

Capital Project Appropriation Request

5/13/2025

FY 24/25

Project: 001435 Turn of River HVAC Controls
Agency: 0900 Board of Education: Capital

Oracle Date	
Commitments	
Obligations	
YTD Balance	
Amount Available	
Unfunded	

Total Request: \$762,000.00

Part A - Description of Request

Phase II replacement for inefficient pneumatic controls, valves, and shut off valves, beyond their useful life. The new system will use direct digital control and convert from constant flow to pressure differential flow to reduce energy inefficiencies and operational costs associated with heating the building. The new systems energy cost savings are anticipated to offset the cost of the improvement over the course of the new systems life

Part B - Appropriation Request Detail

Fund Source	FY 24/25	Capital Forecast						Total
	Amount	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	
Bond (City)	762,000.00	0	0	0	0	0	0	762,000.00
Total	\$762,000.00	\$0	\$0	\$0	\$0	\$0	\$0	\$762,000.00

Part C - Project History

Part D - Approvals

Preparer <i>OPM Dept</i>	Date 05/13/2025	OPM Director/OPM Asst Director	Date
Department Head	Date	Director of Administration	Date
Director	Date	Mayor	Date

PROJECT TITLE: _____

CITY OF STAMFORD - TURN OF RIVER SCHOOL

HVAC Controls Upgrade Project

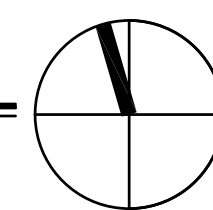
Control Work

117 Vine Road
Stamford, Connecticut 06905

PROJECT LOCATIONS: _____



TURN OF RIVER MIDDLE SCHOOL
SCALE: NONE



SILVER PETRUCELLI + ASSOCIATES

3190 WHITNEY AVENUE HAMDEN CT 06518
311 STATE STREET NEW LONDON CT 06320
203 230 9007 silverpetrucelli.com

DRAWING LIST

- COVER SHEET

MECHANICAL:

M-100-C MECHANICAL NOTES, LEGENDS AND ABBREVIATIONS
M-200-C PARTIAL FIRST FLOOR PLAN PART "A"
M-201-C PARTIAL FIRST FLOOR PLAN PART "B"
M-202-C PARTIAL FIRST FLOOR PLAN PART "C"
M-203-C SECOND FLOOR PLAN
M-204-C ROOF PLAN CONTROLS
M-301-C MASTER CONTROLS SCHEDULE
M-302-C EXISTING MECHANICAL EQUIPMENT LIST FOR REFERENCE
M-701-C UNIT VENTILATOR (TYP), EXISTING CONTROLS

M/E/P/FP ENGINEERS

SILVER PETRUCELLI + ASSOCIATES
3190 WHITNEY AVENUE, HAMDEN CT 06518
311 STATE STREET NEW LONDON, CT 06320
PHONE 203 230 9007 silverpetrucelli.com

PHASE 2 CONTROL WORK 04-02-2025

**ABBREVIATIONS
(NOT ALL SYMBOLS ARE USED)**

(###)	CFM	FA	FACE AREA	NO	NORMALLY OPEN
ABV	ABOVE	FBO	FURNISHED BY OTHERS	NTS	NOT TO SCALE
AC	AIR COMPRESSOR	INSTALLED BY HVAC SUBCONTRACTOR		OA	OUTSIDE AIR
ACU-#	AIR CONDITIONING UNIT	FC	FORWARD CURVE	OAT	OUTDOOR AIR TEMPERATURE
AD	ACCESS DOOR	FCU	FAN COIL UNIT	OA	OUTDOOR AIR INTAKE
AF	AIR FILTER	FD	FIRE DAMPER WITH ACCESS DOOR	ODD	OPPOSED BLADE DAMPER
AFJ	ADJUSTABLE FREQUENCY CONTROLLER	FF	FINAL FILTER	OD	OUTSIDE DIMENSION
AFC	ABOVE FINISHED FLOOR	FBO	FURNISHED AND INSTALLED BY OTHERS	O.E. T.D.	OPEN END TRANSFER DUCT
AFMS	AIR FLOW MEASURING STATION	FIN FL	FINISH FLOOR	P-#	PUMP
AHU-#	AIR HANDLING UNIT	FL	FLOOR	PB	PUSH BUTTON
AL	ACOUSTIC LINING	FLA	FULL LOAD AMPERES	PBD	PARALLEL BLADE DAMPER
ALD	AUTOMATIC LOWER DAMPER	FLEX	FLEXIBLE	PD	PRESSURE DROP
APD	AIR PRESSURE DROP	PPF	PINS PER FOOT	PF	PREFILTER
AUTO	AUTOMATIC	FPV	FAN POWERED VAV BOX	PH	PHASE
B-#	BOILER	FT	FEET	PHC	PREHEAT COIL
BC	BACKWARD CURVED	F.T.	FLOAT & THERMOSTATIC TRAP	PPH	POUND PER HOUR
BD	BELT DRIVE	FR	FIN TUBE RADIATION	PRV	PRESSURE REDUCING VALVE
BMS	BUILDING MANAGEMENT & CONTROL SYSTEM	FV	FACE VELOCITY	PSI	POUND PER SQUARE INCH
BT	INVERTED BUCKET TRAP	GC	GENERAL CONTRACTOR	RA	RETURN AIR
BTU	BRITISH THERMAL UNIT	GH	GRAVITY INTAKE HOOD	RAF-#	RETURN AIR FAN
C-#	CHILLER	GPH	GALLONS PER HOUR	RAT	RETURN AIR TEMPERATURE REGISTER
CAP	CAPACITY	CPM	GALLONS PER MINUTE	REG	REGISTER
CB-#	CHILLED BEAM	CWS	CHEMICAL WATER LOOP SUPPLY	RH	RELATIVE HUMIDITY
CC-#	COOLING COIL	CWR	CHEMICAL WATER LOOP RETURN	RHC	REHEAT COIL
CD	CEILING DIFFUSER	H/C	HEATING/COOLING	RM	ROOM
CFM	CUBIC FEET PER MINUTE	H-#	HUMIDIFIER	RP	RADIANT PANEL
CG	CEILING GRILLE	H-O-A	HAND-OFF-AUTOMATIC	RP	REVOLUTIONS PER MINUTE
CLG	CEILING	HC-#	HEATING COIL	RS	RISE
CONV-#	HOT WATER CONVERTOR	RTU-#	ROOFTOP AIR CONDITIONING UNIT	FEET OF HEAD	
CR	CONDENSATE RECEIVER/PUMPING SYSTEM	SA	SUPPLY AIR	SA	SUPPLY AIR FAN
CR	CEILING REGISTER	HTO	HEATING	SAP-#	SUPPLY AIR TEMPERATURE
CT-#	COOLING TOWER	HTR	HEATER	SB	SECURITY BARS
CTD	CEILING TRANSFER DUCT	H/V-#	HEATING AND VENTILATING UNIT	VSC	VERTICAL SPLIT CASE
CUH-#	CABINET UNIT HEATER HOT WATER	HVAC	HEATING, VENTILATING & AIR CONDITIONING	HSC	HORIZONTAL SPLIT CASE
CV	CONTROL VALVE	HW-#	HEAT EXCHANGER CONVERTOR	SD	SMOKE DAMPER
OW	COLD WATER	DI	INSIDE DIMENSION	SG	SUPPLY GRILLE
DAT	DRIP AND TRAP	IN	INCHES	SP	STATIC PRESSURE
DB	DECIBELS	IV	INLET GUIDE VANES	SQ FT	SQUARE FOOT (AREA)
DB	DRY BULB	IL	INLINE	ST	SINGLE POLE SWITCH
DD	DIRECT DRIVE	KWH	KILOWATT HOUR	SWR	SIDE WALL REGISTER
DDC	DIRECT DIGITAL CONTROL	KW	KILOWATT	TS/ST	THERMOSTAT
DIFF	DIFFUSER	LAT	LEAKING AIR TEMPERATURE	TD	TEMPERATURE DIFFERENCE
DL	DOOR LOUVER	LD	LINEAR DIFFUSER	TEMP	TEMPERATURE
DN	DOWN	LIN	LINEAR	LRA	LOCKED ROTOR AMPERES
DOAS	DEDICATED OUTDOOR AIR SYSTEM	LPR	LOW PRESSURE RETURN	LPS	LOW PRESSURE SUPPLY
DP	DEWPOINT TEMPERATURE	LPG	LEAVING	LWT	LEAVING WATER TEMPERATURE
DR	DROP	MAN	MANUAL	MAX	MAXIMUM
DTWS	DUAL TEMPERATURE WATER SUPPLY	MAT	MIXED AIR TEMPERATURE	MBS	MAXIMUM FUSE SIZE
DTRW	DUAL TEMPERATURE WATER RETURN	MIN	MINIMUM	MEZ	MEZZANINE
DX	DIRECT EXPANSION	MOT	MOTOR	MFS	MAXIMUM FUSE SIZE
EA	ENTERING AIR TEMPERATURE	MUA	MAKE-UP AIR	MN	MINIMUM
EER	ENERGY EFFICIENCY RATIO	MV	MOTORIZED VALVE	NC	NORMALLY CLOSED
EG	EXHAUST GRILLE	MW	MOTORIZED WATER MEASURING STATION	NEA	NET FREE AREA
EHC-#	ELECTRIC HEATING COIL	NC	NORMALLY CLOSED	NEA	NET FREE AREA
ENT	ENTERING	NFA	NET FREE AREA	NC	NOISE CRITERIA
HEPA	HIGH EFFICIENCY PARTICULATE FILTER	NIC	NOT IN THIS CONTRACT	NFA	NET FREE AREA
ER	EXHAUST REGISTER			NC	NOISE CRITERIA
ES	END SUCTION			NFA	NET FREE AREA
ESP	EXTERNAL STATIC PRESSURE			NC	NOISE CRITERIA
ET-#	EXPANSION TANK			NFA	NET FREE AREA
EUI-#	ELECTRIC UNIT HEATER			NC	NOISE CRITERIA
EW	ENTERING WATER TEMPERATURE			NFA	NET FREE AREA
EX	EXISTING			NC	NOISE CRITERIA
EXH	EXHAUST			NFA	NET FREE AREA
EXT	EXTERNAL			NC	NOISE CRITERIA
F	DEGREES FAHRENHEIT			NFA	NET FREE AREA
FAB	FACE & BYPASS DAMPER			NC	NOISE CRITERIA

**SYMBOL LEGEND
(NOT ALL SYMBOLS ARE USED)**

	PRESSURE/TEMPERATURE PORT		PIPE UNION		MECHANICAL NOTE REFERENCE, NUMBER INDICATES NOTE
	TEMPERATURE GAUGE/TEMPERATURE INDICATOR		AIR VENT, AUTOMATIC		CUBIC FEET PER MINUTE
	PRESSURE GAUGE		AIR VENT, MANUAL		DUCT STATIC PRESSURE
	BUTTERFLY VALVE		PUMP OR FAN		VOLUME DAMPER
	SHUT-OFF VALVE		STRAINER		BACKDRAFT DAMPER
	ANGLE GATE VALVE		STRAINER, BLOW OFF		DUCT STATIC PRESSURE SENSOR
	GLOBE VALVE		1" DOOR UNDERCUT		MOTORIZED DAMPER
	BALL OR BUTTERFLY VALVE		RETURN GRILLE		SUPPLY OR OUTSIDE AIR DUCT UP OR CSD
	ANGLE GLOBE VALVE		THERMOSTAT OR SPACE TEMPERATURE SENSOR		SUPPLY OR OUTSIDE AIR DUCT DOWN
	TWO WAY MOTORIZED CONTROL VALVE		PRESSURE SENSOR		RETURN OR EXHAUST DUCT UP OR CRG/CRR
	THREE WAY MOTORIZED CONTROL VALVE		DIRECTION OF FLOW		RETURN OR EXHAUST DUCT DOWN
	CHECK VALVE		METER		FLEXIBLE CONNECTION
	OS & Y		DIAMETER		DUCT TRANSITION
	SAFETY RELIEF VALVE (PRESS. & TEMP.)		THERMOMETER		RECTANGULAR TO ROUND TRANSITION
	DRAIN VALVE W/ HOSE COUPLING W/CAP		PIPE TEE, OUTLET UP		DUCT WORK, DIRECTION OF FLOW
	CAP		PIPE ELBOW, TURNED UP		POSITIVE PRESSURE DUCT
	PIPE CONNECTION BOTTOM		PIPE TEE, OUTLET DOWN		NEGATIVE PRESSURE DUCT
	PIPE CONNECTION TOP		HWS HOT WATER SUPPLY		CHANGE OF ELEVATION, RISE (R) DROP (D)
	PIPE COUPLING (JOINT)		HWR HOT WATER RETURN		LINED DUCT WORK
	ELBOW, 90°		CWS CONDENSER WATER SUPPLY		SINGLE LINE LINED DUCT WORK
	PIPE ELBOW, TURNED DOWN		CWR CONDENSER WATER RETURN		DIRECTION OF SUPPLY OR OUTSIDE AIR
	PIPE TEE		POINT OF CONNECTION		DIRECTION OF RETURN OR EXHAUST AIR
	CALIBRATED BALANCING VALVE		RETURN OR EXHAUST DUCT UP		AIR TERMINAL UNIT
	HUMIDISTAT/HUMIDITY SENSOR		SUPPLY OR OUTSIDE AIR DUCT UP		DUCT SMOKE DETECTOR
	DUCT MOUNTED HUMIDITY SENSOR		SMOKE DAMPER		FIRE DAMPER WITH ACCESS DOOR AS REQUIRED
	DUCT MOUNTED CARBON DIOXIDE SENSOR		COMBINATION FIRE AND SMOKE DAMPER		DUCT ACCESS DOOR
	HWS HOT WATER SUPPLY		45° CHILLED WATER SYSTEM SUPPLY		57° CHILLED WATER SYSTEM SUPPLY
	HWR HOT WATER RETURN		45° CHILLED WATER SYSTEM RETURN		57° CHILLED WATER SYSTEM RETURN
	PIPE ANCHOR		PIPE GUIDE		

PROJECT CONSTRUCTION/CUSTODIAN SCHEDULE + WORKING HOURS:
THIS PROJECT WILL BE CONSTRUCTED DURING 2ND SHIFT PRIOR TO THE END OF THE 2024-2025 SCHOOL YEAR: 7:40PM - 9PM. THE TENTATIVE LAST DAY OF SCHOOL IS JUNE 12TH, 2025. THIS DATE IS SUBJECT TO CHANGE AFTER THE LAST DAY OF SCHOOL. THE WORKING HOURS WILL BE THE CUSTODIAN SUMMER HOURS, SEE BELOW.

