SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	(SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION
							5111002				
AAD		<u> </u>	CONNECTION - TOP	(DBL)	DOUBLE WALL LINED DUCT		24X12		1-1/2 TIMES BRANCH SIZE	E _P	ELECTRIC/PNEUMATIC SWITCH OR RELAY
ACC	AIR-COOLED CONDENSING UNIT		CONNECTION - BOTTOM	20/10	DUCT SECTION - SUPPLY		-12X10	SUPPLY / RETURN /		PE	PNEUMATIC/ELECTRIC SWITCH OR RELAY
AD	ACCESS DOOR	· · · · · · · · · · · · · · · · · · ·	DIRECTION OF FLOW					EXHAUST AIR		CT	CURRENT TRANSDUCER
AFF	ABOVE FINISHED FLOOR		DIRECTION OF FLOW	20/10	DUCT SECTION - RETURN/EXHAUST		VD	TAKEOFFS	VD		
AHU	AIR HANDLING UNIT	D	REDUCER	A"	DUCT SECTION - ROUND DUCT IN INCHES					\sim	OPEN/CLOSED
BBD	BOILER BLOW DOWN]	CAP OR PLUG		DUCT SECTION - FLAT OVAL DUCT IN INCHES					S S	START/STOP
BD	BACKDRAFT DAMPER				ACOUSTIC THERMAL LINING		24X12	SUPPLY / RETURN /	□ □-1/2 TIMES BRANCH SIZE		ENABLE/DISABLE
		+)	ELBOW DOWN		ACOUSTIC THERMAL LINING			EXHAUST AIR	× × ×		
CA	COMPRESSED AIR	+0	ELBOW UP		FLEXIBLE DUCTWORK		VD	TAKEOFFS			TEMPERATURE SENSOR (DUCT OR PIPE MOUNTED)
CD	COOLING COIL CONDENSATE DRAIN		TEE OUTLET - UP							H	HUMIDITY SENSOR (DUCT MOUNTED)
CFM	CUBIC FEET PER MINUTE				FLEXIBLE CONNECTION		\frown		\sim	F	
CHWR	CHILLED WATER RETURN		TEE OUTLET - DOWN	'FC			14"		- CONICAL TEE	×	FLOW TRANSMITTER
CHWS	CHILLED WATER SUPPLY		UNION					SUPPLY AIR		P	PRESSURE TRANSMITTER
CR	CONDENSER WATER RETURN		GATE VALVE		FIRE DAMPER		VD)	TAKEOFFS		<u>AP</u>	DIFFERENTIAL PRESSURE TRANSMITTER
CS	CONDENSER WATER SUPPLY								VD	· · · · · · · · · · · · · · · · · · ·	
CW	DOMESTIC COLD WATER	0	BALL VALVE	_	SMOKE DAMPER						ELECTRIC/PNEUMATIC TRANSDUCER
	DRAIN	⊗	BALANCING VALVE	٤		(E)	14"		LATERAL		ELECTRIC/ELECTRONIC TRANSDUCER
D		K+	STRAINER				- 10"	SUPPLY AIR			DUCT SMOKE DETECTOR
(E)	EXISTING	<u> </u>						TAKEOFFS	<u>-</u>		
EA	EXHAUST AIR		STRAINER WITH BLOW-DOWN	l (e)	COMBINATION FIRE AND SMOKE DAMPER		VD		VD		SPACE THERMOSTAT
EC	ELECTRICAL CONTRACTOR	× ×				J				T	SPACE TEMPERATURE SENSOR
EF	EXHAUST FAN		BUTTERFLY VALVE				$\widehat{\ }$		T		SPACE CARBON DIOXIDE SENSOR
ERHC	ELECTRIC REHEAT COIL						24X12 6X12 - 12X10		24X12		
ETR	EXISTING TO REMAIN		BUTTERFLY CONTROL VALVE, PNEUMATIC 2-WAY		DAMPER CONTROL, PARALLEL BLADE			SUPPLY AIR	18X12 12X10	CH4	SPACE NATURAL GAS SENSOR
EUH	ELECTRIC UNIT HEATER	0.1450	BUTTERFLY CONTROL VALVE, ELECTRIC ACTUATOR	<u></u>	DAMPER CONTROL, OPPOSED BLADE		18X12	TAKEOFFS	6X12		SPACE CARBON MONOXIDE SENSOR
F&T	FLOAT AND THERMOSTATIC TRAP		GLOBE VALVE				20X12		20X12	G	SPACE SENSOR WITH GUARD
				_							
FCU	FAN-COIL UNIT		CHECK VALVE				24X12	SUPPLY/RETURN		H	SPACE HUMIDISTAT
FPM	FEET PER MINUTE		TRIPLE DUTY VALVE	AAD		AAD	-12X10	EXHAUST AIR	24X12	FS	WATER FLOW SENSOR
FT	FIN-TUBE	{√						TAKEOFFS W/		PA	
GC	GENERAL CONTRACTOR		GAS COCK, PLUG VALVE		BACK DRAFT DAMPER			REGISTER/GRILLE/ DIFFUSER			PNEUMATIC ACTUATOR
GR	GLYCOL RETURN	U/C	UNDERCUT DOOR 1"	BDD		BDD		DITTOSER		EA	ELECTRIC ACTUATOR
GS	GLYCOL SUPPLY	ф	LOUVERED DOOR W/ SQ. FT. OF FREE AREA				Γ_{i}			VSD VFD	VARIABLE SPEED / FREQUENCY DRIVE
НС	HVAC CONTRACTOR	Ŷм	AIR VENT - MANUAL		BLAST GATE		VD	SUPPLY/RETURN			
		Ť	AIR VENT - MANUAL	BG		BG		EXHAUST AIR			
HHWR	HEATING HOT WATER RETURN	<u></u> А	AIR VENT - AUTOMATIC	20/10		_	VD	END OF MAIN BRANCH TAKEOFFS		H C	HEATING COIL
HHWS	HEATING HOT WATER SUPPLY		FLANGE			12/10 4		BRANCHTAREOTTS	VD	G	GAS FURNACE
HP	HEAT PUMP				(FIRST FIGURE IS DUCT WIDTH/TOP,	- 12X10					
HPC	HIGH PRESSURE CONDENSATE	Ř	CONTROL/SOLENOIND VALVE, ELECTRIC 2-WAY		SECOND FIGURE IS DUCT DEPTH)		VD		VD	H	HUMIDIFIER
HPS	HIGH PRESSURE STEAM		CONTROL VALVE, ELECTRIC 3-WAY			10/20 –	(SUPPLY/RETURN EXHAUST AIR	Jere 1	A	ALARM
LF	LINEAR FOOTAGE OF FIN-TUBE RADIATION	т Т		10/20				END OF MAIN		S	STATUS
LPC	LOW PRESSURE CONDENSATE		CONTROL VALVE, PNEUMATIC 2-WAY				VD	BRANCH TAKEOFFS	IVD /		
LPG	LIQUEFIED PROPANE GAS	·	CONTROL VALVE, PNEUMATIC 3-WAY	· ~	MULTI-BLADE AIR EXTRACTOR				1	FS	FLOW SWITCH
		Τ			TURNING VANES				T	ΔΡ	DIFFERENTIAL STATIC PRESSURE SWITCH
LPS	LOW PRESSURE STEAM	\$	RELIEF / SAFETY VALVE		EXISTING WORK TO BE REMOVED (HATCHED)		γ	LONG RADIUS	WR	R	RELAY
МВН	1,000 BTU/HR							90° ELBOW			
MC	MECHANICAL CONTRACTOR	k	PRESSURE REDUCING VALVE	P	POINT OF CONNECTION	(R/W=1.5	2	\oslash	PRESSURE GAUGE
MPC	MEDIUM PRESSURE CONDENSATE	Q v	VACUUM BREAKER	R	POINT OF DISCONNECTION					FZ	FREEZE-STAT
MPC MPS				R						FZ	
MPS	MEDIUM PRESSURE STEAM	₽v	VACUUM BREAKER FLEXIBLE PIPE CONNECTOR		POINT OF DISCONNECTION AIR FLOW SENSOR				W R M	FZ DI	FREEZE-STAT DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM)
MPS MRD	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR						2	LONG RADIUS 45° ELBOW	W R		
MPS MRD MSD	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES		AIR FLOW SENSOR	¿_	2	LONG RADIUS 45° ELBOW R/W=1.5	W R		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD MUW	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT		AIR FLOW SENSOR	¿_		45° ELBOW	W R		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES		AIR FLOW SENSOR FILTER			45° ELBOW	W R		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD MUW	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND	<u>}</u>		45° ELBOW	W R		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD MUW NC	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR		AIR FLOW SENSOR FILTER	<		45° ELBOW R/W=1.5 90° ELBOW	W R		DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD MUW NC NG	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND			45° ELBOW R/W=1.5 90° ELBOW WITH TURNING			DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE
MPS MRD MSD MUW NC NG NO	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND			45° ELBOW R/W=1.5 90° ELBOW		DO DO C AO AI SF	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM)
MPS MRD MSD MUW NC NG NG NO NTS OA	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE			45° ELBOW R/W=1.5 90° ELBOW WITH TURNING			DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE
MPS MRD MSD MUW NC NG NG NO NTS OA PC	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE		<u></u>	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING		DO DO AO AI SF ES	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK
MPS MRD MSD MUW NC NG NG NO NTS OA PC PD	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE		X16 - 18X8	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK
MPS MRD MSD MUW NC NG NG NO NTS OA PC PD PHWR	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF		DO DO AO AI SF ES	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWS	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK
