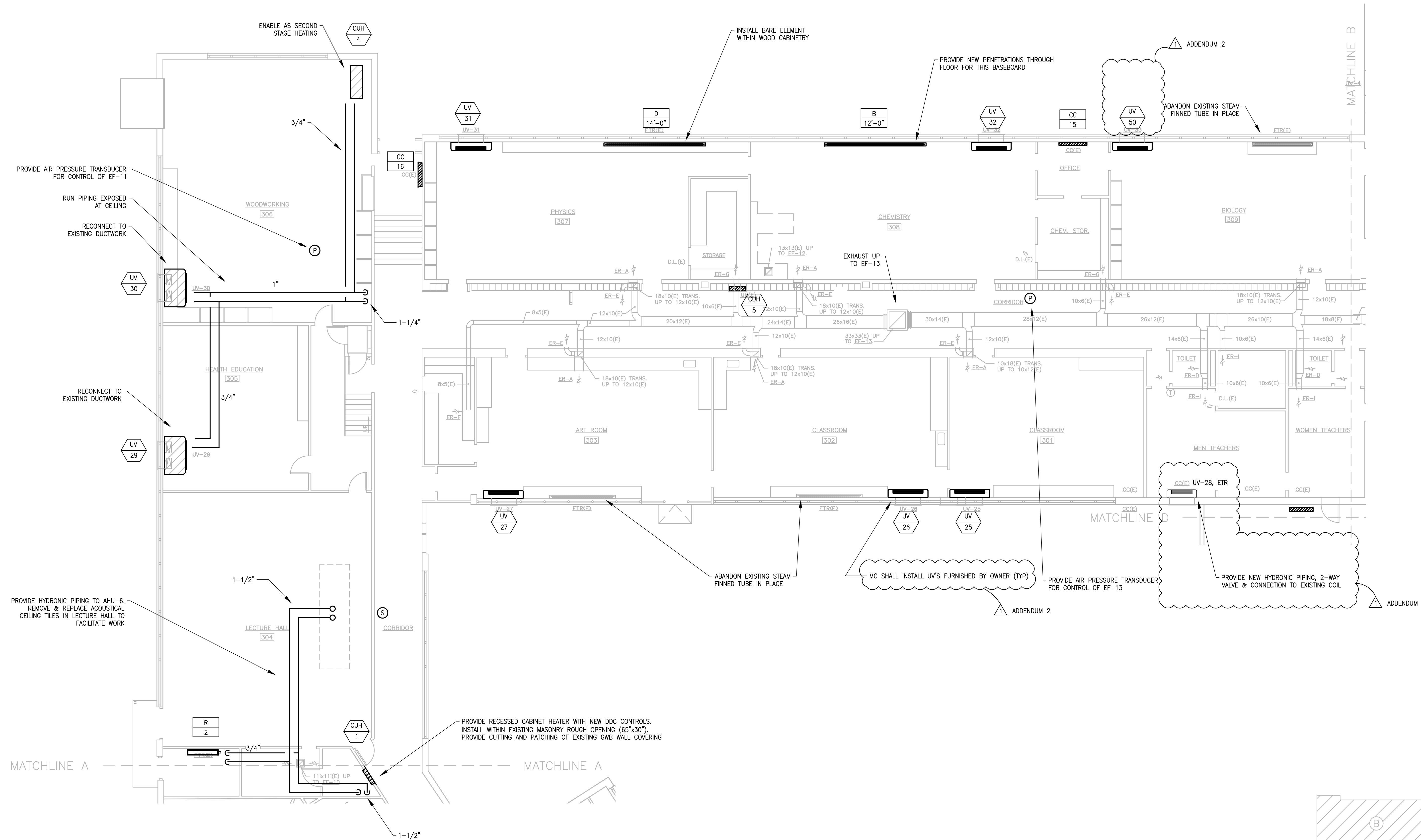
HEATING & VENTILATING SYSTEM UPGRADE
WEST MIDDLE SCHOOL
70 SHAWSHEEN ROAD
ANDOVER, MA 01810