CONTRACTOR HOURS OF OPERATION ? TURN OF RIVER: REGULAR DAY SCHEDULE (STUDENTS & STAFF): 8:00AM - 2:40PM. RELAYED OPENING: 10:00AM EARLY RELEASE: 12:20PM CUSTODIAN REGULAR DAY SCHEDULE: 6:30AM - 9:00PM CUSTODIAN SUMMER SCHEDULE: 7:00AM - 2:30PM.

CONTRACTOR WORKING HOURS FOR THE REGULAR DAY SCHEDULE ARE TYPICALLY SET TO BEFORE AND AFTER REGULAR DAY SCHOOL HOURS (OUTSIDE OF WHEN THE STUDENTS ARE IN THE SCHOOL). HOWEVER, DEPENDING ON THE SCOPE OF WORK FOR THE PROJECT, SOME WORK MAY BE ACCEPTABLE DURING REGULAR SCHOOL HOURS. THIS IS DETERMINED ON A CASE-BY-CASE BASIS THROUGH VERIFICATION AND APPROVAL BY BOTH THE COS ENGINEERING & BOE FACILITIES PROJECT TEAM MEMBERS. THIS WORK NEEDS TO BE APPROVED AHEAD OF AN SCHEDULING REQUEST FOR WORKING HOURS OUTSIDE OF THE ABOVE, BOTH FOR REGULAR AND SUMMER HOURS, WILL BE CHARGED DIRECTLY TO THE CONTRACTOR AT THE CUSTODIAN OVERTIME RATES OUTLINED BELOW.

CUSTODIAN OVERTIME: REQUESTS FOR WORKING HOURS OUTSIDE OF THE ABOVE, BOTH FOR REGULAR AND SUMMER HOURS, WILL NEED TO BE SUBMITTED A MINIMUM OF (10) WORKING DAYS IN ADVANCE. CUSTODIAN OVERTIME HOURS WILL BE TRACKED BY BOE FACILITIES AND THEN BILLED DIRECTLY TO THE CONTRACTOR BY THE BOE FACILITIES TEAM AT THE HOURLY RATES BELOW. RATES ARE PER INDIVIDUAL CUSTODIAN (TYPICALLY ONLY (1) CUSTODIAN IS REQUIRED AT A TIME); MON ? SAT: \$72 / HR SUN, \$94 / HR

PLEASE NOTE THE CUSTODIAN HOLIDAYS BELOW - THE SCHOOL WILL BE CLOSED FOR THESE DATES AND ANY WORK TAKING PLACE WILL NECESSITATE CUSTODIAN OVERTIME CHARGES.

CUSTODIAN HOLIDAYS 2025: JANUARY 1 NEW YEAR'S DAY, JANUARY 20 MARTIN LUTHER KING DAY, APRIL 18 GOOD FRIDAY, MAY 26 MEMORIAL DAY, JUNE 16 JUNETEENTH, JUNE 19 JUNETEENTH, JULY 4 INDEPENDENCE DAY, SEPTEMBER 1 LABOR DAY, OCTOBER 13 COLUMBUS DAY, NOVEMBER 11 VETERAN'S DAY, NOVEMBER 27 THANKSGIVING DAY, NOVEMBER 28 DAY AFTER THANKSGIVING, DECEMBER 25 CHRISTMAS DAY

APRIL BREAK 2025: APRIL 14-18TH

TYPICAL SUMMER HOURS ARE FROM MID-JUNE THROUGH THE LAST WEEK OF AUGUST. EXACT CHANGEOVER DATES NEED TO BE VERIFIED BY COS ENGINEERING & BOE FACILITIES PROJECT TEAM MEMBERS. PICNIC DATE TBD, TYPICALLY FIRST MONDAY AFTER LAST DAY OF SCHOOL THE WEEK OF APRIL BREAK THE CUSTODIANS WILL BE WORKING SUMMER HOURS

SCHOOL VACATIONS / BREAKS: PLEASE REFER TO THE STAMFORD BOE WEBSITE FOR THE MOST UP-TO-DATE AND APPROVED SCHOOL VACATION/BREAK SCHEDULE.

HTTPS://WWW.STAMFORDPUBLICSCHOOLS.ORG/ABOUT-US/CALENDAR.

A COPY OF THE ADOPTED SCHOOL CALENDAR IS ALSO POSTED WITHIN THE BID DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BUILD OUT THEIR SCHEDULE AND ACCOUNT FOR ANY FORESEEN OVERTIME CHARGES WITHIN THEIR BID PRICING.

UNIT PRICING

- INTENT OF UNIT PRICING IS TO ADDRESS ANY UNFORESEEN EQUIPMENT OR CHANGES IN QUANTITIES AND WILL BE USED AS A BASIS FOR ANY REQUIRED CHANGE ORDERS.
- CONTRACTOR TO PROVIDE UNIT PRICING FOR CONTROL VALVES FOR EACH CLASSROOM FOR ADDITIONAL CONTROL VALVE AND DAMPER INSTALLATIONS FOR ANY SYSTEM QUANTITY ADJUSTMENTS DUE TO UNFORESEEN EQUIPMENT.
- PROVIDE UNIT PRICING FOR DAMPERS THAT NEED TO BE REPAIRED OR REPLACED IN UNIT VENTILATORS.

NOTES ON THIS DRAWING, OTHER DRAWINGS AND THE ENTIRE SPECIFICATION APPLY TO THE ENTIRE PROJECT.

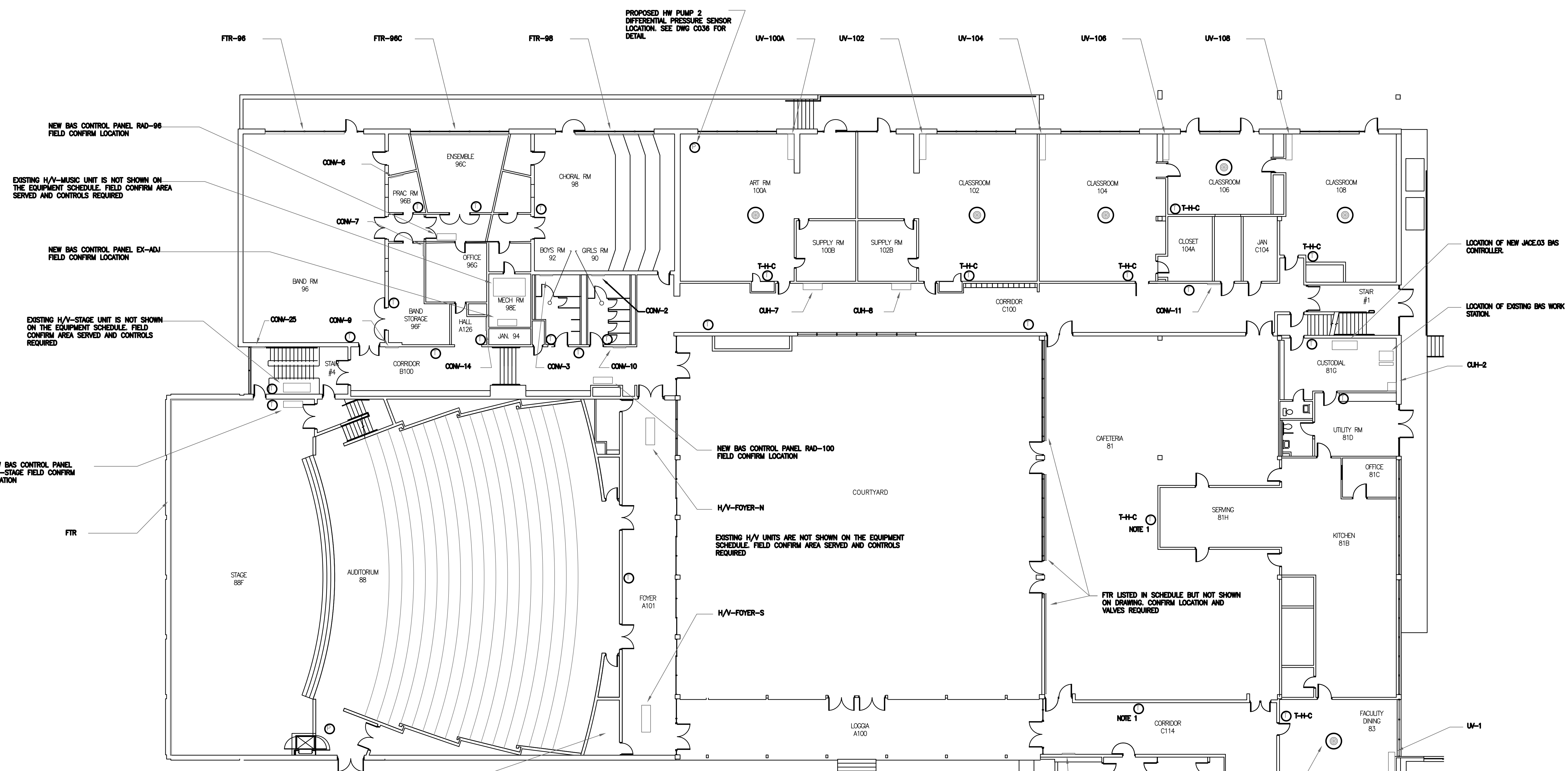
CONTRACTOR SHALL MEET PREVAILING WAGE REQUIREMENTS. DAILY BUILDING OPERATIONS SHALL NOT BE IMPEDED UPON BY WORK. WORK MAY BE COMPLETED ON SECOND SHIFT DURING THE SCHOOL YEAR.