MPS MRD MSD MUW NC NG NG NO NTS OA PC PD PHWR	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY)	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWS	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & & \\ & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWS RA	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY)	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING	18X16 18X8	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWS RA RD	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW)		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWS RA RD RHC	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE	(x16 18X8 18X8 18X8 18X8 20X10 20X10 20X10	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC	18X16 18X8 20X10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWR PHWS RA RD RA RD RHC RLL RSL	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT LIQUID PIPE REFRIGERANT SUCTION PIPE		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE	(x16 18X8 18X8 18X8 18X8 20X10 20X10 20X10	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN	18X16 18X8 20X10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWR PHWS RA RA RD RHC RLL RSL RTU	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT SUCTION PIPE ROOFTOP UNIT		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE	R DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY	(45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM	20x10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWR PHWS RA RD RA RD RHC RLL RLL RSL RTU RV	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT LIQUID PIPE ROOFTOP UNIT ROOF VENT		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE	R DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY	($\frac{10000}{1000000000000000000000000000000$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC	20x10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWS RA RD RA RD RHC RLL RLL RLL RSL RTU RV SA	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYREFURN AIRREFRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEROOFTOP UNITROOF VENTSUPPLY AIR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE PITHERNATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY	(x16 18X8 18X8 18X8 18X8 20X10 20X10 20X10	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M	20x10 20x10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWR PHWS RA RD RA RD RHC RLL RLL RSL RTU RV	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT SUCTION PIPE ROOFTOP UNIT ROOF VENT SUPPLY AIR SECONDARY HEATING HOT WATER RETURN		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS	R DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY	($\frac{10000}{1000000000000000000000000000000$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM	20x10 20x10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWS RA RD RA RD RHC RLL RLL RLL RSL RTU RV SA	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYREFURN AIRREFRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEROOFTOP UNITROOF VENTSUPPLY AIR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE PITHERNATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC		AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER CEILING RETURN OR EXHAUST GRILLE	($U = \frac{1}{MAX}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT	20x10 20x10	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PHWR PHWR PHWS RA RD RHC RLL RLL RLL RSL RTU RV SA SHWR	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN – HHWR MONOFLO FITTING DOWN – HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT SUCTION PIPE ROOFTOP UNIT ROOF VENT SUPPLY AIR SECONDARY HEATING HOT WATER RETURN		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS	R DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP DROP	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM	($U = \frac{1}{MAX}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE	20X10 X TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWR PHWS RA RD RHC RLL RLL RSL RTU RV SA SA SHWR	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETURN AIRREFRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOFTOP UNITSUPPLY AIRSECONDARY HEATING HOT WATER SUPPLYSECONDARY HEATING HOT WATER SUPPLY		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE	Image: Second state of the second s	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM	($\frac{10000}{1000000000000000000000000000000$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CF	20x10 20x10 TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWR PHWS RA RD RHC RL RL RL RL RL RL RL RL RL RL RL RSL SA SHWR	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETURN AIRREFRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOFTOP UNITSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM INDOOR SECTION (EVAPORATOR SECTION)		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE	Image: Constraint of the second se	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM	($U = \frac{1}{MAX}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C	20x10 20x10 TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWS RA PL PHWS RA RD RHC RLL RSL RLL RSL RTU RV SA SA SHWR SHWS SSO TC	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM INDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTOR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE	Image: Second state of the second s	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER CEILING RETURN OR EXHAUST GRILLE WITH NECK SIZE, TYPE, & CFM SUPPLY REGISTER	($U = \frac{1}{MAX}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CF	20x10 20x10 TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG NG PC PD PD PHWR PHWR PHWS RA RD RHC RLL RSL RLL RSL RTU RV SA SA SHWR SA SA SHWR	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYREFRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM INDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT HEATER		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP IN-LINE PUMP AIR TERMINAL UNIT WITH	Image: Constraint of the second se	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER CEILING RETURN OR EXHAUST GRILLE WITH NECK SIZE, TYPE, & CFM SUPPLY REGISTER	(IX16 IXX8 IXX8	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT	20x10 20x10 TWORK TWORK IN FM M H	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PHWR PHWR PHWS RA RD RHC RL RL RL RL RL RD RHC SA SHWR SA SHWR SA SHWR SA SHWR	MEDIUM PRESSURE STEAM MONOFLO FITTING DOWN - HHWR MONOFLO FITTING DOWN - HHWS MAKE-UP WATER NORMALLY CLOSED NATURAL GAS NORMALLY OPEN NOT TO SCALE OUTSIDE AIR PLUMBING CONTRACTOR PUMP DISCHARGE PRIMARY HEATING HOT WATER RETURN PRIMARY HEATING HOT WATER SUPPLY RETURN AIR REFRIGERANT DISCHARGE HOT WATER REHEAT COIL REFRIGERANT LIQUID PIPE REFRIGERANT SUCTION PIPE ROOF VENT SUPPLY