

EASTPORT HALL

UMA BANGOR
BANGOR, ME

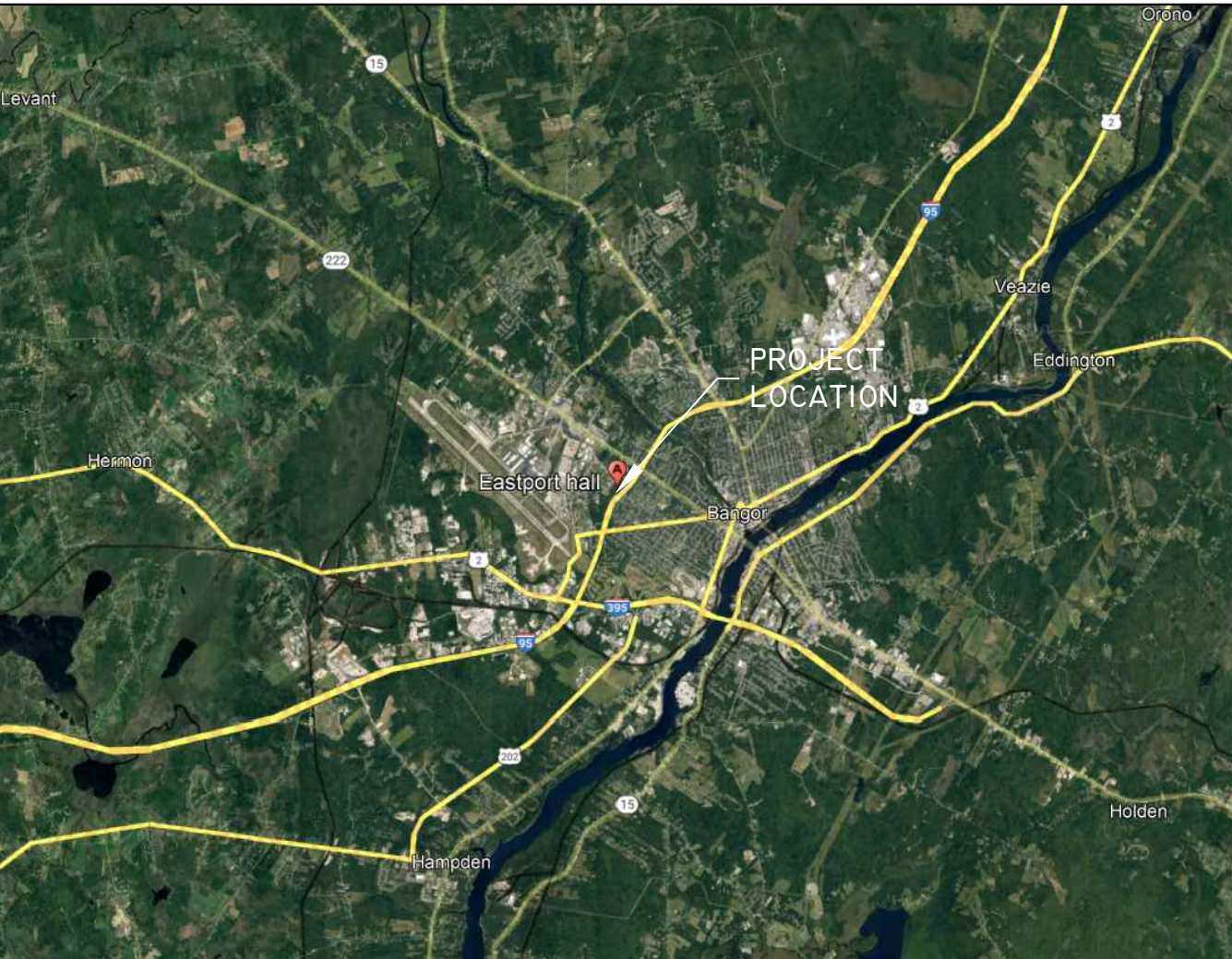
HVAC/IAQ PROJECT -PHASE II RENOVATION-