GENERAL

- THE INTENT OF THESE CONTRACT DOCUMENTS IS FOR THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE CONTROL SYSTEM WITH SUPPORTING ELECTRICAL SYSTEMS. THESE ELECTRICAL SYSTEMS INCLUDE CONTROLS, PLUMBING, FIRE PROTECTION, HVAC, ELECTRICAL AND ALL ASSOCIATED SPECIAL SYSTEMS. ALL SYSTEMS SHALL BE COMPLETED IN RESPECTS, OPERATING, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
- THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS, INCLUDING PROJECT MANUAL, PLANS AND SPECIFICATIONS OF ALL TRADES BEFORE SUBMITTING BID. REFER TO SPECIFICATIONS, PROJECT MANUAL AND PLANS, INCLUDING ALL EQUIPMENT SCHEDULES FOR MECHANICAL AND ELECTRICAL INFORMATION. CONTRACTOR SHALL WALK THROUGH BUILDING PRIOR TO SUBMITTING BID.
- ALL OF THE CONTRACT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO FORM A TOTAL DESIGN PACKAGE.
- ALL WORK AND ACTION DEPICTED AND DESCRIBED SHALL BE PERFORMED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
- PROVIDE SUPPORT/BRACING OF EQUIPMENT AND BUILDING SERVICES FOR SEISMIC RESTRAINT AS REQUIRED BY CODE.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS.
- ALL EQUIPMENT MATERIALS AND RELATED SYSTEMS COMPONENTS SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- REPAIR AND/OR REPLACE AT NO COST TO OWNER ALL EQUIPMENT AND MATERIALS DAMAGED DURING CONSTRUCTION.
- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION ARE TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH 2021 IBC, 2021 IBC, 2021 IMC, 2021 IECC, 2020 NEC IN THE ORDINANCES AND THE REGULATORY AGENCIES HAVING JURISDICTION.
- WHEN CONFLICTS OCCUR BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
- CONTRACTORS SHALL COORDINATE THEIR WORK WITH ALL OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, RECEPTACLES, ETC. BEFORE INSTALLATION.
- CONTRACTORS SHALL PROVIDE ALL REQUIRED SLEEVES AND SEALS FOR CONDUIT PENETRATING WALLS OR FLOOR SLABS WITH U.L. APPROVED FIRE STOPPING SEALANT WHERE REQUIRED. PROVIDE ESCUTCHEONS IN FINISHED SPACE.
- ELECTRICAL CONDUITS & BOXES TO BE CONCEALED IN WALLS OR ABOVE CEILING WHEREVER POSSIBLE.
- COORDINATE WITH ALL CONDUITS LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) FOLLOWING CODE BEFORE INSTALLATION.
- LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP/DOWN STREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES AND OTHER CONCEALED MECHANICAL EQUIPMENT.
- LOCATION AND SIZES OF ALL FLOOR, WALL AND ROOF PENETRATIONS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
- INSTALL COMPLETE OPERATING SYSTEMS, PROVIDE ALL COMPONENTS, DEVICES, CONTROLS, RELAYS, TRANSFORMERS, ETC., WHETHER INDICATED OR NOT, FOR COMPLETE SYSTEMS AS INTENDED BY THE CONSTRUCTION DOCUMENTS.
- SOME PART OF THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. REFER TO PHASING PLAN FOR MORE INFORMATION. MAINTAIN EXISTING SERVICES TO OCCUPIED AREAS. SEAL ALL DUCTWORK AND VENTILATION OPENINGS COMMUNICATING CONSTRUCTION AREAS WITH OCCUPIED AREAS TO PREVENT THE TRANSFER OF AIR CONTAMINATED BY CONSTRUCTION ACTIVITIES.
- ALL PENETRATIONS THRU RATED WALLS, FLOORS & CEILINGS SHALL BE SEALED USING FM APPROVAL CLASS NUMBER 4990 AND/OR UL 1479, FREE FROM FORESEEABLE DANGER OR RISK OF FIRE, APPROPRIATE FOR INDICATED RATING.
- CONTRACTOR TO COORDINATE WITH BOILER REPLACEMENT PROJECT FOR DIFFERENTIAL PRESSURE REGARDING THE PUMPING SYSTEM.
- CONTRACTOR SHALL COORDINATE/WORK WITH BMS CONTRACTOR.
- THE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING THE MECHANICAL CONTRACTOR WILL ALL MODULATING CONTROL BALL VALVES FREEZE-STATS (CONTROL VALVES AND ACTUATORS TO BE INSTALLED BY MECHANICAL CONTRACTOR). THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL OTHER HARDWARE INCLUDING BUT NOT LIMITED TO ISOLATION VALVES, PIPING, STRAINERS, BALANCING VALVES, UNIONS, FITTINGS, PRO.
- THE CONTROLS CONTRACTOR SHALL FURNISH AND INSTALL ALL OTHER CONTROL-RELATED EQUIPMENT INCLUDING CONTROLLERS, WIRING AND SENSORS, ETC.
- THE CONTROLS CONTRACTOR SHALL PERFORM ALL PROGRAMMING AND SCHEDULING OF EQUIPMENT. SETPOINTS AND SCHEDULES SHALL BE USER ADJUSTABLE.
- 5 MINUTE TRENDS SHOULD BE ESTABLISHED FOR COMMISSIONING PURPOSES. PROVISION SHOULD BE MADE FOR LONG TERM STORAGE OF TRENDS DATA.
- BMS CONTRACTOR SHALL IMPLEMENT A VIRTUAL FREEZESTAT FOR ALL UV'S AS DESCRIBED IN CONTRACT DOCUMENTS. BMS VIRTUAL FREEZE-STATS SHOULD BE SET 2-5 DEGREES ABOVE PHYSICAL FREEZE-STAT SETTINGS (USER ADJUSTABLE). BMS SHALL SHUT-DOWN UV FAN, CLOSE OUTDOOR AIR DAMPER AND OPEN HOT WATER VALVE. AFTER 20 MINUTES, THE SYSTEM SHALL RESET AUTOMATICALLY. AFTER THE 2ND VIRTUAL TRIP, THE SYSTEM SHALL REQUIRE A MANUAL/PHYSICAL RESET.
- ALL WORK SHALL BE DONE IN COORDINATION WITH THE MECHANICAL CONTRACTOR TO ENSURE THE CONTINUED OPERATION OF THE BMS AND HVAC SYSTEM FOR THE APPROPRIATE SEASON.
- THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY NECESSARY PATCHING AND PAINTING ASSOCIATED WITH THEIR WORK.
- THE CONTRACTOR SHALL COOPERATE WITH THE COMMISSIONING TEAM AS NEEDED TO ENSURE SYSTEMS ARE OPERATING AS REQUIRED.
- ALL WORK SHALL BE COMPLETED BY AUGUST 29TH, 2025.
- CONTRACTOR SHALL PROVIDE SUBMITTALS WITH SEQUENCES FOR APPROVAL BY OWNER AND ENGINEER. ALL SEQUENCES SHALL BE REVIEWED WITH OWNER.
- CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF THE FINAL BMS.
- THE CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING SENSORS FOR BOTH THE SUPPLY AND RETURN LOOPS. THERE ARE 5 LOOPS. CONTROLS CONTRACTOR SHALL INTEGRATE AND CONTROL THE PUMP DRIVES WITH PD CONTROLS. REPROGRAM DRIVES AS REQUIRED. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL WELLS. CONTROLS CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR.
- CONTROLS CONTRACTOR SHALL WIRE NEW DAMPER ACTUATORS. MECHANICAL CONTRACTOR SHALL INSTALL BELIMO VALVES AND ACTUATING VALVES AS INDICATED ON DRAWINGS. MODULATING VALVES SHALL BE SPRING RETURNS, NORMALLY OPEN. COORDINATE WITH MECHANICAL CONTRACTOR.
- CONTRACTOR SHALL ELIMINATE ALL PNEUMATIC AND WIRELESS CONTROLS. ANY SYSTEM NOT IDENTIFIED WITHIN THIS PACKAGE SHOULD BE BROUGHT TO THE ATTENTION OF THE SPS BOE AND THE ENGINEER. A NEW WIRED AUTOMATIC TEMPERATURE CONTROL SYSTEM SHALL BE COMPLETE IN ALL REGARDS, TESTED AND CAPABLE OF ACHIEVING THE SEQUENCES OF OPERATION. ALL DEVICES SHALL BE UNDER SYSTEM CONTROL. CONTRACTOR TO REMOVE EXISTING THERMOSTATS AND FURNISH AND INSTALL NEW AS INDICATED IN THE CONTROLS INSTRUMENTATION SPECIFICATIONS. WIRELESS CONTROLS WILL NOT BE ACCEPTED. ALL ZONES SHALL BE THERMOSTATICALLY CONTROLLED WHETHER OR NOT A THERMOSTAT, SENSOR OR CONTROLLER IS INDICATED. WIRELESS WILL NOT BE ALLOWED AT ALL. ALL EQUIPMENT TO BE HARD WIRED, NO EXCEPTIONS. REFER TO SPECIFICATIONS FOR EQUIPMENT CONTROL POINTS.
- OCCUPANCY SENSOR SHALL BE CEILING MOUNTED WITH POWER PAK# PP20, WHITE WITH 360 DEGREE COVERAGE. OCCUPANCY SENSOR SHALL BE SET FOR A 10 MINUTE DELAY. CONTRACTOR TO FURNISH AND INSTALL OCCUPANCY SENSORS TO REDUCE HVAC/LIGHTING OPERATING TIMES. REFER TO SPECIFICATIONS. THE OCCUPANCY SENSOR SHALL BE PROGRAMMED FOR 10 MINUTES. SENSOR SHALL HAVE OUTPUT TO PROVIDE SIGNAL TO BMS AND SHALL BE INTEGRATED INTO THE SYSTEM TO PROVIDE SOFT SETBACK CAPABILITY DURING OCCUPIED SCHOOL HOURS WHEN THE ROOM IS UN-OCCUPIED FOR ANY PERIOD BEYOND 10 MINUTES.

PHASING

- CONSTRUCTION WORK SHALL BE DONE IN PHASES AS TO MINIMIZE THE IMPACT TO THE SCHOOL. REFER TO COVER SHEET FOR PHASES.
- CONTRACTOR TO START ANY PHASE AS THEY SEE FIT, AS LONG AS THE WORK DOES NOT INTERFERE WITH THE OPERATION OF THE OTHER PHASES.
- ALL WORK IN EACH PHASE MUST BE COMPLETED BEFORE WORK IN OTHER PHASES ARE STARTED UNLESS IT IS REQUIRED TO FINISH THE PRIOR PHASE.
- COORDINATE WITH MECHANICAL CONTRACTOR.



GENERAL NOTES :

1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 120 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.
5. CONTRACTOR TO COORDINATE LOCATION OF THERMOSTAT WITH OWNER.
6. CONTRACTOR TO INSTALL OCCUPANCY SENSOR IN THE CEILING TILE, IN THE MIDDLE OF THE ROOM.
7. CONTRACTOR SHALL REMOVE ALL CONTROLS, FURNISH AND INSTALL THERMOSTATS WITH TEMPERATURE CONTROLS, HUMIDITY AND CO2 MONITORING.
8. FURNISH AND INSTALL DDC THERMOSTAT TO CABINET UNIT HEATER. (TYP. FOR ALL).
9. REPLACE PNEUMATIC CONTROLLED OUTSIDE DAMPERS WITH BELIMO DDC CONTROLLED ACTUATORS. ACTUATORS SHALL FAIL CLOSED ON POWER LOSS.
10. PROVIDE AND WIRE FREEZE STATS THAT VIRTUALLY TRIPS THE UNIT OFF 3-5 DEGREES ABOVE THE PHYSICAL FREEZE-STAT SETTING. THE UNIT WILL THEN SHUT DOWN AND SHUT THE FAN OFF FOR 15-30 MINUTES AND THE BMS CAN HAVE THIS HAPPEN 2 TIMES BEFORE A MANUAL RESET IS REQUIRED. MECHANICAL CONTRACTOR TO INSTALL FREEZE-STATS.
11. REMOVE AND REPLACE DISCHARGE AIR, RETURN AIR AND MIXED AIR TEMPERATURE SENSORS WITH FULL LENGTH AVERAGING SENSORS FOR BETTER SENSING.

CONTROL NOTES :

BMS SHOULD BE HONEYWELL LATEST GENERATION NIAGRA TRIDIUM BASED OPEN PROTOCOL. CONTRACTOR SHOULD INTEGRATE ALL POINTS INTO EXISTING HONEYWELL BMS. SHOULD HAVE SHORT WRITTEN SCOPE OF WORK FOR CLARITY. SHOULD HAVE TRENDDING CAPABILITY ON ALL POINTS IN 5 MINUTE INTERVALS. DATA SHOULD BE ARCHIVED FOR LONG TERM STORAGE. FINAL SEQUENCE OF OPERATIONS SHOULD BE REVIEWED AND APPROVED BY OWNER. ALL POINTS SHALL BE FULLY INTEGRATED INTO THE EXISTING BMS AND SHALL BE ADDED WITH FULL GRAPHICS WITH USER ADJUSTABLE SETPOINTS AND ASSOCIATED SCHEDULING OF EQUIPMENT.

PHASE 2 WORK

REFER TO DRAWING M-302-C FOR ALL ITEMS THAT ARE REQUIRED FOR PHASE 2 WORK.

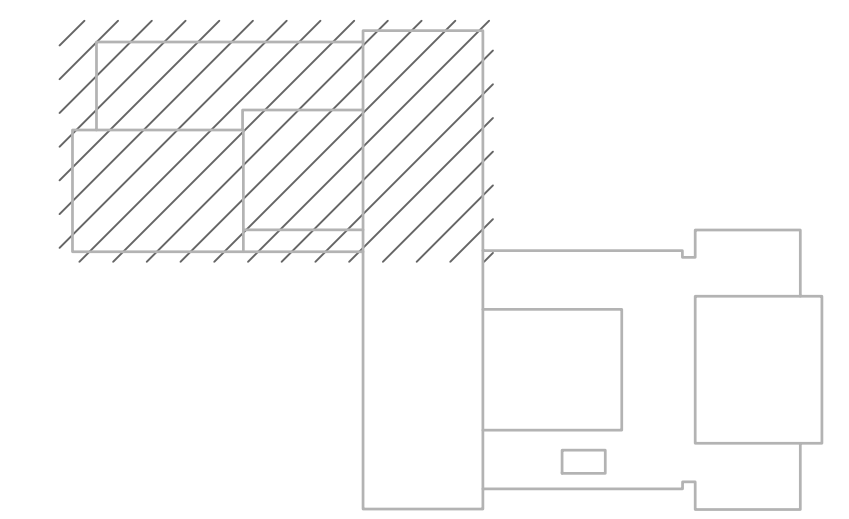
PROPOSED HW PUMP 2 DIFFERENTIAL PRESSURE SENSOR LOCATION. SEE DWG C036 FOR DETAIL.

PROPOSED HW PUMP 5 DIFFERENTIAL PRESSURE SENSOR LOCATIONS AND 2 ISOLATION VALVES.

CONFIRM LOCATION WITH OWNER FOR TEMP SENSOR LOCATIONS.