AIR SECONDARY HEATING HOT WATER RETURN SECONDARY HEATING HOT WATER RETURN SECONDARY HEATING HOT WATER SUPPLY SPLIT SYSTEM INDOOR SECTION (CONDENSING UNIT) TEMPERATURE CONTROLS CONTRACTOR UNIT VENTILATOR		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP IN-LINE PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND	Image: Constraint of the second se	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER CEILING DIFFUSER SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE SUPPLY REGISTER WITH SIZE, TYPE, & CFM SUPPLY REGISTER SUPPLY REGISTER WITH SIZE, TYPE, & CFM	($U = \frac{1}{MAX}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$ $U = \frac{MAX}{MIN}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM	TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RL RU RL RL RL RU RL RL SHWS SA SA SHWR SA SA SHWR SA SA SHWR V SA	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM INDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENT		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE PITERLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REHEAT COLLAND SOUND ATTENUATOR	Image: Constraint of the second se	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING RETURN OR EXHAUST GRILLE SUPPLY REGISTER WITH NECK SIZE, TYPE, & CFM SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CF. FAN = FAN CFM	TWORK	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND AIR TERMINAL UNIT WITH	Image: Constraint of the second se	AIR FLOW SENSOR FILTER IRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING RETURN OR EXHAUST GRILLE WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE AIR FLOW	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RL RU RL RL RL RU RL RL SHWS SA SA SHWR SA SA SHWR SA SA SHWR V SA	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOFTOP UNITROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM INDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENT		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP THERMODETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND ATTENUATOR AIR TERMINAL UNIT WITH SOUND ATTENUATOR	Image: Constraint of the second se	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE MITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING -	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLING GPM = HEATING O	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND AIR TERMINAL UNIT WITH	Image: second	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE WITH NICK SIZE, TYPE, & CFM SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING - 1 INCH THICK ACOUSTIC/THERMAL DUCTWORK LINING -	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REFLAT COIL AND SOUND AIR TERMINAL UNIT WITH SOUND ATTENUATOR	Image: Second state of the second s	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE SUPPLY REGISTER WITH NICK SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING - 1 INCH THICK	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP THERMODYNAMIC TRAP PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND ATTENUATOR AIR TERMINAL UNIT WITH SOUND ATTENUATOR AIR TERMINAL UNIT WITH	Image: second	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE WITH NICK SIZE, TYPE, & CFM SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING - 1 INCH THICK ACOUSTIC/THERMAL DUCTWORK LINING -	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP AIR TERMINAL UNIT WITH REFLAT COIL AND SOUND AIR TERMINAL UNIT WITH SOUND ATTENUATOR	Image: Second state of the second s	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER, NOR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER, 0R EXHAUST GRILLE WITH NECK SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING - 1 INCH THICK ACOUSTIC/THERMAL DUCTWORK LINING - 2 INCH THICK ACOUSTIC/THERMAL DUCTWORK LINING - 2 INCH THICK	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM SPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR
MPS MRD MSD MUW NC NG NG NG NG PC PD PD PHWR PHWS RA RD RHC RLL RLL RLL RSL RLL RSL SSI SSO TC UH UV V V WAHP	MEDIUM PRESSURE STEAMMONOFLO FITTING DOWN - HHWRMONOFLO FITTING DOWN - HHWSMAKE-UP WATERNORMALLY CLOSEDNATURAL GASNORMALLY OPENNOT TO SCALEOUTSIDE AIRPLUMBING CONTRACTORPUMP DISCHARGEPRIMARY HEATING HOT WATER RETURNPRIMARY HEATING HOT WATER SUPPLYRETRIGERANT DISCHARGEHOT WATER REHEAT COILREFRIGERANT LIQUID PIPEREFRIGERANT SUCTION PIPEROOF VENTSUPPLY AIRSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER RETURNSECONDARY HEATING HOT WATER SUPPLYSPLIT SYSTEM OUTDOOR SECTION (EVAPORATOR SECTION)SPLIT SYSTEM OUTDOOR SECTION (CONDENSING UNIT)TEMPERATURE CONTROLS CONTRACTORUNIT VENTILATORVENTWATER-TO-AIR HEAT PUMP		FLEXIBLE PIPE CONNECTOR EXPANSION COMPENSATOR W/ GUIDES EXPANSION JOINT PIPE ANCHOR PIPE GUIDE THERMOSTATIC TRAP FLOAT & THERMOSTATIC TRAP BUCKET TRAP THERMODYNAMIC TRAP THERMOMETER WELL PRESSURE GAUGE STEAM PRESSURE GAUGE WITH 1/4" NEEDLE VALVE PNEUMATIC (CONTROL) TUBING BUTTERFLY VALVE WITH PNEUMATIC AND MANUAL OPERATORS PIPING PIPING BELOW GRADE BASE MOUNTED PUMP IN-LINE PUMP AIR TERMINAL UNIT WITH REHEAT COIL AND SOUND ATTENUATOR AIR TERMINAL UNIT WITH REHEAT COIL AIR TERMINAL UNIT WITH REHEAT COIL	$ \begin{array}{c} $	AIR FLOW SENSOR FILTER TRANSITION SQUARE TO ROUND HUMIDIFIER DISPERSION TUBE RISE IN DUCT DROP IN DUCT SQUARE CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER (4 WAY) ROUND CEILING DIFFUSER SQUARE OR RECTANGULAR CEILING GRILLE SUPPLY REGISTER, RETURN OR EXHAUST GRILLE SUPPLY DIFFUSER, 1-WAY, 2-WAY, 3-WAY CEILING DIFFUSER WITH NECK SIZE, TYPE, & CFM CEILING RETURN OR EXHAUST GRILLE WITH NIZE, TYPE, & CFM SUPPLY REGISTER WITH SIZE, TYPE, & CFM RETURN OR EXHAUST GRILLE WITH SIZE, TYPE, & CFM AIR FLOW ACOUSTIC/THERMAL DUCTWORK LINING - 1 INCH THICK ACOUSTIC/THERMAL DUCTWORK PLENUM LINING - 1 INCH THICK	($U = \frac{1}{18X8}$	45° ELBOW R/W=1.5 90° ELBOW WITH TURNING VANES 90 VERTICAL SPLIT OFF (PLAN VIEW) DUCT TURNING UP OR DOWN AIR TERMINAL UNIT-DUC U - UNIT TYPE MAX = MAXIMUM CFM MIN = MINIMUM CFM AIR TERMINAL UNIT-DUC U - UNIT TYPE GPM = GALLONS PER M MAX = MAXIMUM GPM FAN POWERED AIR TERMINAL UNIT U - UNIT TYPE MAX = PRIMARY MAX C MIN = PRIMARY MAX C MIN = PRIMARY MIN CFF FAN = FAN CFM TYPE = VALANCE TYPE COIL SIZE = COIL LENGT CLNG GPM = HEATING O X = DIFFUSER OR GRILL	18x16 18x8 18x16 18x8 20x10 0 TWORK TWORK IN FM GPM GPM TYPE	$\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & &$	DIGITAL INPUT (TO BUILDING MANAGEMENT SYSTEM) DIGITAL OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG OUTPUT (FROM BUILDING MANAGEMENT SYSTEM) ANALOG INPUT (TO BUILDING MANAGEMENT SYSTEM) ELECTRICAL INTERFACE SPEED FEED BACK END SWITCH POSITION FEEDBACK TRAVERSE AVERAGING SENSOR PROBE SENSOR