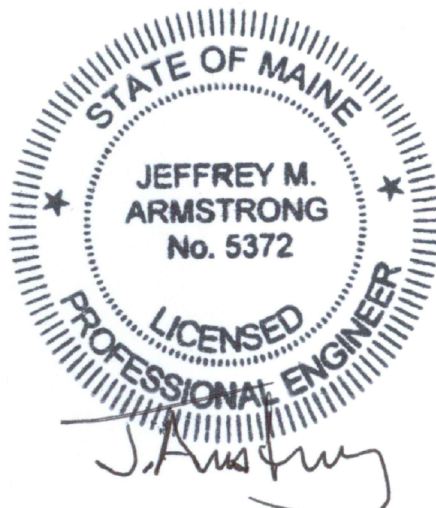
AREA OF
CONSTRUCTION

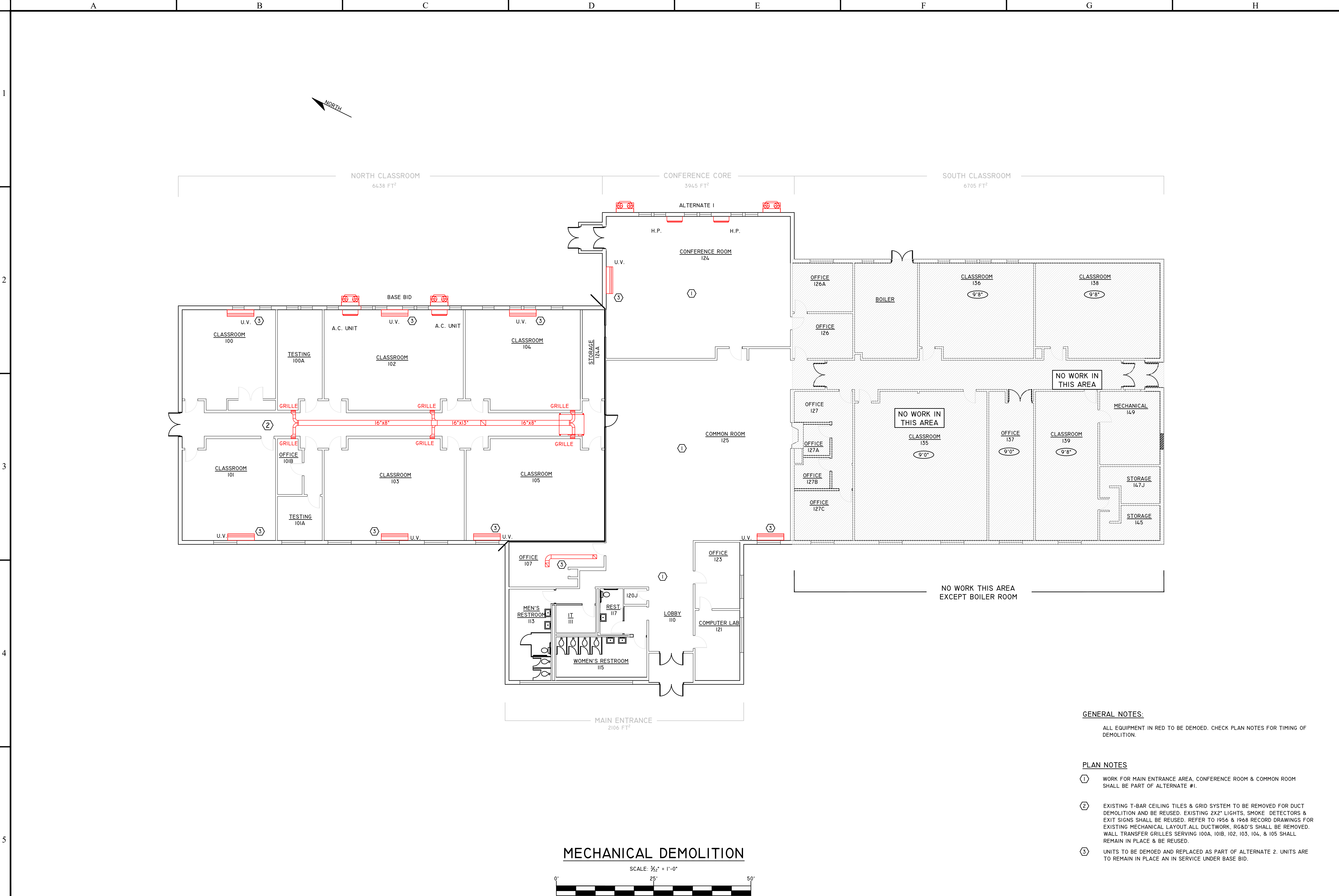


GOOGLE MAP IMAGE

LOCATION MAP:



INDEX OF DRAWINGS				DESIGNED BY:	ENGINEER OF RECORD:	Bid Document
00	COVER SHEET			 Armstrong Engineering Mechanical Electrical Design Consultants 94 Presque Isle Street, Fort Fairfield, Maine 04742 Phone (207) 473-7117 Fax (207) 476-5621		
MD-1	MECHANICAL DEMO					
M-1	MECHANICAL DUCTWORK					
M-2	REFRIGERATION & HW PIPING					
M-3	ROOFTOP & PLUMBING					
M-4	DETAILS & SCHEDULES					DATE: 03/24/2025
P-1	CONDENSATE DRAIN PIPING					OWNER: UMA BANGOR
E-1	ELECTRICAL POWER PLAN					A.E. PROJECT: #24.10.31

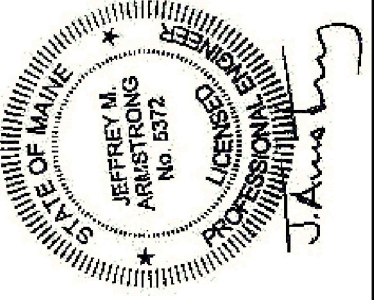


- GENERAL NOTES:**
- ALL EQUIPMENT IN RED TO BE DEMOED. CHECK PLAN NOTES FOR TIMING OF DEMOLITION.
- PLAN NOTES**
- ① WORK FOR MAIN ENTRANCE AREA, CONFERENCE ROOM & COMMON ROOM SHALL BE PART OF ALTERNATE #1.
- ② EXISTING T-BAR CEILING TILES & GRID SYSTEM TO BE REMOVED FOR DUCT DEMOLITION AND BE REUSED. EXISTING 2X2" LIGHTS, SMOKE DETECTORS & EXIT SIGNS SHALL BE REUSED. REFER TO 1956 & 1968 RECORD DRAWINGS FOR EXISTING MECHANICAL LAYOUT. ALL DUCTWORK, RG&D'S SHALL BE REMOVED. WALL TRANSFER GRILLES SERVING 100A, 101B, 102, 103, 104, & 105 SHALL REMAIN IN PLACE & BE REUSED.
- ③ UNITS TO BE DEMOED AND REPLACED AS PART OF ALTERNATE 2. UNITS ARE TO REMAIN IN PLACE AN IN SERVICE UNDER BASE BID.

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☐ RECORD DRAWINGS



EASTPORT HALL, UMA BANGOR
BANGOR, ME
PROJECT HVAC / IAQ
RENOVATION (PHASE 2)