FTR LISTED IN SCHEDULE BUT NOT SHOWN ON DRAWING. CONFIRM LOCATION AND VALVES REQUIRED.

TYPICAL OCCUPANCY SENSOR TO BE INSTALLED IN CENTER OF ROOM. SEE DETAIL PAGE C022

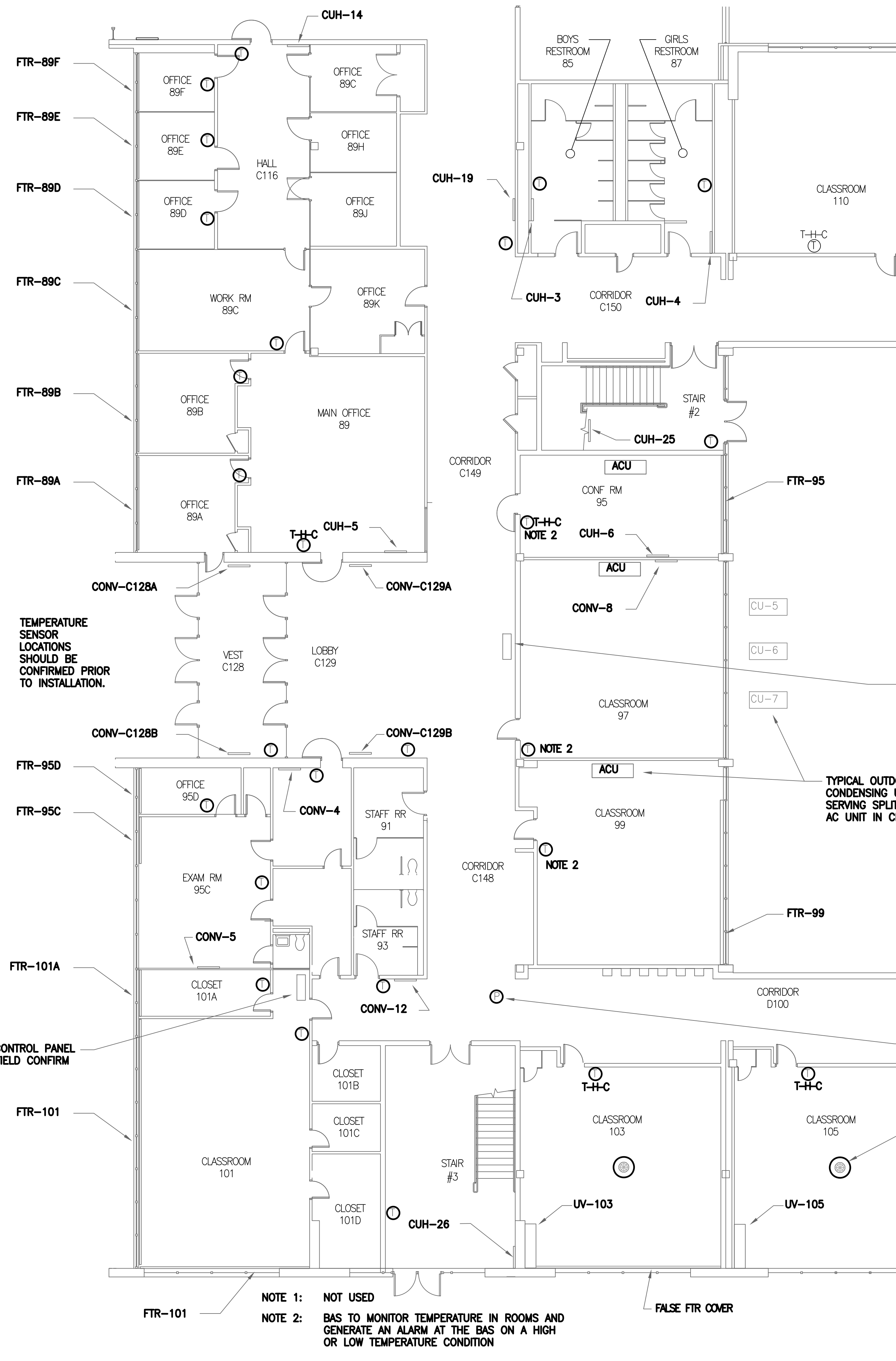


GENERAL NOTES :

- CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
- CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
- COORDINATE WORK SCHEDULE WITH THE OWNER 120 HOURS IN ADVANCE.
- CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.
- CONTRACTOR TO COORDINATE LOCATION OF THERMOSTAT WITH OWNER.
- CONTRACTOR TO INSTALL OCCUPANCY SENSOR IN THE CEILING TILE, IN THE MIDDLE OF THE ROOM.
- CONTRACTOR SHALL REMOVE ALL CONTROLS, FURNISH AND INSTALL THERMOSTATS WITH TEMPERATURE CONTROLS, HUMIDITY AND CO2 MONITORING.
- FURNISH AND INSTALL DDC THERMOSTAT TO CABINET UNIT HEATER. (TYP. FOR ALL).
- REPLACE PNEUMATIC CONTROLLED ACTUATORS WITH BELIMO DDC CONTROLLED ACTUATORS. ACTUATORS SHALL FAIL CLOSED ON POWER LOSS.
- PROVIDE AND WIRE FREEZE STATS THAT VIRTUALLY TRIPS THE UNIT OFF 3-5 DEGREES ABOVE THE PHYSICAL FREEZE-STAT SETTING. THE UNIT WILL THEN SHUT DOWN AND SHUT THE FAN OFF FOR 15-30 MINUTES AND THE BMS CAN HAVE THIS HAPPEN 2 TIMES BEFORE A MANUAL RESET IS REQUIRED. MECHANICAL CONTRACTOR TO INSTALL FREEZE-STATS.
- MECHANICAL CONTRACTOR SHALL REMOVE AND REPLACE DISCHARGE AIR, RETURN AIR AND MIXED AIR TEMPERATURE SENSORS WITH FULL LENGTH AVERAGING SENSORS FOR BETTER SENSING. CONTROLS CONTRACTOR SHALL WIRE THE SENSORS. COORDINATE WITH MECHANICAL CONTRACTOR.

PHASE 2 WORK

REFER TO DRAWING M-302-C FOR ALL ITEMS THAT ARE REQUIRED FOR PHASE 2 WORK.



TEMPERATURE SENSOR LOCATIONS SHOULD BE CONFIRMED PRIOR TO INSTALLATION.

NEW BAS CONTROL PANEL RAD-101 FIELD CONFIRM LOCATION

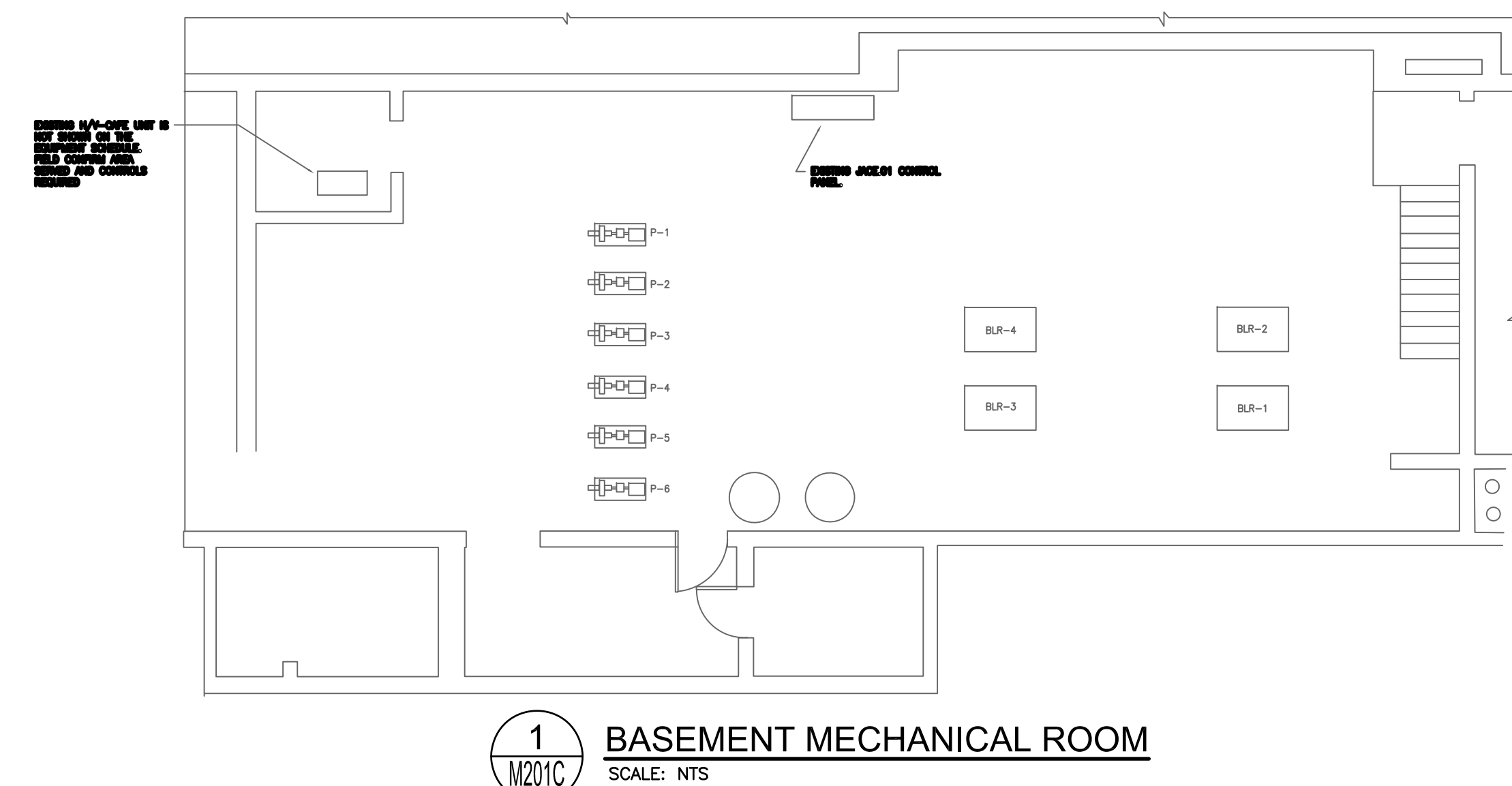
NEW BAS CONTROL PANEL RAD-C129 FIELD CONFIRM LOCATION

TYPICAL OUTDOOR CONDENSING UNIT SERVING SPLIT SYSTEM AC UNIT IN CLASSROOM

PROPOSED HW PUMP 6 DIFFERENTIAL PRESSURE SENSOR LOCATION. SEE DWG C036 FOR DETAIL

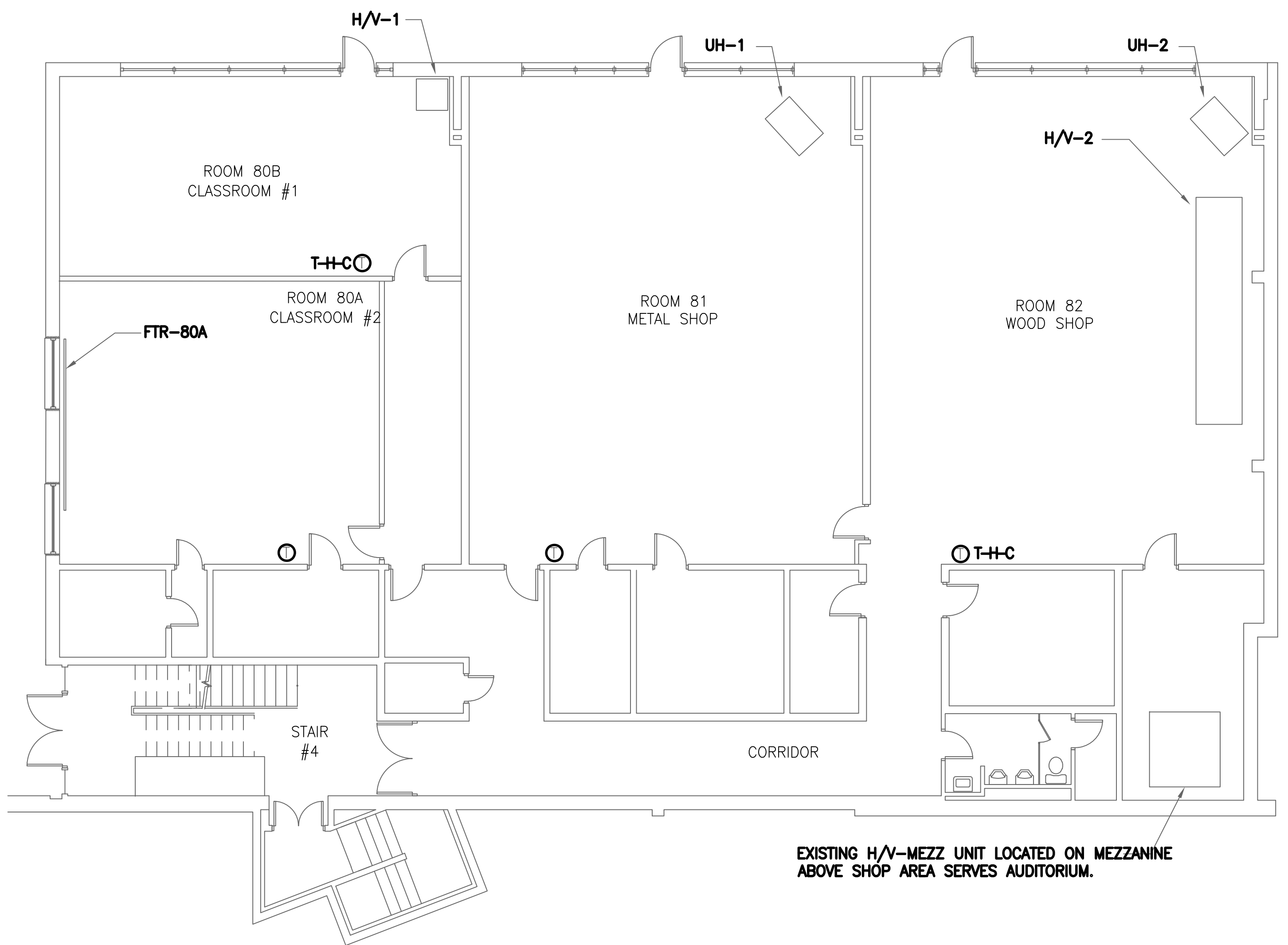
TYPICAL OCCUPANCY SENSOR TO BE INSTALLED IN CENTER OF ROOM.