HVAC SYMBOLS LIST

SYMBOLS GENERAL NOTES:

1) VALVE AND DAMPER ACTUATOR TYPES (ELECTRIC OR PNEUMATIC) WHICH ARE INDICATED IN HVAC TEMPERATURE CONTROL DRAWINGS SHALL SUPERSEDE TYPE INDICATED ON ALL OTHER HVAC DRAWINGS.

HVAC CONTRACTOR GENERAL NOTES:

- A. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS WITHIN THE BUILDING PRIOR TO COMMENCEMENT OF ALL DEMOLITION AND NEW WORK.
- B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND REPLACE EXISTING CEILINGS, UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS, FOR PERFORMING DEMOLITION OR NEW WORK WITHIN THE BUILDING. THE EXISTING CEILINGS SHALL BE REMOVED IN A MANNER TO AVOID DAMAGE TO THE CEILING SYSTEMS. STORAGE OF CEILING SYSTEM COMPONENTS FOR REINSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR. THE STORAGE OF ALL MATERIAL SHALL BE IN AREAS OR LOCATIONS APPROVED BY THE OWNER. THE OWNER WILL NOT COMPENSATE FOR ANY DAMAGED OR LOST MATERIAL WHILE IN STORAGE. AFTER COMPLETION OF ALL DEMOLITION OR NEW WORK, THE CONTRACTOR SHALL REINSTALL THE CEILING SYSTEMS TO MATCH THE ORIGINAL INSTALLATION.
- C. DEMOLITION DRAWINGS SHOW MAJOR EQUIPMENT, PIPING, AND DUCTWORK REMOVALS. THE INTENT IS NOT TO IDENTIFY ALL MISCELLANEOUS PIPING. PIPING ACCESSORIES, DUCTWORK, DUCTWORK ACCESSORIES, SUPPORTS, CONTROLS, CONTROL ACCESSORIES, CONTROL WIRING, CONDUIT, AND PNEUMATIC CONTROL TUBING TO BE DISCONNECTED AND REMOVED, BUT IS THE REQUIREMENT UNDER THIS CONTRACT. NO EQUIPMENT, PIPING, OR DUCTWORK SHALL BE ABANDONED IN PLACE, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- D. ALL EQUIPMENT INDICATED TO BE TURNED OVER TO THE OWNER SHALL BE DISCONNECTED AND REMOVED FROM THE EXISTING SYSTEMS AND DELIVERED (INCLUDING LOADING AND UNLOADING) TO A STORAGE AREA WITHIN THE BUILDING AS SELECTED BY THE OWNER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ANY EQUIPMENT DAMAGED DURING REMOVAL AND DELIVERY. ANY DAMAGE TO EQUIPMENT PRIOR TO DISCONNECTING SHOULD BE REPORTED TO THE OWNER'S REPRESENTATIVE. IF NOT REPORTED, THE CONTRACTOR TAKES FULL RESPONSIBILITY FOR REPAIRS TO THE EQUIPMENT.
- BEFORE DISCONNECTING, REMOVING, OR SERVICING ANY AIR Ε. CONDITIONING EQUIPMENT OR SYSTEMS CONTAINING REFRIGERANTS, THE EQUIPMENT OR SYSTEMS SHALL BE EVACUATED OF ALL REFRIGERANT PER THE LATEST ADOPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). THE CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE CERTIFIED BY AN EPA APPROVED CERTIFYING AGENCY OR ORGANIZATION.
- F. ALL DUCTWORK, PIPING, AND CONDUIT PENETRATIONS THROUGH RATED WALLS OR FLOORS SHALL BE PROVIDED WITH FIRE/SMOKE STOPPINGS PER SPECIFICATION. REFER TO CODE ANALYSIS DRAWING FOR ALL RATED WALL LOCATIONS. ALL FLOORS SHALL BE CONSIDERED RATED.
- G. UNLESS SHOWN ON THE ARCHITECTURAL DRAWINGS, IT IS THE RESPONSIBILITY OF THIS CONTRACT TO PATCH AND FINISH ALL EXISTING DUCTWORK OR PIPE PENETRATIONS THROUGH FLOORS, ROOFS, INTERIOR WALLS, AND EXTERIOR WALLS AFTER DEMOLITION WORK. IN ADDITION, ALL NEW PENETRATIONS SHALL BE PROVIDED FOR INSTALLATION OF MECHANICAL SYSTEMS INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, CURBING, DUCTWORK, PIPING, CONTROLS, ETC. PATCHING AND FINISHING SHALL MATCH EXISTING CONSTRUCTION INCLUDING FIRE RATINGS. PROVIDE LINTELS PER LINTEL SCHEDULE.
- H. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL AIR VENTS AND DRAINS IN THE PIPING SYSTEMS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AIR VENTS AT ALL SYSTEM HIGH POINTS AND AT AREAS WITHIN THE PIPING SYSTEMS THAT COULD ACCUMULATE OR TRAP AIR WHICH WOULD PREVENT PROPER VENTING OR OPERATION OF THE SYSTEMS. DRAINS SHALL BE PROVIDED AT ALL LOW POINTS WITHIN THE PIPING SYSTEM TO FACILITATE COMPLETE DRAINING OF THE SYSTEM .
- PROVIDE THERMAL EXPANSION COMPENSATORS AND THERMAL EXPANSION LOOPS IN PIPING SYSTEM PER INDUSTRY STANDARDS.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL **IMPROVEMENT PROJECT**

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

PROJECT ISSUE SCHEDULE No. Date Description

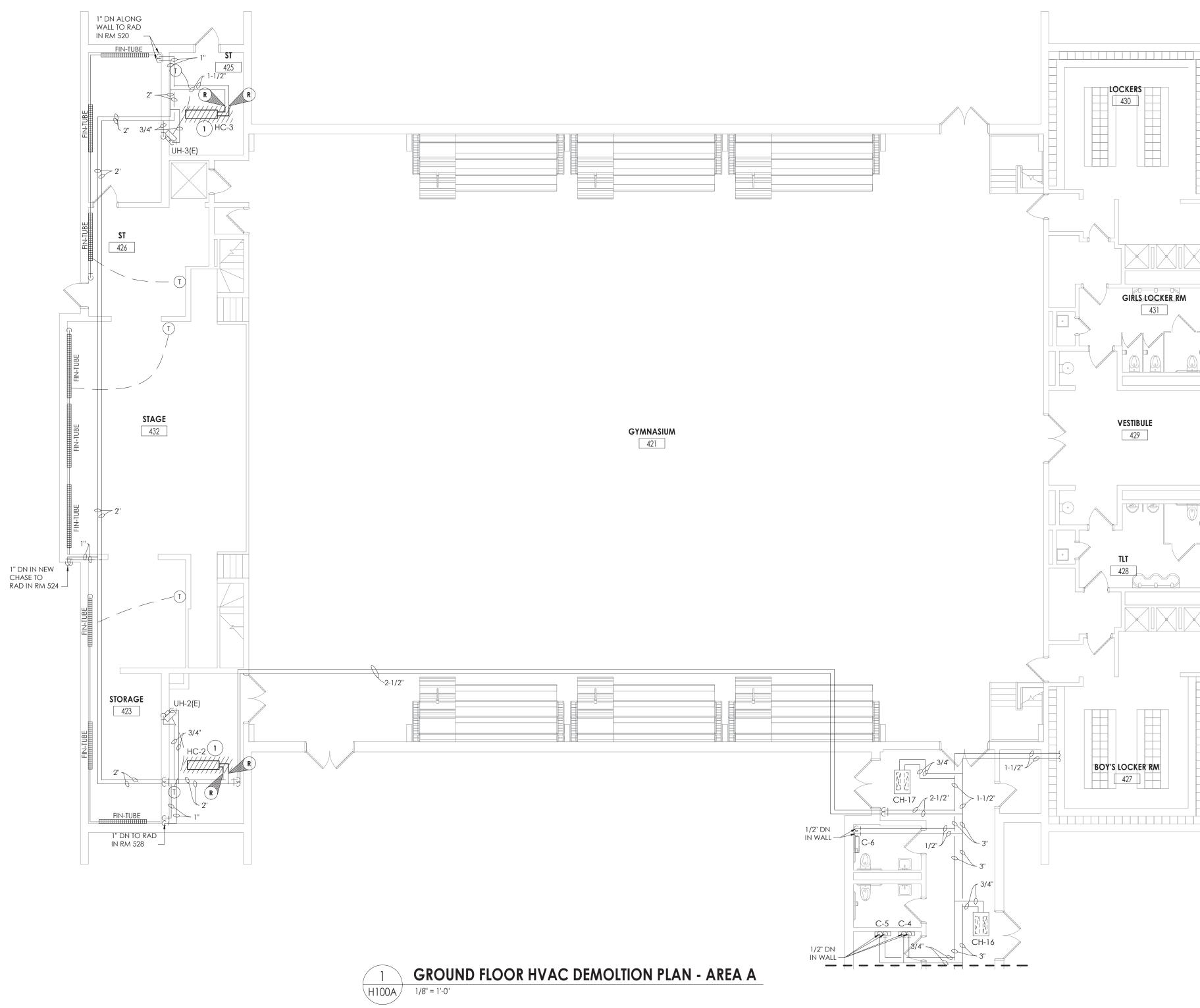
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED. THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
HVAC SYMBOLS I	EGEND AND
CONTRACTOR NO	otes

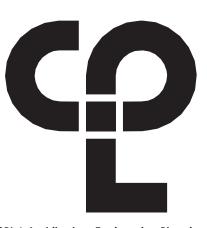
Drawing Number





KEY NOTES

1 REMOVE EXISTING HEATING AND VENTILATING UNIT, ASSOCIATED HHWS/R PIPING, DUCTWORK, SUPPORTS AND GRILLES. SALVAGE CONTROLS FOR RECONNECTION.