REV	DATE	DESCRIPTION

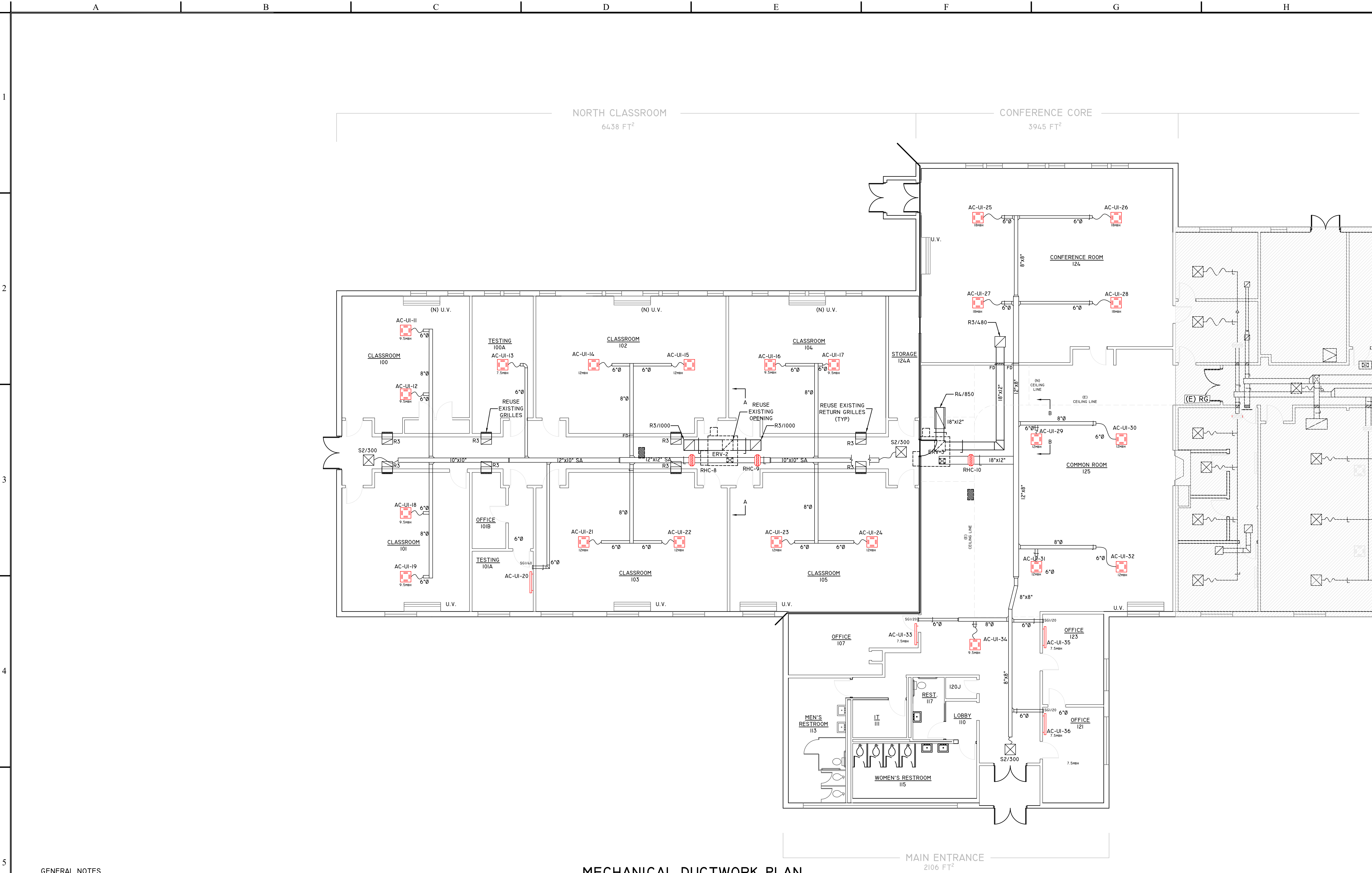
SHEET TITLE:
MECHANICAL
DEMOLITION

03/24/2025

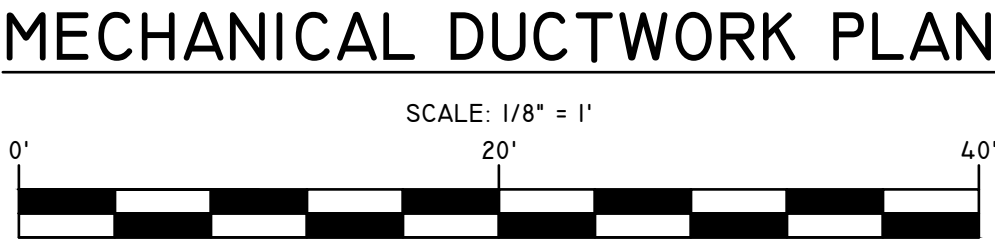
MD-I

PROJECT #24.031

BID DOCUMENT



- GENERAL NOTES**
- USE EXISTING WALL OPENINGS FOR NEW DUCTWORK RA TRANSFER GRILLES WERE POSSIBLE. REFER TO 1956 & 1968 RECORD DRAWINGS.
 - COORDINATE AC CASSETTES, RG & D'S, LOCATIONS WITH EXISTING 2 X 2 LIGHT TROFFERS.