- NOTE 1: NOT USED
- NOTE 2: BAS TO MONITOR TEMPERATURE IN ROOMS AND GENERATE AN ALARM AT THE BAS ON A HIGH OR LOW TEMPERATURE CONDITION



1 BASEMENT MECHANICAL ROOM
SCALE: NTS

TEMPERATURE SENSOR LOCATIONS SHOULD BE CONFIRMED PRIOR TO INSTALLATION.



EXISTING H/V-MEZZ UNIT LOCATED ON MEZZANINE ABOVE SHOP AREA SERVES AUDITORIUM.



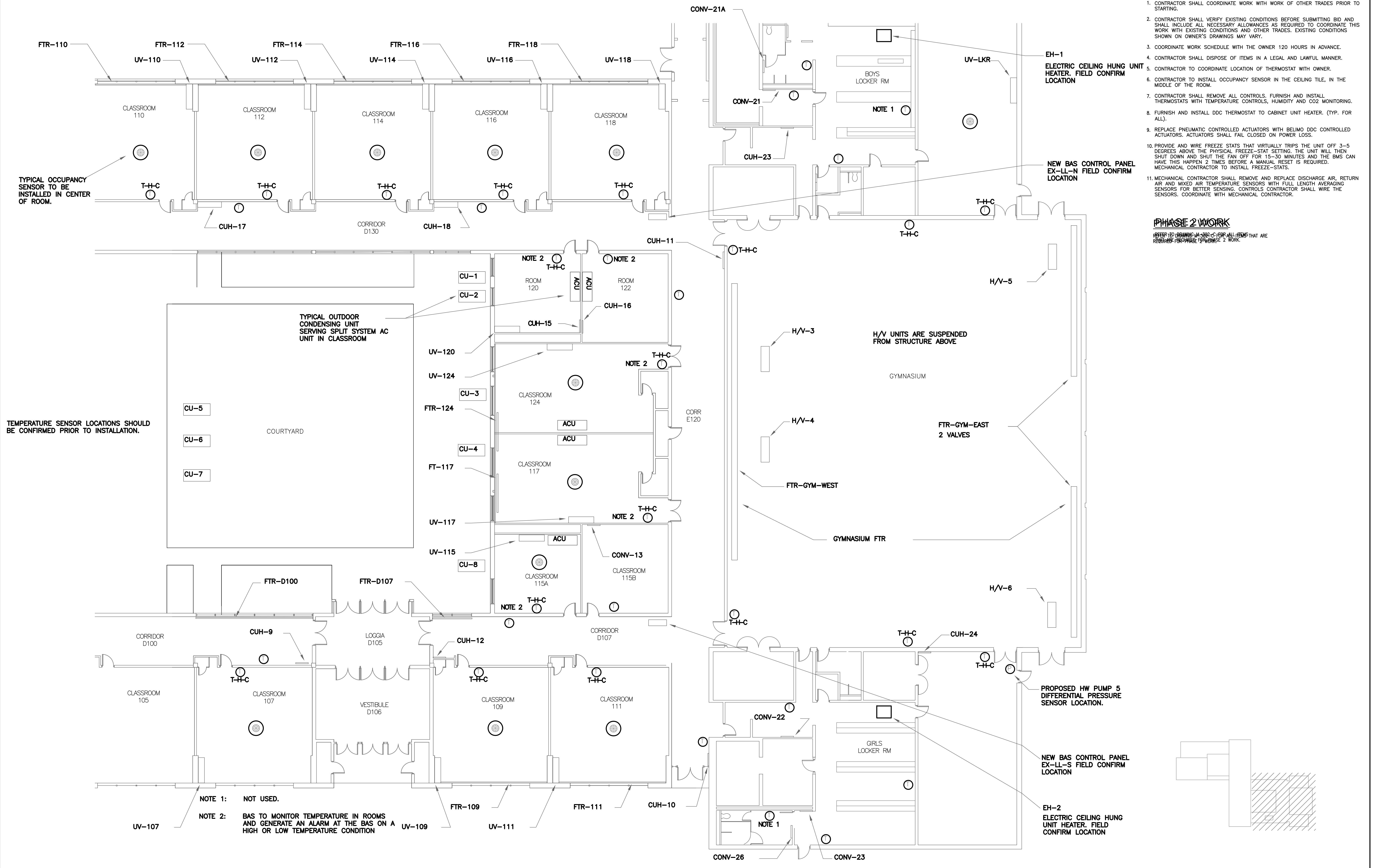
Revision:	Description:	Date:	Revised By:
1	CLIENTS-COMMENTS	04/02/2025	MZ

GENERAL NOTES :

1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 120 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.
5. CONTRACTOR TO COORDINATE LOCATION OF THERMOSTAT WITH OWNER.
6. CONTRACTOR TO INSTALL OCCUPANCY SENSOR IN THE CEILING TILE, IN THE MIDDLE OF THE ROOM.
7. CONTRACTOR SHALL REMOVE ALL CONTROLS, FURNISH AND INSTALL THERMOSTATS WITH TEMPERATURE CONTROLS, HUMIDITY AND CO2 MONITORING.
8. FURNISH AND INSTALL DDC THERMOSTAT TO CABINET UNIT HEATER. (TYP. FOR ALL).
9. REPLACE PNEUMATIC CONTROLLED ACTUATORS WITH BELIMO DDC CONTROLLED ACTUATORS. ACTUATORS SHALL FAIL CLOSED ON POWER LOSS.
10. PROVIDE AND WIRE FREEZE STATS THAT VIRTUALLY TRIPS THE UNIT OFF 3-5 DEGREES ABOVE THE PHYSICAL FREEZE-STAT SETTING. THE UNIT WILL THEN SHUT DOWN AND SHUT THE FAN OFF FOR 15-30 MINUTES AND THE BMS CAN HAVE THIS HAPPEN 2 TIMES BEFORE A MANUAL RESET IS REQUIRED. MECHANICAL CONTRACTOR TO INSTALL FREEZE-STATS.
11. MECHANICAL CONTRACTOR SHALL REMOVE AND REPLACE DISCHARGE AIR, RETURN AIR AND MIXED AIR TEMPERATURE SENSORS WITH FULL LENGTH AVERAGING SENSORS FOR BETTER SENSING. CONTROLS CONTRACTOR SHALL WIRE THE SENSORS. COORDINATE WITH MECHANICAL CONTRACTOR.

PHASE 2 WORK

REFER TO DRAWING M-202-C FOR ALL ITEMS THAT ARE RETURNED FOR PHASE 2 WORK.



TYPICAL OCCUPANCY SENSOR TO BE INSTALLED IN CENTER OF ROOM.

TYPICAL OUTDOOR CONDENSING UNIT SERVING SPLIT SYSTEM AC UNIT IN CLASSROOM

TEMPERATURE SENSOR LOCATIONS SHOULD BE CONFIRMED PRIOR TO INSTALLATION.

- NOTE 1: NOT USED.
- NOTE 2: BAS TO MONITOR TEMPERATURE IN ROOMS AND GENERATE AN ALARM AT THE BAS ON A HIGH OR LOW TEMPERATURE CONDITION

Project Title:
 HVAC Controls Upgrade
Turn of River Middle School-Phase 2
 117 Vine Road
 Stamford, Connecticut 06907

S+PA SILVER PETRUCELLI + ASSOCIATES
 3190 WHITNEY AVENUE HAMDEN CT 06518
 311 STATE STREET NEW LONDON CT 06320
 203 230 9007 silverpetrucci.com

Revision:	Description:	Date:	Revised By:
1	CLIENTS-COMMENTS	04/02/2025	MZ

Drawing Title:
**1st Floor Plan-
 Part C
 Control Work**

Date: 03/12/2025
 Scale: as noted
 Drawn By: MZ
 Project Number: 21.232
 Drawing Number: **M-202-C**

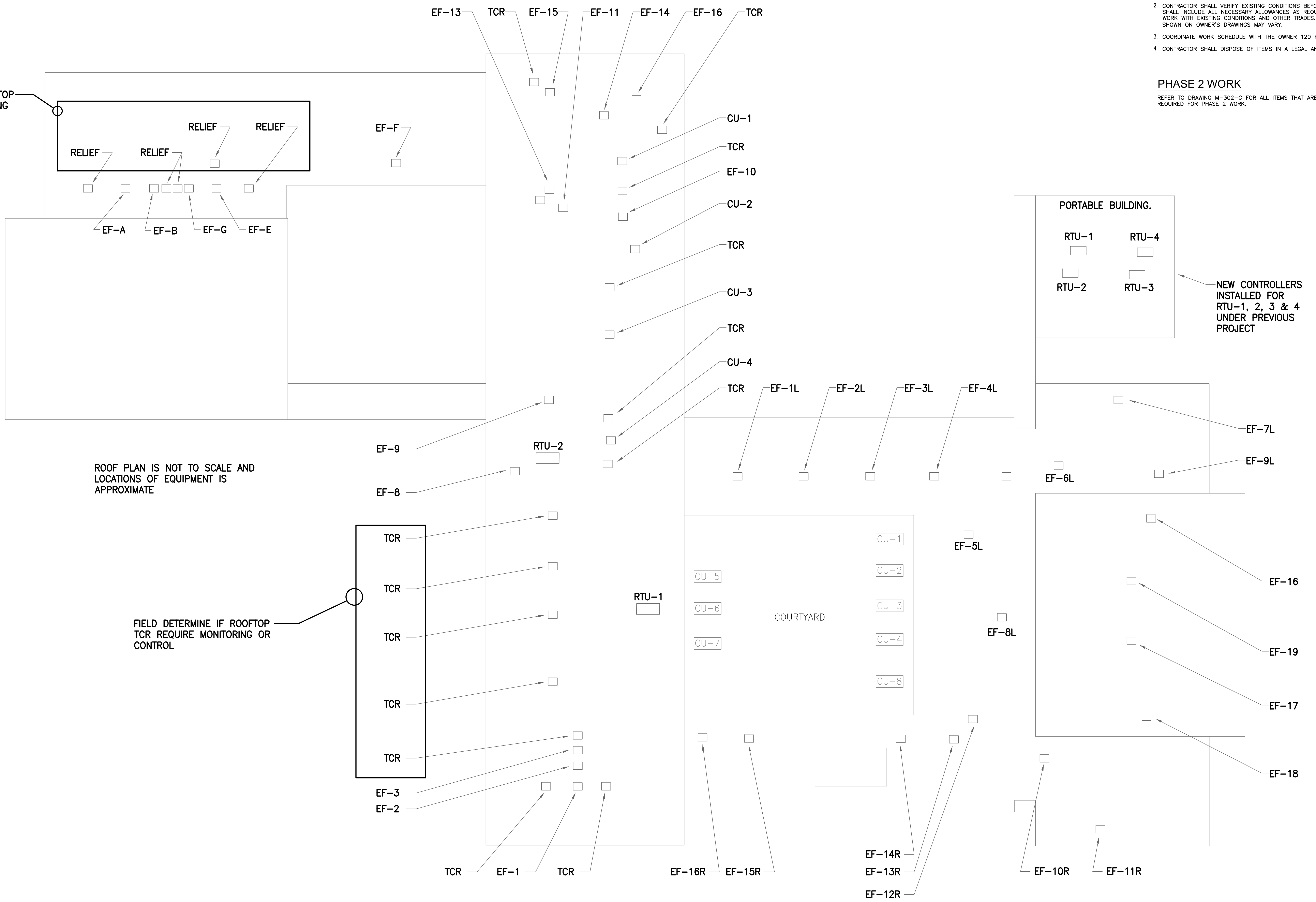
GENERAL NOTES :

1. CONTRACTOR SHALL COORDINATE WORK WITH WORK OF OTHER TRADES PRIOR TO STARTING.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING BID AND SHALL INCLUDE ALL NECESSARY ALLOWANCES AS REQUIRED TO COORDINATE THIS WORK WITH EXISTING CONDITIONS AND OTHER TRADES. EXISTING CONDITIONS SHOWN ON OWNER'S DRAWINGS MAY VARY.
3. COORDINATE WORK SCHEDULE WITH THE OWNER 120 HOURS IN ADVANCE.
4. CONTRACTOR SHALL DISPOSE OF ITEMS IN A LEGAL AND LAWFUL MANNER.