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY

SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

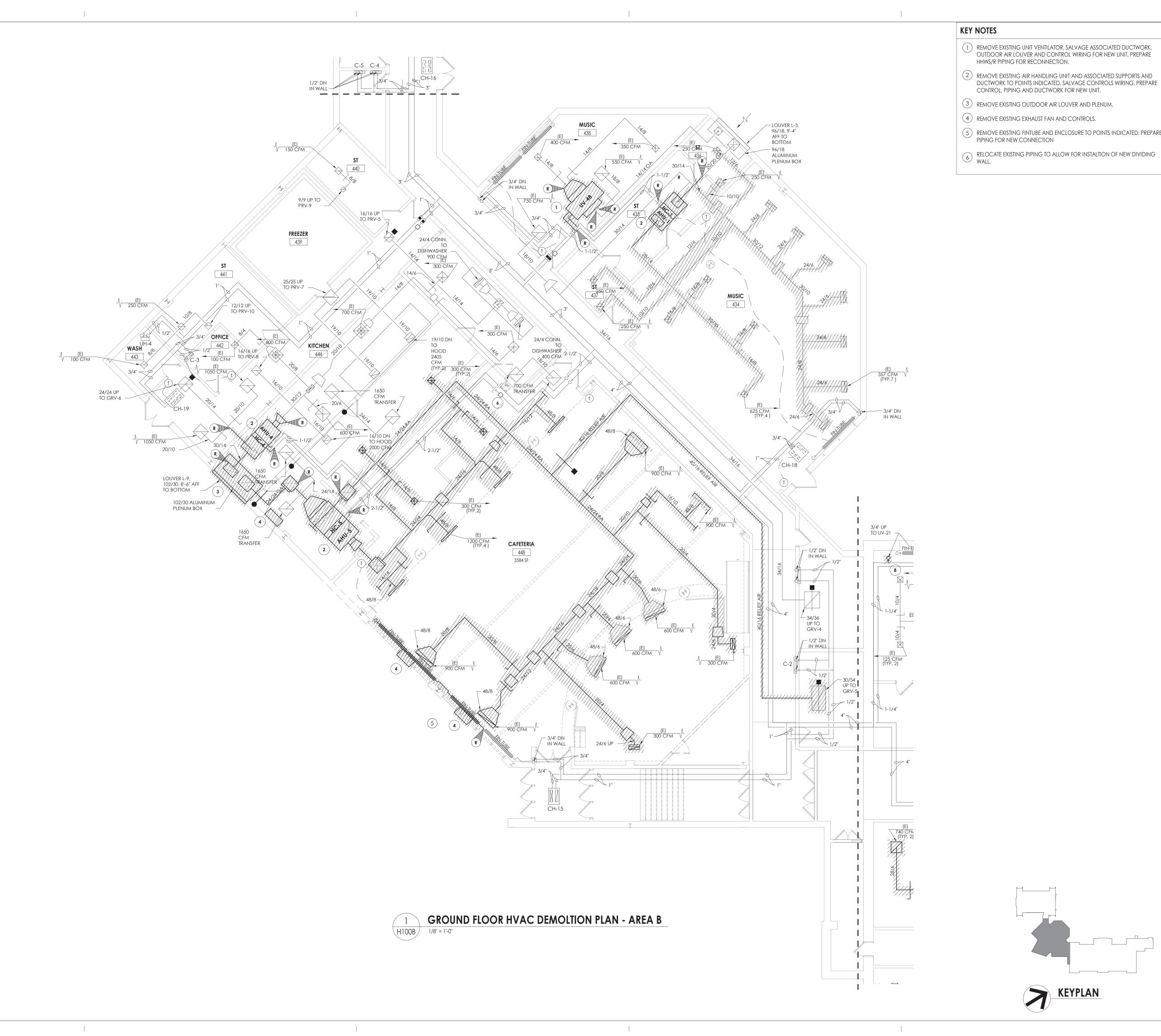
 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFRX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION E	ocuments
Drawn By	Checked By
NRH	JJM
Drawing Title	
GROUND FLO	OR HVAC
DEMOLITION I	PLAN - AREA A

Drawing Number HMS H100A

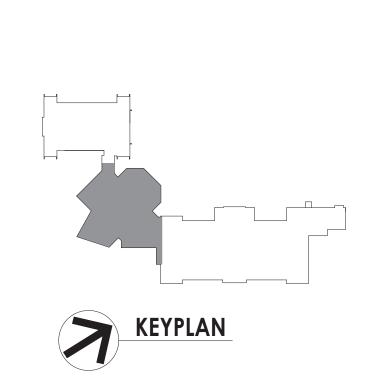


KEY NOTES

- 1 REMOVE EXISTING UNIT VENTILATOR, SALVAGE ASSOCIATED DUCTWORK, OUTDOOR AIR LOUVER AND CONTROL WIRING FOR NEW UNIT. PREPARE HHWS/R PIPING FOR RECONNECTION.
- (2) REMOVE EXISTING AIR HANDLING UNIT AND ASSOCIATED SUPPORTS AND DUCTWORK TO POINTS INDICATED. SALVAGE CONTROLS WIRING. PREPARE CONTROL, PIPING AND DUCTWORK FOR NEW UNIT.
- (3) REMOVE EXISTING OUTDOOR AIR LOUVER AND PLENUM.
- (4) REMOVE EXISTING EXHAUST FAN AND CONTROLS.
- (5) REMOVE EXISTING FINTUBE AND ENCLOSURE TO POINTS INDICATED. PREPARE PIPING FOR NEW CONNECTION