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☐ RECORD DRAWINGS

**EASTPORT HALL, UMA BANGOR
BANGOR, ME**

PROJECT HVAC/ IAQ
RENOVATION (PHASE 2)

REV	DATE	DESCRIPTION

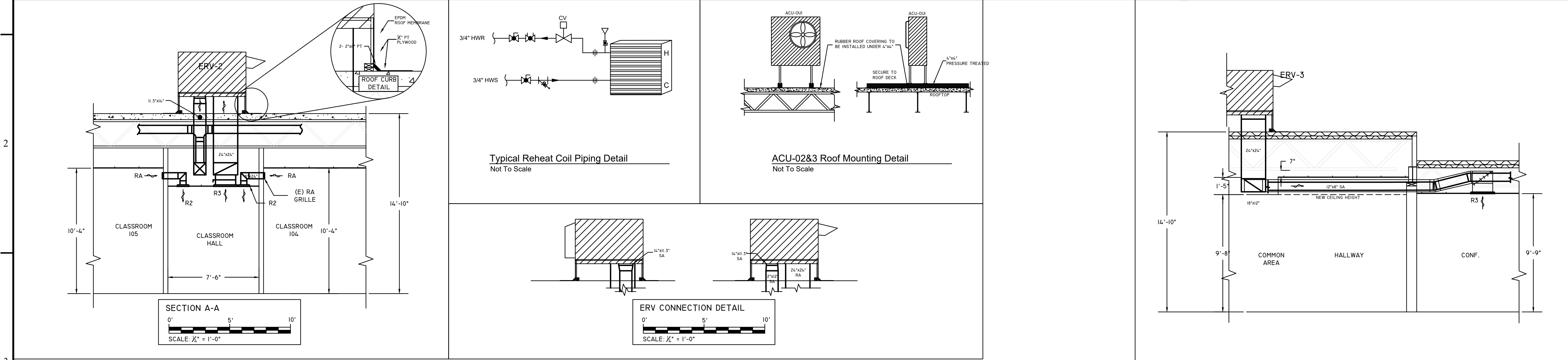
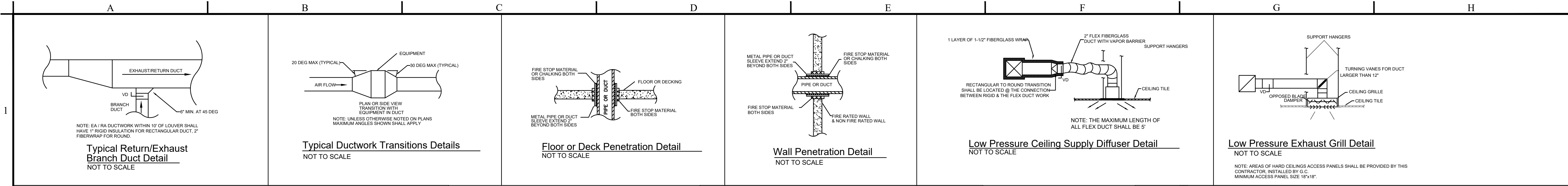
SHEET TITLE:
**MECHANICAL
DUCTWORK**

03/24/2025

M-1

BID DOCUMENT

PROJECT#241031



REHEAT COIL SCHEDULE												
TAG NO.	AREA SERVED	MANUFACTURE MODEL	SIZE (MBH) TONS	CFM	ROWS	FPI	EAT (°F)	LAT (°F)	MBH	GPM	PSI WDP	EWT (°F)
RHC-8	ERV-2 SA	STERLING	28"x16"	1000	-	-	50	80	33.0	3.3	-	180
RHC-9	ERV-2 SA	STERLING	28"x16"	1000	-	-	50	80	33.0	3.3	-	180
RHC-10	ERV-3 SA	STERLING	32"x18"	2000	-	-	50	80	66.0	6.6	-	180

NOTE: SA DUCTWORK SHALL BE INSULATED FROM ERV SA UNIT CONNECTION TO RHC COIL INLET. (TYP FOR ALL RH COILS)