PHASE 2 WORK

REFER TO DRAWING M-302-C FOR ALL ITEMS THAT ARE REQUIRED FOR PHASE 2 WORK.

FIELD DETERMINE IF ROOFTOP RELIEF REQUIRE MONITORING OR CONTROL



ROOF PLAN IS NOT TO SCALE AND LOCATIONS OF EQUIPMENT IS APPROXIMATE

FIELD DETERMINE IF ROOFTOP TCR REQUIRE MONITORING OR CONTROL



Revision:	Description:	Date:	Revised By:
1	CLIENTS-COMMENTS	04/02/2025	MZ

PHASE 2 WORK
 ALL ITEMS THAT ARE REQUIRED FOR PHASE 2 WORK ARE INDICATED **BOLD** ON THESE SCHEDULES

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
108	UV-9	3	FTR-MISSED
106	UV-7	3	FTR-MISSED
104	UV-5	3	
102	UV-3	3	
100A	UV-2	3	
98	FTR	3	
96C	FTR	3	
96B	FTR	3	
96F	CONV-7	3	
96	FTR	3	
STAIR #4	CONV-25	3	
B100	CONV-9	3	
A126	CONV-14	3	
92	CONV-3	3	
90	CONV-2	3	
OUTSIDE 90	CONV-10	3	
C100	CUH-7, CUH-8, CONV-11	3	
81G	CUH-2	3	
81D	CUH-1	3	
A101	H/V-9, H/V-10	2	MISSED CONTROLS
88	FTR	2	MISSED CONTROLS

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
A101	CUH-28	2	MISSED CONTROLS
83	FTR	2	MISSED CONTROLS
STAIR #1	CUH-29	2	
81	H/V-15, H/V-14	2	
102	CONV-46, CONV-47	2	
98	AHU-2	2	
98B	CONV-49	2	
98D	CONV-48	2	
98E	AHU-5	2	
98G	CONV-82	2	
98F	H/V-12	2	
88F	FTR	2	
88	AHU-1	2	
105	UV-6	1	
103	UV-4	1	
STAIR #3	CUH-26	1	
101	FTR	1	
101A	FTR	1	
95C	FTR	1	
95C	CONV-5	1	
95D	FTR	1	
95E	CONV-4	1	
99	FTR	1	
97	CONV-8	1	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
114	UV-14	3	
116	UV-16	3	
118	UV-18	3	
120	UV-19	3	
120	CUH-15	3	
122	CUH-16	3	
124	UV-20	3	
124	FTR	3	
117	FTR	3	
117	UV-17	3	
115A	UV-15	3	
115B	CONV-13	3	
107	UV-8	3	
109	UV-10	3	
111	UV-12	3	
D107	CUH-12	3	
D100	CUH-9	3	
D100	FTR	3	
D130	CUH-17	3	
D130	CUH-18	3	
E100	CUH-11	3	
E100	CUH-10	3	
OFF GYM	CUH-24	3	
OFF GYM	UV-39	3	
BATHROOM	CUH-23	3	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
BATHROOM	CONV-21	1	
BATHROOM	CONV-23	1	
BATHROOM	CONV-22	1	
BATHROOM	CONV-26	1	
105	FTR	2	
107	FTR	2	
115A	SPLIT-5	2	
110	FTR	2	
112	FTR	2	
116	FTR	2	
118	FTR	2	
OFF GYM	FTR, UH-3	2	
OFF GYM	FTR, UV-39	2	
BATHROOM	CONV-34	2	
LOCKER ROOM	FTR, CONV-54	2	
LOCKER ROOM	CONV-36, CONV-55, CONV-56, H/V-14	2	
GYM CLOSET	CONV-35	2	
GYM CLOSET	CONV-64	2	
CORRIDOR	CUH-32, CUH-31, FTR	2	
209	UV-28	1	
207	UV-26	1	
205	UV-24	1	
203	UV-22	1	
201	UV-21	1	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
95	FTR	1	
95	CUH-6	1	
STAIR#1	CUH-25	1	
C150	CUH-4	1	
C150	CUH-19	1	
85	CUH-3	1	
C116	CUH-14	1	
85	CUH-3	1	
89F	FTR	1	
89E	FTR	1	
89D	FTR	1	
89C	FTR	1	
89B	FTR	1	
89A	FTR	1	
89A	CUH-5	1	
80B	H/V-1	1	
81	UNIT HEATER-1	1	
82	UNIT HEATER-2	1	
82	H/V-2	1	
88F	CONV-32	2	
C116	CUH-30	2	
89C	SPLIT-6, UV-45	2	
89	SPLIT-4, CUH-5	2	
C128	CONV-29, CONV-27	2	
C129	CONV-28, CONV-30	2	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
95C	FTR	2	
95	SPLIT-3, FTR	2	
97	SPLIT-2, FTR	2	
99	SPLIT-1	2	
101	UV-43, CONV-33	2	
STAIR #3	CUH-26	2	
80B	FTR	2	
82	FTR, AHU-3	2	
81	FTR, H/V-8	2	
LOWER LEVEL	H/V-13	2	
LOWER LEVEL	CONV-53	2	
LOWER LEVEL	CONV-52	2	
LOWER LEVEL	CONV-51	2	
LOWER LEVEL	CUH-29	2	
LOWER LEVEL	CONV-50	2	
LOWER LEVEL	CONV-61	2	
GYMNASIUM	H/V-3	1	
GYMNASIUM	H/V-4	1	
GYMNASIUM	H/V-5	1	
GYMNASIUM	H/V-6	1	
GYMNASIUM	FTR X7	1	
GYMNASIUM	ELEVATED FTR	1	
110	UV-11	1	
112	UV-13	1	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
201	FTR	1	
STORAGE	UV-40	1	
204	UV-23	1	
202A	UV-41	1	
202A	FTR	1	
202B	UV-42	1	
200A	CUH-27	1	
200	CUH-20	1	
2121	CONV-24	1	
221	UV-37	1	
219	UV-36	1	
217	UV-35	1	
215	UV-34	1	
213	UV-32	1	
211	UV-30	1	
214	UV-33	1	
214	ETR	1	
220	CUH-21	1	
212	UV-31	1	
210	UV-29	1	
208	UV-27	1	
206	UV-25	1	
CORRIDOR	CONV-15	1	
CORRIDOR	FTR	1	

MASTER CONTROLS LIST OF EXISTING EQUIPMENT			
ROOM NUMBER	EQUIPMENT ID	PHASE	ADDITIONAL POINTS
CORRIDOR	CONV-16	1	
CORRIDOR	CONV-17	1	
CORRIDOR	CONV-18	1	
CORRIDOR	CUH-22	1	
TEACHER LOUNGE	CONV-19	1	
TEACHER LOUNGE	CONV-20	1	
TEACHER LOUNGE	UV-38	1	
208	UV-27	1	
206	UV-25	1	
STAIR #2	CONV-40	2	
OFFICE	CONV-39	2	
204	UV-23, CONV-38	2	
STAIR #3	CONV-60	2	
CORRIDOR	CONV-41, CONV-44, CONV-45, CONV-37	2	
219A	CONV-57	2	
215A	CONV-58	2	
211A	CONV-59	2	
OFFICE	FTR	2	
BOYS TOILET	CONV-42	2	
GIRLS TOILET	CONV-43	2	
GIRLS RM-90	CONV-65	2	
BOYS RM-92	CONV-66	2	
RM-98D	CONV-67	2	
RM-98B	CONV-68	2	



EXISTING CONDENSING UNIT SCHEDULE (COURT YARD) (N.I.C)

UNIT NUMBER	LOCATION (ROOM)	MFRG / MODEL
CU-1	COURTYARD	MITSUBISHI / PU24EK-1
CU-2	COURTYARD	MITSUBISHI / PU24EK-1
CU-3	COURTYARD	MITSUBISHI / PU36EK-1
CU-4	COURTYARD	MITSUBISHI / PU36EK-1
CU-5	COURTYARD	CARRIER / 38TKB024
CU-6	COURTYARD	CARRIER / 38TKB030
CU-7	COURTYARD	HEIL / 24AB330

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING CONDENSING UNIT SCHEDULE (MAIN ROOF) (N.I.C)

UNIT NUMBER	LOCATION (ROOM)	MFRG / MODEL
CU-1	MAIN ROOF	TRANE / 2TTB303
CU-2	MAIN ROOF	TRANE / 2TTB303
CU-3	MAIN ROOF	TRANE / 2TTB303
CU-4	MAIN ROOF	TRANE / 2TTB303

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING ROOF TOP UNIT SCHEDULE (MAIN ROOF) (N.I.C)

UNIT NUMBER	LOCATION	MFRG / MODEL #	SERVES
RTU-1	ROOF	TRANE / TCD181E3	CLASSROOMS
RTU-2	ROOF	CARRIER / 50SS-024	CLASSROOMS

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING SPLIT SYSTEM

UNIT NUMBER	LOCATION (ROOM)	MFRG / MODEL #
SPLIT-1	94	----
SPLIT-2	97	----
SPLIT-3	95	----
SPLIT-4	89	----
SPLIT-5	115A	----
SPLIT-6	OFFICE 89 C	----
SPLIT-7	124	----
SPLIT-8	117	----

EXISTING AIR HANDLING SYSTEM

UNIT NUMBER	LOCATION (ROOM)
AHU-1	ADJACENT TO STAGE
AHU-2	CHORUS ROOM 98
AHU-3	WRESTLING ROOM TO BE CONFIRMED
AHU-4	MEZZANINE LEVEL
AHU-5	MECHANICAL ROOM

EXISTING BOILER SCHEDULE

UNIT NUMBER	LOCATION	MFRG / MODEL #	BURNER	FUEL
B-1	BOILER ROOM	SMITH 28 HE-18/C4-G0-25	POWERLINE	GAS/OIL
B-2	BOILER ROOM	SMITH 28 HE-18/C4-G0-25	POWERLINE	GAS/OIL
B-3	BOILER ROOM	SMITH 28 HE-18/C4-G0-25	POWERLINE	GAS/OIL
HWH	BOILER ROOM	AO SMITH/ BTR-199-118	POWERLINE	GAS

EXISTING UNITS ARE CURRENTLY MONITORED ON THE EXISTING BMS. CONTRACTOR TO VERIFY.

EXISTING CABINET UNIT HEATER SCHEDULE

UNIT NUMBER	LOCATION (ROOM)	MFRG
CUH-2	81G	----
CUH-3	85	----
CUH-4	87	----
CUH-5	89	----
CUH-6	95 CONF	----
CUH-7	C100	MESTEK
CUH-8	C100	----
CUH-9	D100	----
CUH-10	E100	----
CUH-11	E100	----
CUH-12	D107	----
CUH-13	C114	----
CUH-14	C116	----
CUH-15	120	----
CUH-16	122	----
CUH-17	D130	----
CUH-18	D130	----
CUH-19	C149	----
CUH-20	200B	----
CUH-21	220	----
CUH-22	223	----
CUH-23	BOYS LOCKER RM	----
NOT USED	-----	----
CUH-25	STAIR 2.1	----
CUH-26	STAIR 3.1	----
CUH-27	200A	----
CUH-28	FOYER A101	----
CUH-29	LOWER LEVEL	----
CUH-30	116C	----
CUH-31	HALLWAY	----
CUH-32	HALLWAY	----

NOTE: EXISTING CABINET UNIT HEATERS ARE CURRENTLY MONITORED. CONTRACTOR TO VERIFY.