**FIRST FLOOR
MECHANICAL
DEMOLITION PLAN**

SCALE: AS NOTED
DATE: 05/08/13
ISSUE: BID SET
DRAWN BY: BC
CHECKED BY: GC

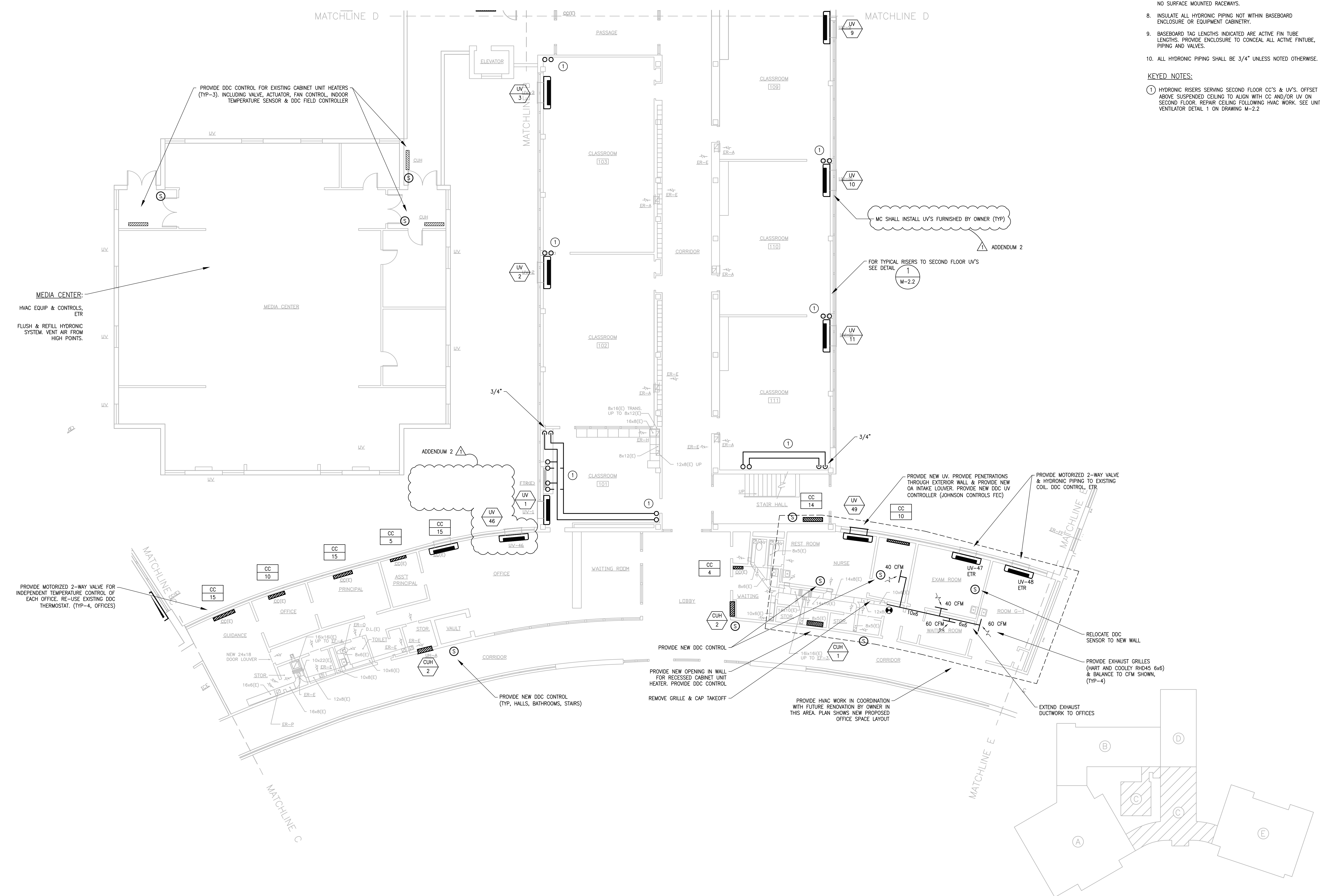
MD-1.2

- MECHANICAL NOTES:**
- SEE SPECIFICATIONS AND DETAILS FOR FURTHER REQUIREMENTS.
 - INSTALL EQUIPMENT AND SYSTEMS PER CODE AND PER MANUFACTURER'S INSTRUCTIONS.
 - ALL DIMENSIONS AND LOCATIONS ARE APPROXIMATE. CONTRACTOR TO INSPECT AND VERIFY ALL INFORMATION IN FIELDS AND INFORM THE ENGINEERS OF ANY DISCREPANCIES IN WRITING IMMEDIATELY.
 - EQUIPMENT, DUCTS AND PIPING MAY BE SHOWN DISPLACED FOR CLARITY.
 - MC TO PROVIDE REQUIRED FIRESTOPPING.
 - MC TO PROVIDE ACCESS HATCHES FOR CONCEALED EQUIPMENT.
 - CONCEAL ALL CONTROL WIRING FOR THERMOSTATS WITHIN WALLS. NO SURFACE MOUNTED RACEWAYS.
 - INSULATE ALL HYDRONIC PIPING NOT WITHIN BASEBOARD ENCLOSURE OR EQUIPMENT CABINETS.
 - BASEBOARD TAG LENGTHS INDICATED ARE ACTIVE FIN TUBE LENGTHS. PROVIDE ENCLOSURE TO CONCEAL ALL ACTIVE FIN TUBE, PIPING AND VALVES.
 - ALL HYDRONIC PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.



1 FIRST FLOOR MECHANICAL PARTIAL PLAN
 SCALE: 1/8" = 1'-0"





1 ADMINISTRATIVE AREA MECHANICAL PARTIAL PLAN
SCALE: 1/8" = 1'-0"



- MECHANICAL NOTES:**
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 - EQUIPMENT, DUCTS AND PIPING MAY BE SHOWN DISPLACED FOR CLARITY.
 - MC TO PROVIDE REQUIRED FIRESTOPPING.
 - MC TO PROVIDE ACCESS HATCHES FOR CONCEALED EQUIPMENT.
 - CONCEAL ALL CONTROL WIRING FOR THERMOSTATS WITHIN WALLS. NO SURFACE MOUNTED RACEWAYS.
 - INSULATE ALL HYDRONIC PIPING NOT WITHIN BASEBOARD ENCLOSURE OR EQUIPMENT CABINETRY.
 - BASEBOARD TAG LENGTHS INDICATED ARE ACTIVE FIN TUBE LENGTHS. PROVIDE ENCLOSURE TO CONCEAL ALL ACTIVE FIN TUBE, PIPING AND VALVES.
 - ALL HYDRONIC PIPING SHALL BE 3/4" UNLESS NOTED OTHERWISE.
- KEYED NOTES:**
- 1 HYDRONIC RISERS SERVING SECOND FLOOR CC'S & UV'S. OFFSET ABOVE SUSPENDED CEILING TO ALIGN WITH CC AND/OR UV ON SECOND FLOOR. REPAIR CEILING FOLLOWING HVAC WORK. SEE UNIT VENTILATOR DETAIL 1 ON DRAWING M-2.2

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ADMINISTRATIVE AREA
MECHANICAL
PARTIAL PLAN

SCALE: AS NOTED
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M-1.4