AIR CONDENSING UNIT SCHEDULE												
TAG NO.	AREA SERVED	MODEL	CAPACITY TONS	EFFICIENCY	CAPACITY	REFRIGERANT	ELECTRICAL	UNIT WEIGHT	REMARKS			
ACU-002	NORTH CLASSROOM WING	AM1208XYTH/AA	10 TON	3.92	120,000 BTU/HR	R410A	208V-230V 3-PH 76.0	644.0 LBS	4, 5	BASE BID		
ACU-003	COMMON AREA / CONFERENCE ROOM	AM1208XYTH/AA	10 TON	3.92	120,000 BTU/HR	R410A	208V-230V 3-PH 76.0	644.0 LBS	4, 5	ALT. #1		

NOTES: 1) REMOTE WALL CONTROLLER, 2) BACNET INTERFACE W/ EXISTING B.M.S., 3) CONDENSATE PUMP, 4) ROOF MOUNT STANDS, 5) FACTORY START UP EQUIPMENT BASED UPON SAMSUNG MANUFACTURE.

VARIABLE AIR CONDITIONING EVAPORATOR UNIT SCHEDULE														
TAG NO.	AREA SERVED	OA	TOTAL CFM	INDOOR EVAPORATOR UNIT									NOTES	
				DAIKIN MODEL NO.	COOLING	HEATING	SMBH	ELEC. CHARACTERISTICS			MOP	WEIGHT (LBS)		
								POWER	MCA	MFA				
AC-UI-11	CLASSROOM 100	70	353	AM009NNNDCH/AA	9.5 MBH	10.5 MBH	-	208-230/1PH	0.24	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-12	CLASSROOM 100	70	353	AM009NNNDCH/AA	9.5 MBH	10.5 MBH	-	208-230/1PH	0.24	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-13	OFFICE 100A	40	201	AM007TNNDCH/AA	7.5 MBH	8.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-14	CLASSROOM 102	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.2	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-15	CLASSROOM 102	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-16	CLASSROOM 104	70	353	AM009NNNDCH/AA	9.5 MBH	8.5 MBH	-	208-230/1PH	0.24	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-17	CLASSROOM 104	70	353	AM009NNNDCH/AA	9.5 MBH	8.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-18	CLASSROOM 101	70	353	AM009NNNDCH/AA	9.5 MBH	10.5 MBH	-	208-230/1PH	0.24	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-19	CLASSROOM 101	70	353	AM009NNNDCH/AA	9.5 MBH	10.5 MBH	-	208-230/1PH	0.24	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-20	OFFICE 101A	201	201	AM007TNVDCH/AA	7.5 MBH	8.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 9	BASE BID
AC-UI-21	CLASSROOM 103	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-22	CLASSROOM 103	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-23	CLASSROOM 105	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-24	CLASSROOM 105	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	BASE BID
AC-UI-25	CONFERENCE 124	120	459	AM018NNNDCH/AA	18.0 MBH	20.0 MBH	-	208-230/1PH	0.38	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-26	CONFERENCE 124	120	459	AM018NNNDCH/AA	18.0 MBH	20.0 MBH	-	208-230/1PH	0.38	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-27	CONFERENCE 124	120	459	AM018NNNDCH/AA	18.0 MBH	20.0 MBH	-	208-230/1PH	0.38	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-28	CONFERENCE 124	120	459	AM018NNNDCH/AA	18.0 MBH	20.0 MBH	-	208-230/1PH	0.38	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-29	COMMON 125	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-30	COMMON 125	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-31	COMMON 125	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-32	COMMON 125	80	371	AM012NNNDCH/AA	12.0 MBH	13.5 MBH	-	208-230/1PH	0.26	-	ISA	26.4	1, 2, 3, 5, 6, 7, 9	ALT #1
AC-UI-33	OFFICE 100A	201	201	AM007TNVDCH/AA	7.5 MBH	8.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-34	LOBBY 110	70	353	AM009NNNDCH/AA	7.5 MBH	10.5 MBH	-	208-230/1PH	0.24	-	ISA	26.4	1, 2, 3, 5, 6, 7, 8, 9	ALT #1
AC-UI-35	OFFICE 123	201	201	AM007TNVDCH/AA	7.5 MBH	8.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 9	ALT #1
AC-UI-36	OFFICE 121	201	201	AM007TNVDCH/AA	7.5 MBH	8.5 MBH	-	208-230/1PH	0.2	-	ISA	19.8	1, 2, 3, 5, 6, 7, 9	ALT #1

NOTES: 1) REMOTE WALL CONTROLLER, 2) BACNET INTERFACE W/ EXISTING B.M.S., 3) CONDENSATE PUMP, 4) WALL MOUNT BRACKETS, 5) FACTORY START UP EQUIPMENT BASED UPON SAMSUNG MANUFACTURE.