EXISTING ROOF TOP UNIT SCHEDULE (PORTABLE CLASSROOM ROOF) (N.I.C)

UNIT NUMBER	LOCATION	MFRG / MODEL #
RTU-1	ROOF	TRANE / WCC048F3
RTU-2	ROOF	TRANE / WSC048H3
RTU-3	ROOF	TRANE / WCC048F3
RTU-4	ROOF	TRANE / WHC048H3

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING UNIT HEATER SCHEDULE (N.I.C)

UNIT NUMBER	LOCATION	MFRG / MODEL #
UNIT HTR-1	ROOM 81	----
UNIT HTR-2	ROOM 82	----
UNIT HTR-3	ROOM 119D	----
UNIT HTR-4	ROOM 82B	----

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING UNIT VENTILATOR SCHEDULE

UNIT NUMBER	LOCATION (ROOM)	MFRG	MODEL	VALVE ARRANGEMENT (2-WAY / 3-WAY)	FACE & BY-PASS
UV-1	83	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-2	100A	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-3	102	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-4	103	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-5	104	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-6	105	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-7	106	JOHNSON CONTROLS	JCUVF221	2-WAY	YES
UV-8	107	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-9	108	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-10	109	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-11	110	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-12	111	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-13	112	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-14	114	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-15	115A	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-16	116	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-17	117	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-18	118	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-19	120	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-20	124	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-21	201	JOHNSON CONTROLS	JCUVF521	2-WAY	YES
UV-22	203	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-23	204	JOHNSON CONTROLS	JCUVF521	2-WAY	YES
UV-24	205	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-25	206	TRANE	VUVE1000	3-WAY	COOLING
UV-26	207	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-27	208	TRANE	VUVE1000	3-WAY	COOLING
UV-28	209	JOHNSON CONTROLS	JCUVF321	2-WAY	YES
UV-29	210	TRANE	VUVE1000	3-WAY	COOLING
UV-30	211	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-31	212	TRANE	VUVE1000	3-WAY	COOLING
UV-32	213	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-33	214	JOHNSON CONTROLS	JCUVF521	2-WAY	YES
UV-34	215	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-35	217	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-36	219	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-37	221	JOHNSON CONTROLS	JCUVF421	2-WAY	YES
UV-38	TEACHERS LOUNGE	JOHNSON CONTROLS	JCUVF221	2-WAY	YES
UV-39	BOYS LOCKER ROOM	HERMAN NELSON	-----	2-WAY	YES
UV-40	STORAGE	JOHNSON CONTROLS	JCUVF221	2-WAY	YES
UV-41	202A	JOHNSON CONTROLS	JCUVF221	2-WAY	YES
UV-42	202B	JOHNSON CONTROLS	JCUVF221	2-WAY	YES
UV-43	101	----	----	----	----
UV-44	116C	----	----	----	----
UV-45	204	----	----	----	----

NOTE: EXISTING UNITS ARE CURRENTLY MONITORED ON THE EXISTING BMS. CONTRACTOR TO VERIFY.

CONV-37	CORRIDOR(M-203)	----
CONV-38	204	----
CONV-39	OFFICE	----
CONV-40	STAIRS #2	----
CONV-41	CORRIDOR(M-203)	----
CONV-42	BOYS TOILET	----
CONV-43	GIRLS TOILET	----
CONV-44	CORRIDOR(M-203)	----
CONV-45	CORRIDOR(M-203)	----
CONV-46	ROOM 104	----
CONV-47	ROOM 102	----
CONV-48	HALL 96D	----
CONV-49	ROOM 98B	----
CONV-50	VESTIBULE	----
CONV-51	BATHROOM	----
CONV-52	2ND ROOM OFF ROOM 82	----
CONV-53	CLOSET OFF OF ROOM 82	----
CONV-54	WORK RM OPPOSITE LOCKER RM PART 'C'	----
CONV-55	BATHROOM	----
CONV-56	BATHROOM	----
CONV-57	STORAGE 219A	----
CONV-58	STORAGE 215	----
CONV-59	STORAGE 211A	----
CONV-60	STAIR #3	----
CONV-61	ROOM 80A-STORAGE	----
CONV-62	ROOM NEAR PRACTICE ROOM	----
CONV-63	KITCHEN REST ROOM	----
CONV-64	WOMENS PE OFFICE	----

EXISTING HEATING / VENTILATING UNIT SCHEDULE

UNIT NUMBER	LOCATION	MFRG	MODEL #
H/V-1	CLASSROOM #1	TRANE	TORRIVENT
H/V-2	WOOD SHOP	TRANE	TORRIVENT
H/V-3	GYM	TRANE	TORRIVENT
H/V-4	GYM	TRANE	TORRIVENT
H/V-5	GYM	TRANE	TORRIVENT
H/V-6	GYM	TRANE	TORRIVENT
H/V-7	MECH. RM CLOSET STORAGE CLOSET	----	SERVING THE CAFETERIA, LOCATED IN BOILER RM
H/V-8	LOWER LEVEL IN MEZZANINE	----	SERVING THE AUDITORIUM, LOCATED IN LOWER LEVEL MEZZANINE
H/V-9	FOYER A101		
H/V-10	FOYER A101		
H/V-11	LOWER LEVEL		LOWER LEVEL, ROOM 82B
H/V-12	BAND STORAGE 96F		
H/V-13	LOWER LVL	HALLWAY RM 81	
H/V-14	CAFETERIA		
H/V-15	CAFETERIA		

EXISTING UNITS ARE CURRENTLY MONITORED ON THE EXISTING BMS. CONTRACTOR TO VERIFY.

EXISTING CONVECTOR HEATER SCHEDULE (N.I.C)

UNIT NUMBER	LOCATION (ROOM)	MFRG
CONV-1	81D	----
CONV-2	81G	----
CONV-3	85	----
CONV-4	87	----
CONV-5	89	----
CONV-6	95 CONF	----
CONV-7	C100	MESTEK
CONV-8	C100	----
CONV-9	D100	----
CONV-10	E100	----
CONV-11	E100	----
CONV-12	D107	----
CONV-13	C114	----
CONV-14	C116	----
CONV-15	120	----
CONV-16	122	----
CONV-17	D130	----
CONV-18	D130	----
CONV-19	C149	----
CONV-20	200B	----
CONV-21	220	----
CONV-22	223	----
CONV-23	BOYS LOCKER RM	----
CONV-24	GIRLS LOCKER RM	----
CONV-25	STAIR 2.1	----
NOT USED	-----	----
CONV-27	VESTIBULE C128	----
CONV-28	LOBBY 129	----
CONV-29	VESTIBULE C128	----
CONV-30	LOBBY 129	----
CONV-31	99	----
CONV-32	89F	----
CONV-33	101D	----
CONV-34	BATHROOM	----
CONV-35	STORAGE	----
CONV-36	HALLWAY	----

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR MONITORING. PROVIDE ALL NECESSARY WIRING, EQUIPMENT, CONDUIT, ETC AS REQUIRED.

EXISTING PUMP SCHEDULE

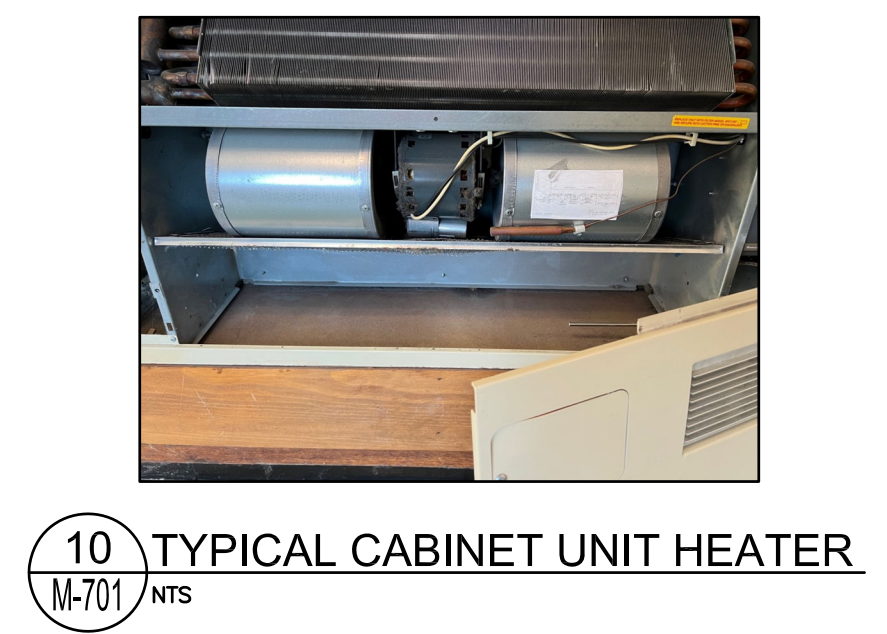
UNIT NUMBER	LOCATION	MFRG	MODEL #	FLOW RATE (GPM)
P-1	BOILER ROOM	B&G	1510	170
P-2	BOILER ROOM	B&G	1510	105
P-3	BOILER ROOM	B&G	E-1510	320
P-4	BOILER ROOM	B&G	E-1510	260
P-5	BOILER ROOM	B&G	1510	125
P-6	BOILER ROOM	B&G	E-1510	505
P-7	BOILER ROOM	GOULDS	ESV4X4X5.7-2P-PM	---
P-8	BOILER ROOM	GOULDS	ESV4X4X5.7-2P-PM	---

EXISTING UNITS ARE CURRENTLY MONITORED ON THE EXISTING BMS. CONTRACTOR TO VERIFY.

EXISTING EXHAUST FAN SCHEDULE (N.I.C)

UNIT NUMBER	LOCATION	MFRG / MODEL #	QUANTITY
E-19	GYM ROOF	GREENHECK/GB-330	1
E-18	GYM ROOF	GREENHECK/GB-330	1
E-17	GYM ROOF	GREENHECK/GB-330	1
E-16	GYM ROOF	GREENHECK/GB-330	1
EF-6L	LOWER ROOF	GREENHECK/GB-330	1
EF-10L	LOWER ROOF	GREENHECK/GB-1	1
EF-12R	LOWER ROOF	GREENHECK/GB-160	1
EF-5L	LOWER ROOF	GREENHECK/GB-160	1
EF-8L	LOWER ROOF	GREENHECK/GB-180	1
EF-1L	LOWER ROOF	GREENHECK/GRS-1200	1
EF-2L	LOWER ROOF	GREENHECK/GRS-1200	1
EF-3L	LOWER ROOF	GREENHECK/GRS-1200	1
EF-4L	LOWER ROOF	GREENHECK/GRS-1200	1
EF-13R	LOWER ROOF	GREENHECK/GRS-1200	1
EF-14R	LOWER ROOF	GREENHECK/GRS-1200	1
EF-15R	LOWER ROOF	GREENHECK/GRS-1200	1
EF-16R	LOWER ROOF	GREENHECK/GRS-1200	1
EF-11R	LOWER ROOF	COOK/80-ACE	1
EF-7L	LOWER ROOF	COOK/80-ACE	1
EF-9L	LOWER ROOF	GREENHECK/GRS-1800	1
EF-16	MAIN ROOF	GREENHECK/GB-200	1
EF-15	MAIN ROOF	GREENHECK/GB-300	1
EF-14	MAIN ROOF	GREENHECK/GB-200	1
EF-13	MAIN ROOF	GREENHECK/GB-300	1
EF-12	MAIN ROOF	GREENHECK/GB-300	1
EF-11	MAIN ROOF	GREENHECK/GB-480	1
EF-10	MAIN ROOF	GREENHECK/GB-101	1
EF-9	MAIN ROOF	GREENHECK/GB-200	1
EF-8	MAIN ROOF	GREENHECK/GB-200	1
EF-7	MAIN ROOF	GREENHECK/GB-161	1
EF-6	MAIN ROOF	GREENHECK/GB-200	1
EF-5	MAIN ROOF	GREENHECK/GB-161	1
EF-4	MAIN ROOF	GREENHECK/GB-161	1
EF-3	MAIN ROOF	GREENHECK/GB-240	1
EF-2	MAIN ROOF	GREENHECK/GB-161	1
EF-1	MAIN ROOF	GREENHECK/GB-161	1
TCR	MAIN ROOF	GRV	14
EF-A	ADJ ROOF	GREENHECK/GB-101	1
EF-B	ADJ ROOF	GREENHECK/GB-200	1
EF-G	ADJ ROOF	GREENHECK/GB-161	1
EF-E	ADJ ROOF	GREENHECK/GB-161	1
EF-F	ADJ ROOF	GREENHECK/GB-101	1
RELIEF	ADJ ROOF	---	1
RELIEF	ADJ ROOF	---	1
RELIEF	ADJ ROOF	---	1
RELIEF	ADJ ROOF	---	1
RELIEF	ADJ ROOF	---	1
RELIEF	ADJ ROOF	---	1

NOTE: EXISTING UNITS ARE NOT MONITORED BY THE BMS. ALL UNITS SHALL BE INTEGRATED INTO BMS FOR



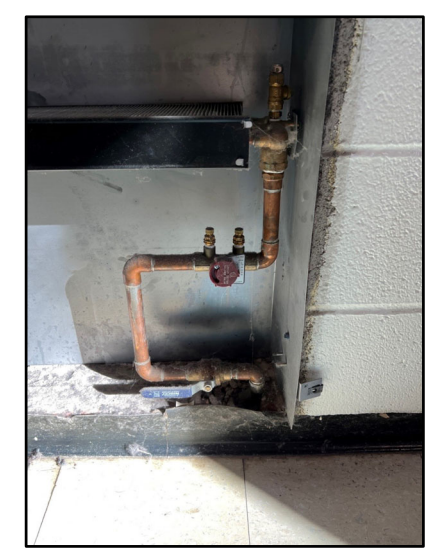
10 TYPICAL CABINET UNIT HEATER
M-701 NTS



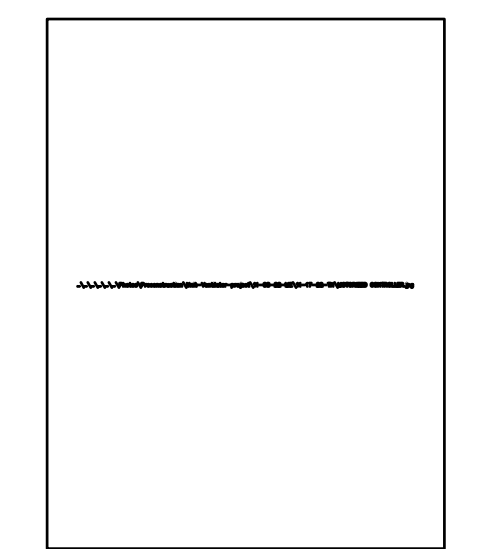
9 TYPICAL CABINET UNIT HEATER CONTROLS
M-701 NTS