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com



Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

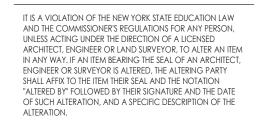
PROJECT INFORMATION

IMPROVEMENT PROJECT Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

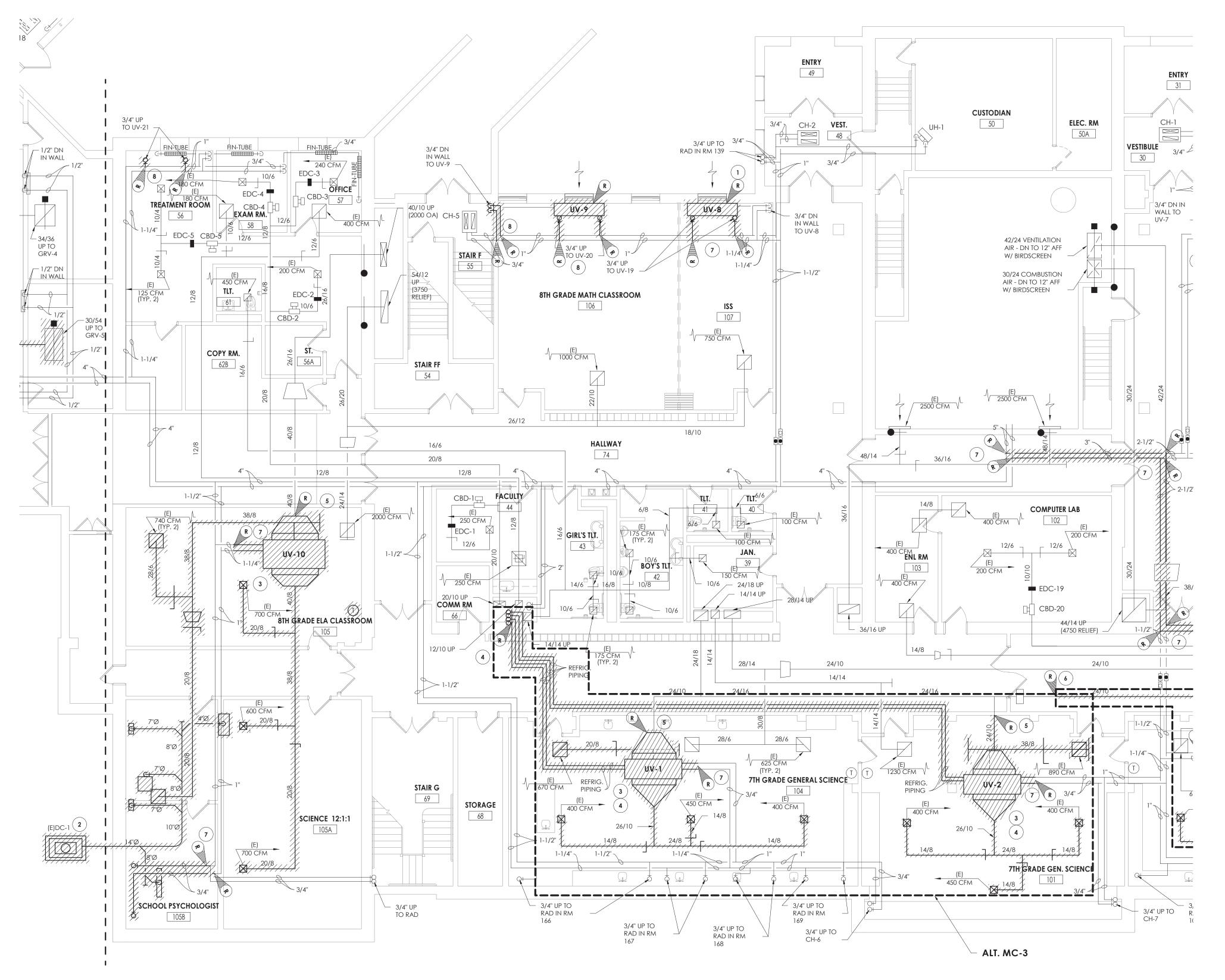
 No.
 Date
 Description



SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION	DOCUMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
GROUND FLC	OOR HVAC
DEMOLITION	PLAN - AREA B

Drawing Number HMS H100B



/2021 3:05:54 PM S:\Projects\Newburgh ECSD\Heritage MS Addtn & Reno\D Design\06 C\D\

GROUND FLOOR HVAC DEMOLTION PLAN - AREA C 1/8" = 1'-0"

 $\left(1 \right)$

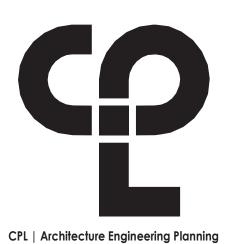
H100C

KEY NOTES

- 1 REMOVE EXISTING UNIT VENTILATOR, SALVAGE OUTDOOR AIR LOUVER AND CONTROL WIRING.
- 2 REMOVE EXISTING DUST COLLECTOR, CONTROLS, HOUSEKEEPING PAD, AND DUCTWORK TO POINT INDICATED.
- (3) REMOVE EXISTING UNIT VENTILATOR AND ASSOCIATED DUCTWORK TO POINT INDICATED. SALVAGE CONTROLS AND CONTROL WIRING FOR NEW UNIT.
- (4) REMOVE ALL RSL/RLL PIPING FROM UNIT VENTILATOR TO CONDENSING UNIT ON GRADE. PRIOR TO REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENCY OR ORGANIZATION.
- 5REMOVE DUCTWORK TO POINT INDICATED. PREPARE DUCTWORK
FOR NEW CONNECTION.
- 6 REMOVE OUTDOOR AIR DUCT TO POINT INDICATED AND CAP MAIN.

KEYPLAN

- 7 REMOVE PIPING TO POINT INDICATED. PREPARE FOR RECONNECTION.
- (8) REMOVE PIPING TO POINT INDICATED AND CAP.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 **CPLteam.com**

PROJECT INFORMATION
Project Number
13940.18
Client Name
NEWBURGH ENLARGED CITY
SCHOOL DISTRICT
Project Name

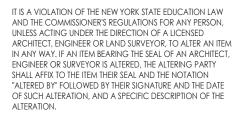
PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

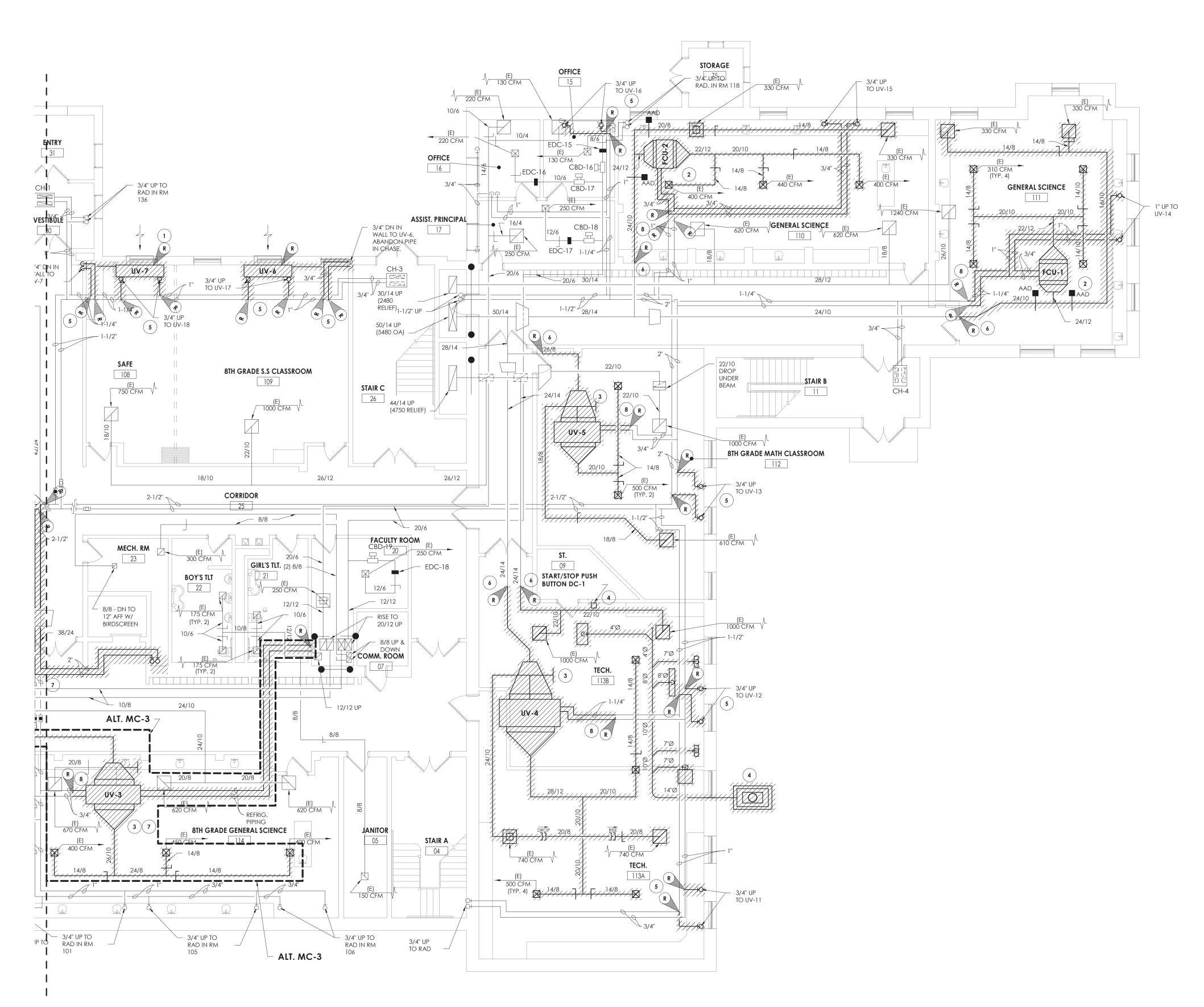
 No.
 Date
 Description



SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION [Documents
Drawn By	Checked By
NRH	JJW
Drawing Title	
GROUND FLC	OR HVAC
DEMOLITION	PLAN - AREA C