DIFFUSER & REGISTER SCHEDULE					
TAG NO.	MANUFACTURER	SIZE (WxH)	INLET SIZE	MOUNTING	NOTES
S1	PRICE OR EQUAL	24x24	6	T BAR	2
S2	PRICE OR EQUAL	24x24	8	T BAR	2
S3	PRICE OR EQUAL	24x24	10	T BAR	2
SG1	PRICE OR EQUAL	8x8	8x8	T BAR	1,2
R1	PRICE OR EQUAL	12x12	12x12	T BAR	1
R2	PRICE OR EQUAL	24x12	24x12	T BAR	1
R3	PRICE OR EQUAL	24x24	24x24	T BAR	1
R4	PRICE OR EQUAL	48x24	48x24	T BAR	1
RG1	PRICE OR EQUAL	18x6	18x16	SURFACE	2

NOTES: 1) PROVIDE WITH OPPOSED BLADE DAMPER
2) PROVIDE HARD DUCT ELBOW FOR FLEX DUCT CONNECTION

UNIT VENTILATOR SCHEDULE															
TAG NO.	TOTAL CFM	MODEL	% F.A.	CAPACITY SCFM	CAPACITY MBH	RUN OUTS		LWT "F	HP	VOLTS	MOTOR DATA				NOTES
UV-A	750	UAVB-07	30	780	64.0	SUP	RET	150"	.333	115	PH	HZ	F.L.A.	HW FLOW	FLOOR MOUNTED
UV-B	1200	UAVB-13	30	1200	95.0	1"1/4"	1"1/4"	150"	.333	115	1	60	5.0/6.3	8.0	FLOOR MOUNTED, ALTERNATE #2

ERV SCHEDULE															
TAG NO.	AREA SERVED	GREENHECK MODEL #	SUPPLY FAN			EXHAUST FAN			ELECTRIC				UNIT WEIGHT		
			CFM	TSP	RPM	HP	CFM	TSP	RPM	HP	VOLTS	PHASE	HERTZ	FLA	
ERV-2	CLASSROOMS	ERV-45-30L	2000	1.26	1220	1.5	2000	1.14	1228	1.5	208V	3PH	60	-	16.4A
ERV-3	CLASSROOMS	ERV-45-30L	2000	1.26	1220	1.5	2000	1.14	1228	1.5	208V	3PH	60	-	16.4A