8 TYPICAL CONVECTOR
M-701 NTS



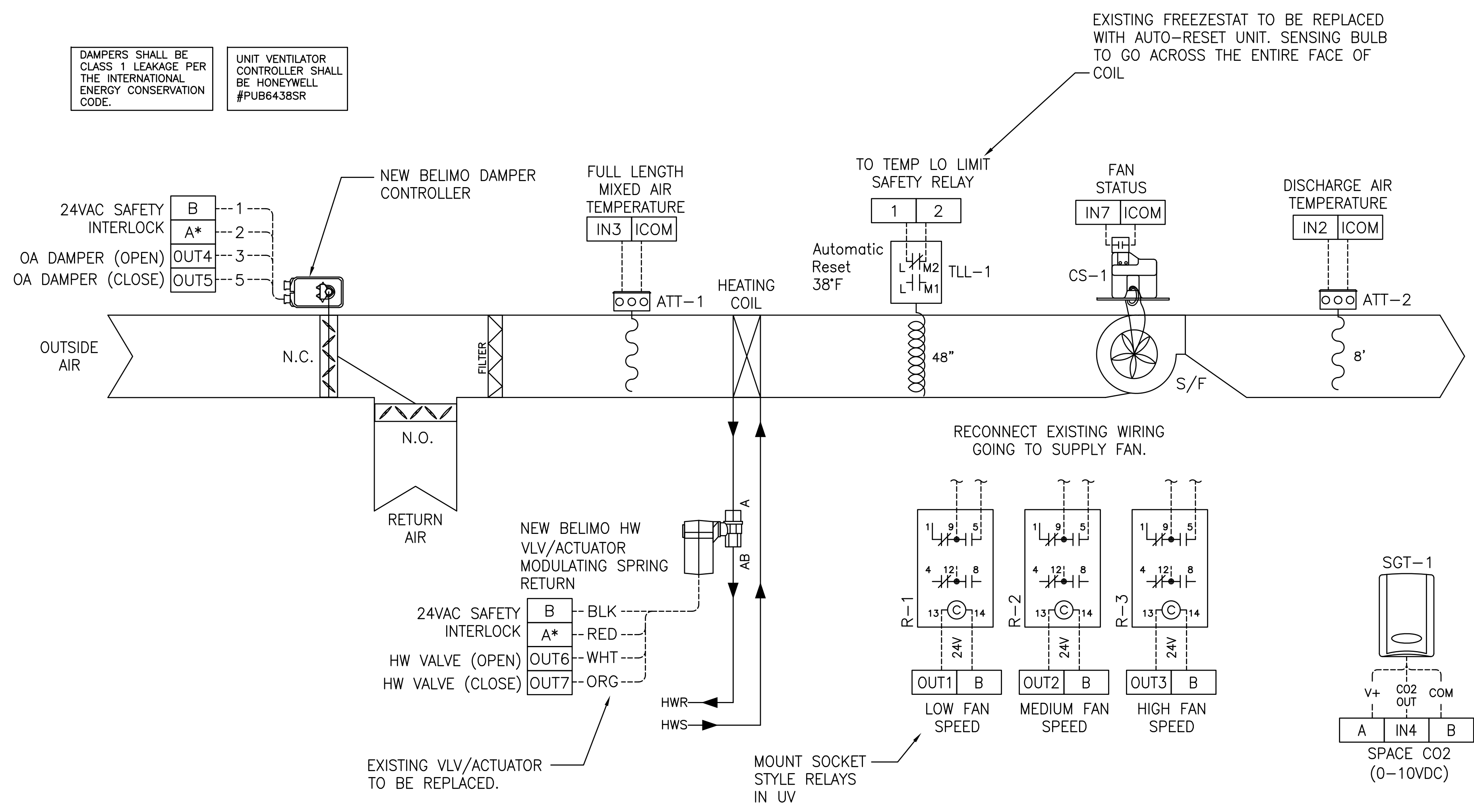
7 TYPICAL CONVECTOR CIRCUIT SETTER
M-701 NTS



6 MOTORIZED VALVE OPERATOR
M-701 NTS



5 RETURN AIR TEMPERATURE SENSOR
M-701 NTS



TYPICAL CLASSROOM UNIT VENTILATOR FLOW DIAGRAM



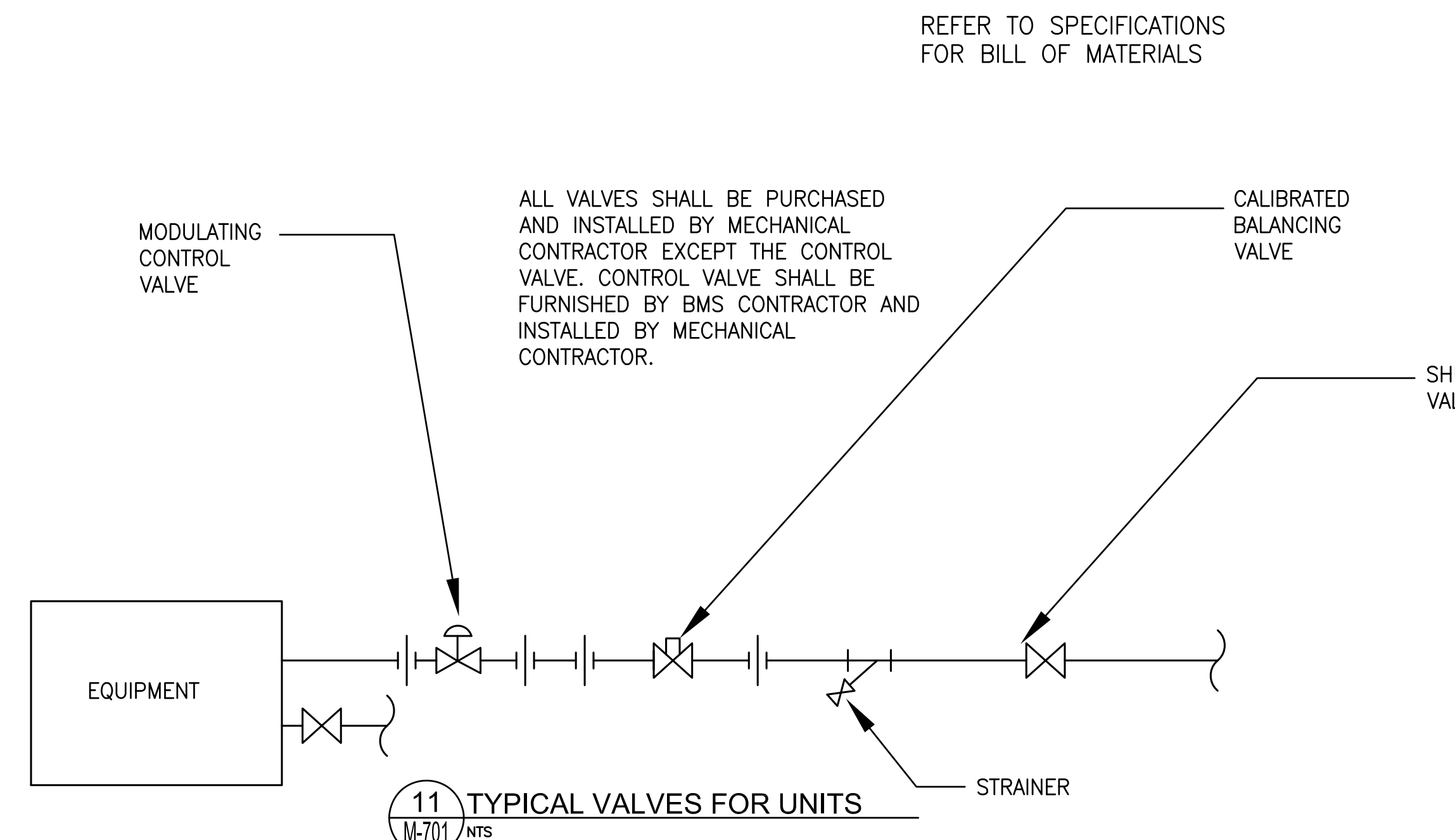
4 TYPICAL VALVE OPERATOR
M-701 NTS



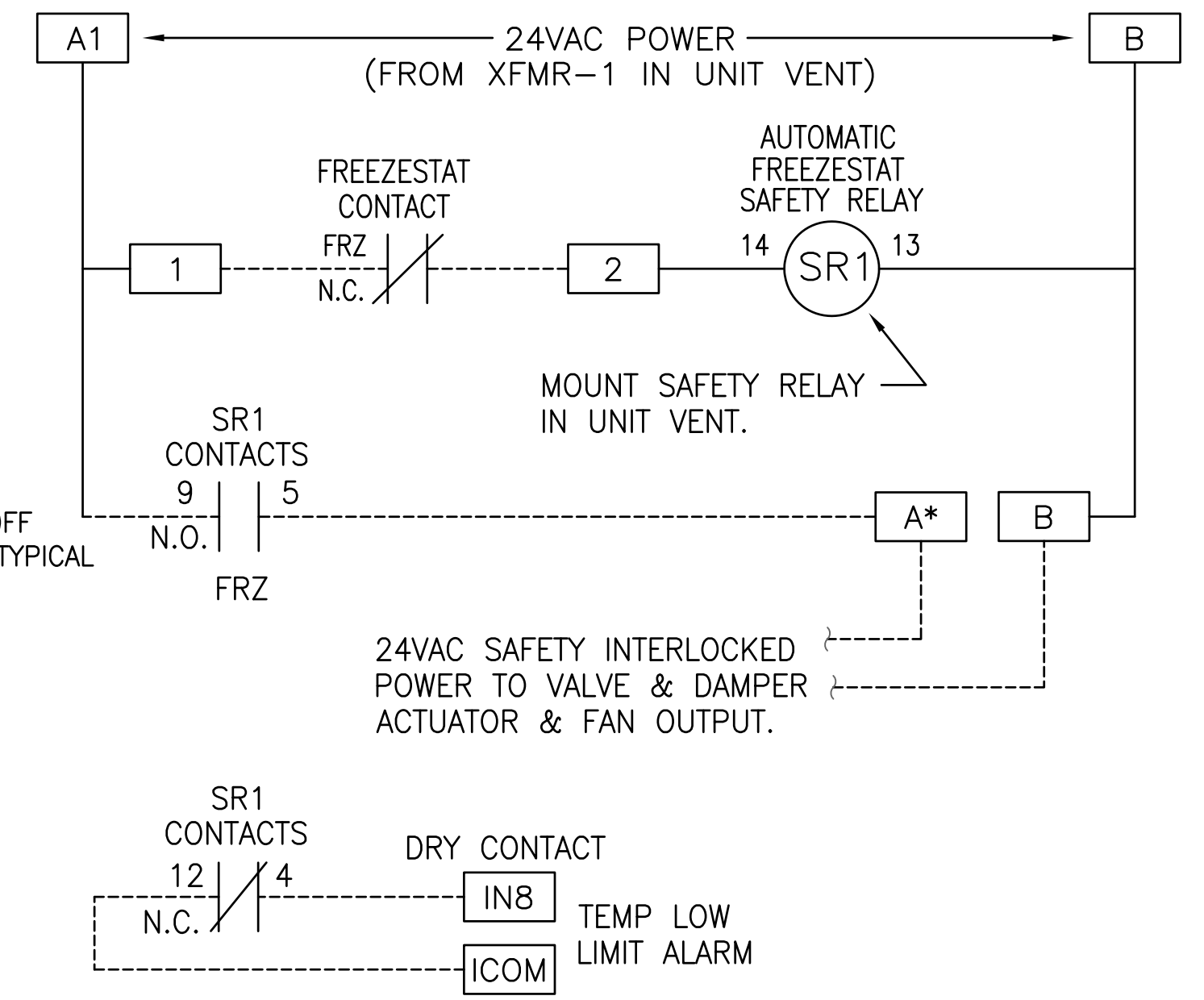
3 TYPICAL UNIT MOUNTED CO2 SENSOR
M-701 NTS



2 TYPICAL UNIT VENTILATOR CONTROLLER
M-701 NTS



TYPICAL NEW CLASSROOM UNIT VENTILATOR FLOW DIAGRAM
SCALE: NTS



UNIT VENT SAFETY INTERLOCK LADDER DIAGRAM

A 'A' & 'B' REPRESENT 24VAC POWER FROM CONTROL TRANSFORMER.



1 EXISTING THERMOSTATS
M-701 NTS

- GENERAL NOTES :
1. MOUNT UNIT VENTILATOR CONTROLS ON SWING OUT DOOR.
 2. SEPARATE UPSTREAM SWITCH FOR CONTROLLER POWER.
 3. NEW NETWORK LOOP AND WIRING TO BE INSTALLED.
 4. UPS ON CONTROLLERS.
 5. EXISTING CONTROLLER TO BE REPLACED WITH NEW CONTROLLER.