HMS H100C



GROUND FLOOR HVAC DEMOLITION PLAN - AREA D H100D 1/8" = 1'-0"

1



- (1) REMOVE EXISTING UNIT VENTILATOR, SAVE OUTDOOR AIR LOUVER AND CONTROL. SAVE AND PREPARE TO EXTEND WIRING.
- (2) REMOVE EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK TO POINT INDICATED. SAVE CONTROLS AND PREPARE HHWS/R PIPING AND DUCTWORK FOR RECONNECTION.
- (3) REMOVE EXISTING UNIT VENTILATOR AND ASSOCIATED DUCTWORK TO POINTS INDICATED. SAVE CONTROLS AND CONTROL WIRING FOR NEW UNIT. PREPARE HHWS/R PIPING FOR RECONNECTION.
- (4) REMOVE EXISTING DUST COLLECTOR, CONTROLS, AND DUCTWORK. PREPARE FOR NEW.
- (5) REMOVE PIPING TO MAIN CAP.
- 6 REMOVE DUCTWORK TO POINT INDICATED AND PREPARE DUCTWORK FOR NEW CONNECTION.
- (7) remove all RSL/RLL PIPING FROM UNIT VENTILATOR TO CONDENSING UNIT ON ROOF. PRIOR TO REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENCY OR ORGANIZATION.
- (8) REMOVE PIPING TO POINT INDICTAED AND PREPARE FOR NEW CONNECTION.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL **IMPROVEMENT PROJECT**

Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

PROJECT ISSUE SCHEDULE No. Date Description

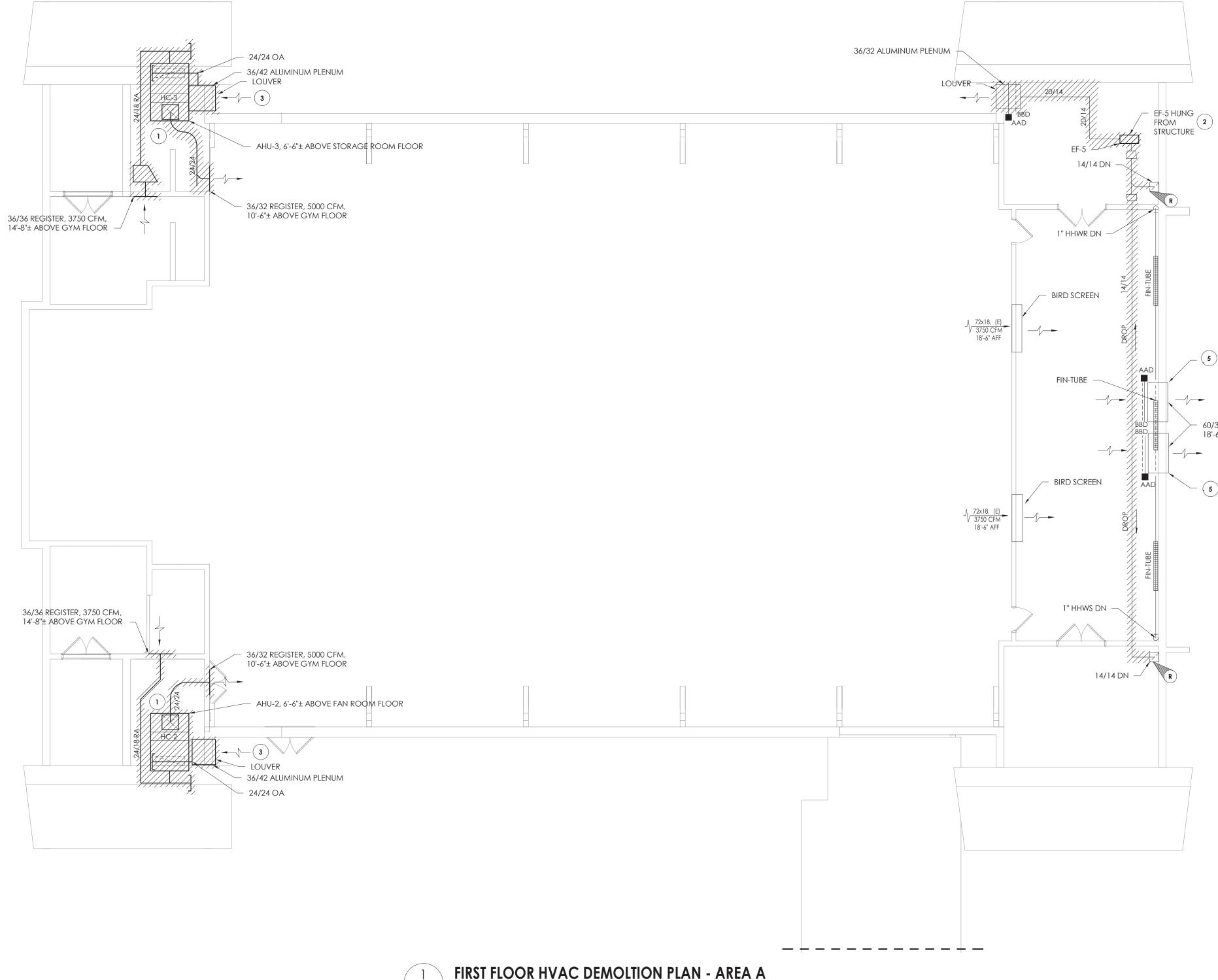
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION D	OCUMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
GROUND FLO	OR HVAC
DEMOLITION F	PLAN - AREA D

Drawing Number HMS H100D

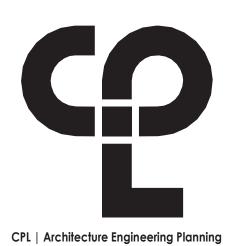
KEYPLAN



FIRST FLOOR HVAC DEMOLTION PLAN - AREA A H101A 1/8" = 1'-0"

KEY NOTES

- (1) REMOVE EXISTING AIR HANDLER, DUCTWORK, GRILLES, SUPPORTS, PIPING AND CONTROLS. SALVAGE CONTROLS FOR RE-USE.
- 2 REMOVE EXISTING EXHAUST FAN AND CONTROLS. PREPARE DUCTWORK FOR NEW CONNECTION. SALVAGE CONTROLS FOR RE-USE.
- 3 PREPARE EXISTING LOUVER FOR RECONNECTION.
- (4) PREPARE EXISTING OPENING FOR NEW DUCTWORK. REMOVE LOUVER.
- (5) DISCONNECT EXISTING CONTROLS. CLOSE DAMPERS AND ABANDON IN PLACE.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

- 60/30 (E)LOUVER

18'-6" AFF

(5)

PROJECT INFORMATION Project Number 13940.18

Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

IMPROVEMENT PROJECT Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

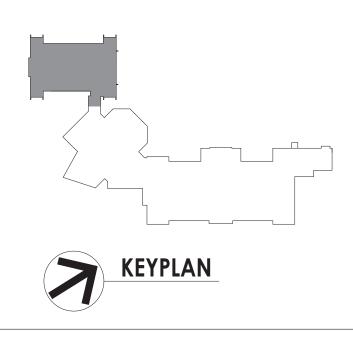
PROJECT ISSUE SCHEDULE No. Date Description