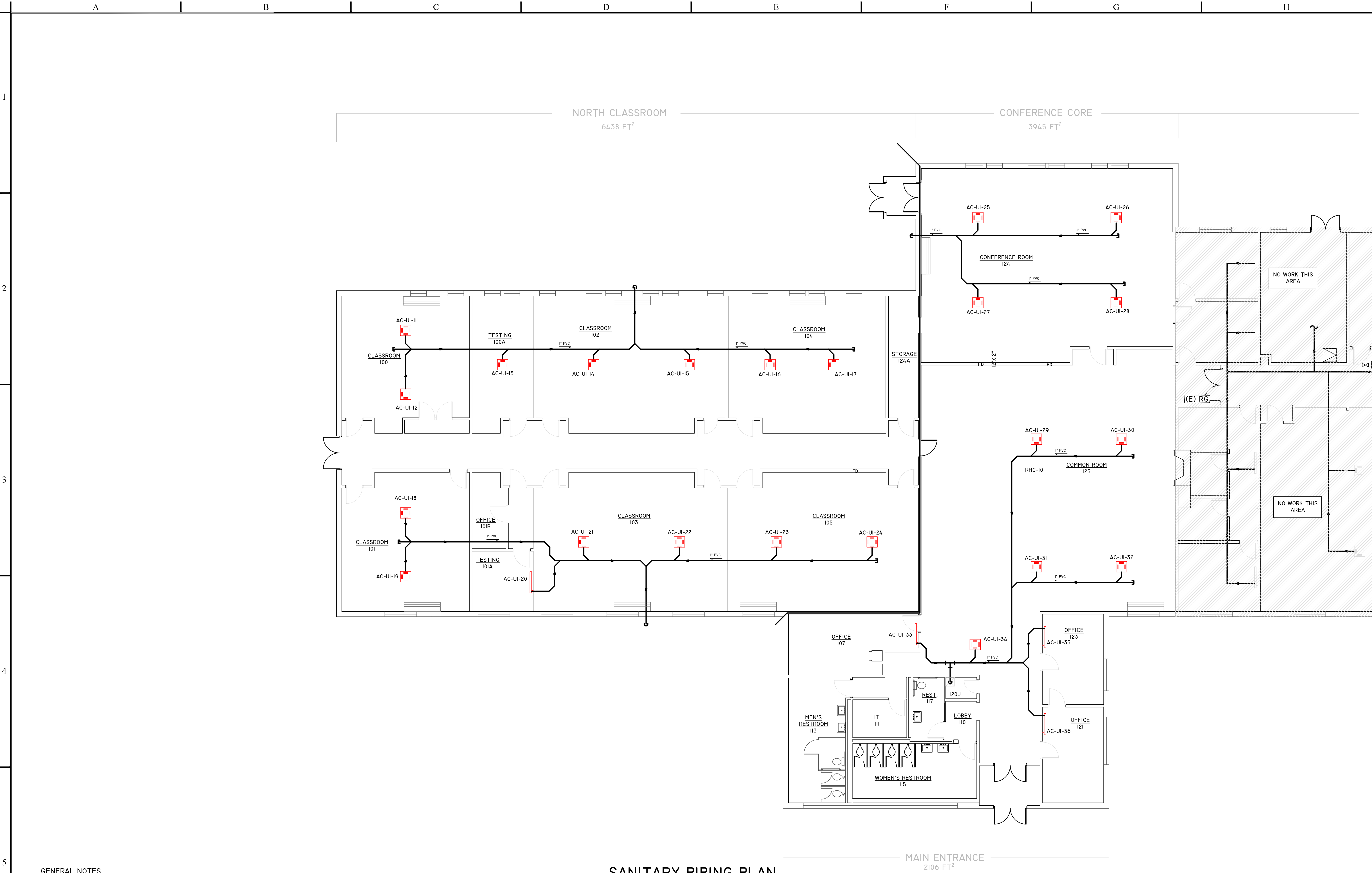
REV	DATE	DESCRIPTION

SHEET TITLE:
SCHEDULES
&
DETAILS

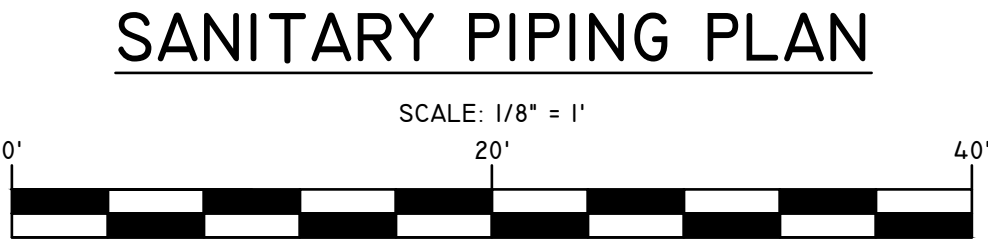
03/24/2025

M-4

PROJECT#241031



- GENERAL NOTES**
- USE EXISTING WALL OPENINGS FOR NEW DUCTWORK WHERE POSSIBLE. REFER TO 1956 & 1968 RECORD DRAWINGS.
 - COORDINATE AC CASSETTES, RG& D'S, LOCATIONS WITH EXISTING 2 X 2 LIGHT TROFFERS.
 - CLASSROOMS 136, 138, 139 & OFFICE 137, WALL TRANSFER GRILLES SHALL BE REUSED.



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☐ RECORD DRAWINGS

**EASTPORT HALL, UMA BANGOR
BANGOR, ME**

PROJECT HVAC / IAQ
RENOVATION (PHASE 2)

REV	DATE	DESCRIPTION

SHEET TITLE:

**SANITARY
PIPING**

03/24/2025

P-1

PROJECT#241031

BID DOCUMENT