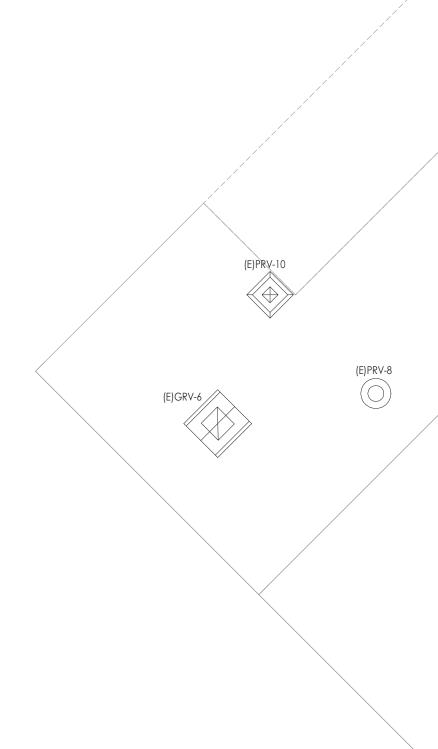
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
FIRST FLOOR HVA	AC DEMOLITION
PLAN - AREA A	

Drawing Number HMS H101A



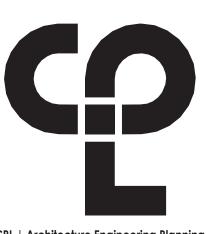




KEY NOTES

1) REMOVE EXISTING 34X36 GRAVITY RELIEF. PREPARE CURB FOR NEW FAN.

2 REMOVE EXISTING 30X54 GRAVITY RELIEF IN ITS ENTIRETY. REMOVE CURB AND PATCH. PATCH ROOF AND DECK TO MATCH EXISTING CONSTRUCTION. COORDINATE WITH THE OWNER AND EXISTING ROOFING MANUFACTURER TO MAINTAIN WARRANTY ON EXISTING ROOF. ALL WORK TO BE PER NRCA RECOMMENDATION



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

Project Address

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

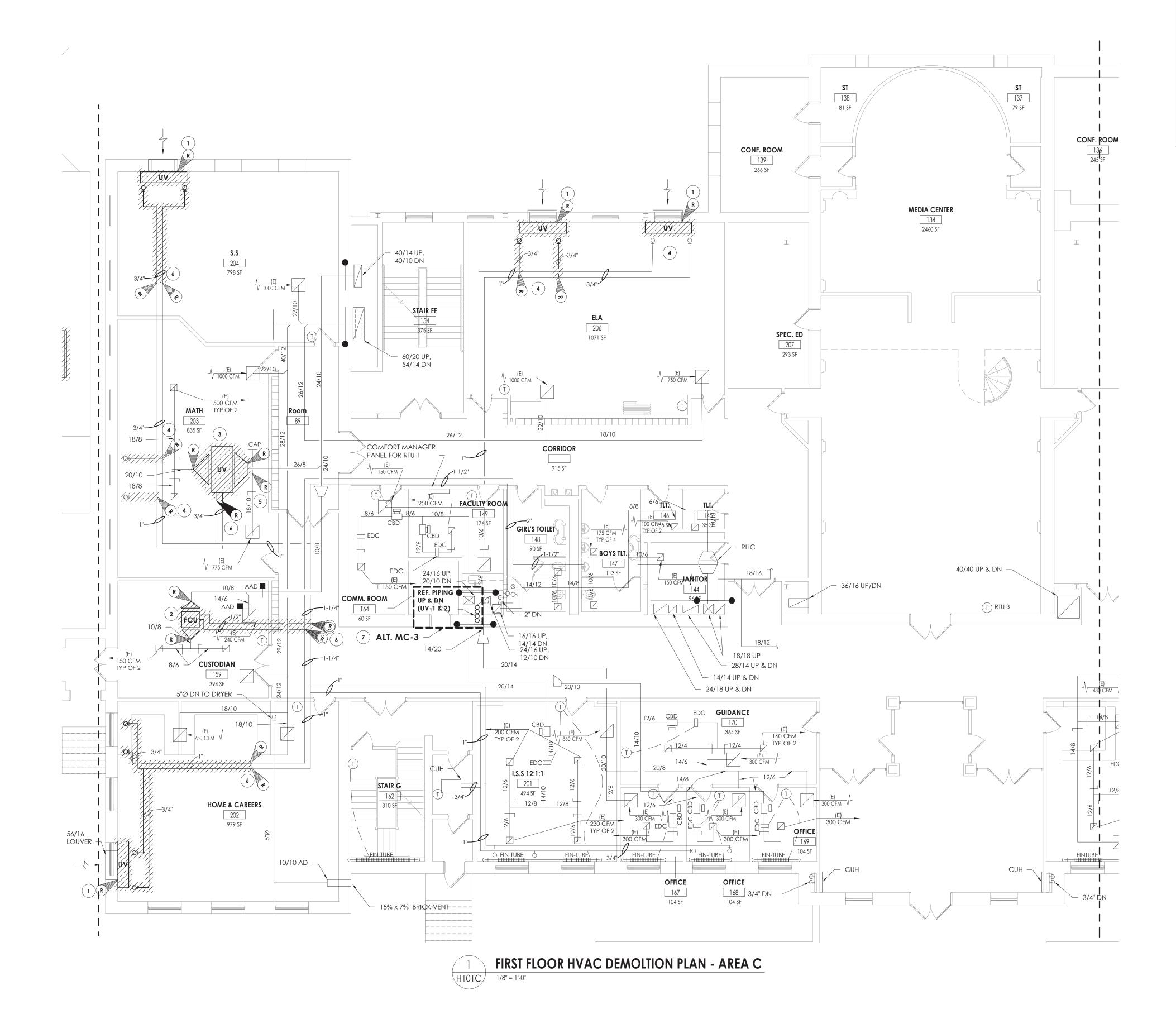
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFRX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	2cale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCU	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
FIRST FLOOR ROC	DF HVAC
DEMOLITION PLA	N - AREA B

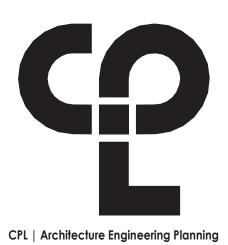
HMS H101B

KEYPLAN



KEY NOTES

- 1 REMOVE EXISTING UNIT VENTILATOR, OUTDOOR AIR LOUVER AND CONTROL WIRING. SAVE AND PREPARE TO EXTEND WIRING.. PATCH AND REPAIR WALL OPENING.
- (2) REMOVE EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK TO POINT INDICATED. SAVE CONTROLS AND PREPARE HHWS/R PIPING AND DUCTWORK FOR RECONNECTION.
- (3) REMOVE EXISTING UNIT VENTILATOR AND ASSOCIATED DUCTWORK TO POINT INDICATED. SAVE CONTROLS AND CONTROL WIRING FOR NEW UNIT. PREPARE HHWS/R PIPING FOR RECONNECTION.
- 4 REMOVE PIPING TO MAIN CAP.
- 5 REMOVE DUCTWORK TO POINT INDICATED AND PREPARE DUCTWORK FOR NEW CONNECTION.
- 6 REMOVE PIPING TO POINT INDICATED AND PREPARE FOR NEW CONNECTION.
- (7) REMOVE EXISTING REFRIGERANT LINES IN ENTIREINTY.
- (8) REMOVE AND SALVAGE FOR REINSTALLATION.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 **CPLieam.com**

PROJECT INFORMATION
Project Number
13940.18
Client Name
NEWBURGH ENLARGED CITY
SCHOOL DISTRICT
Project Name

PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

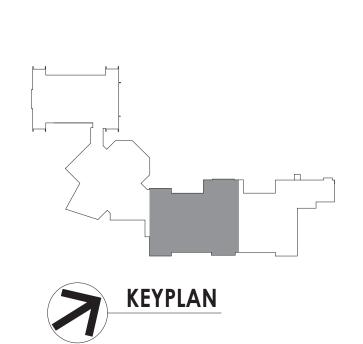
405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description



AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFRIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

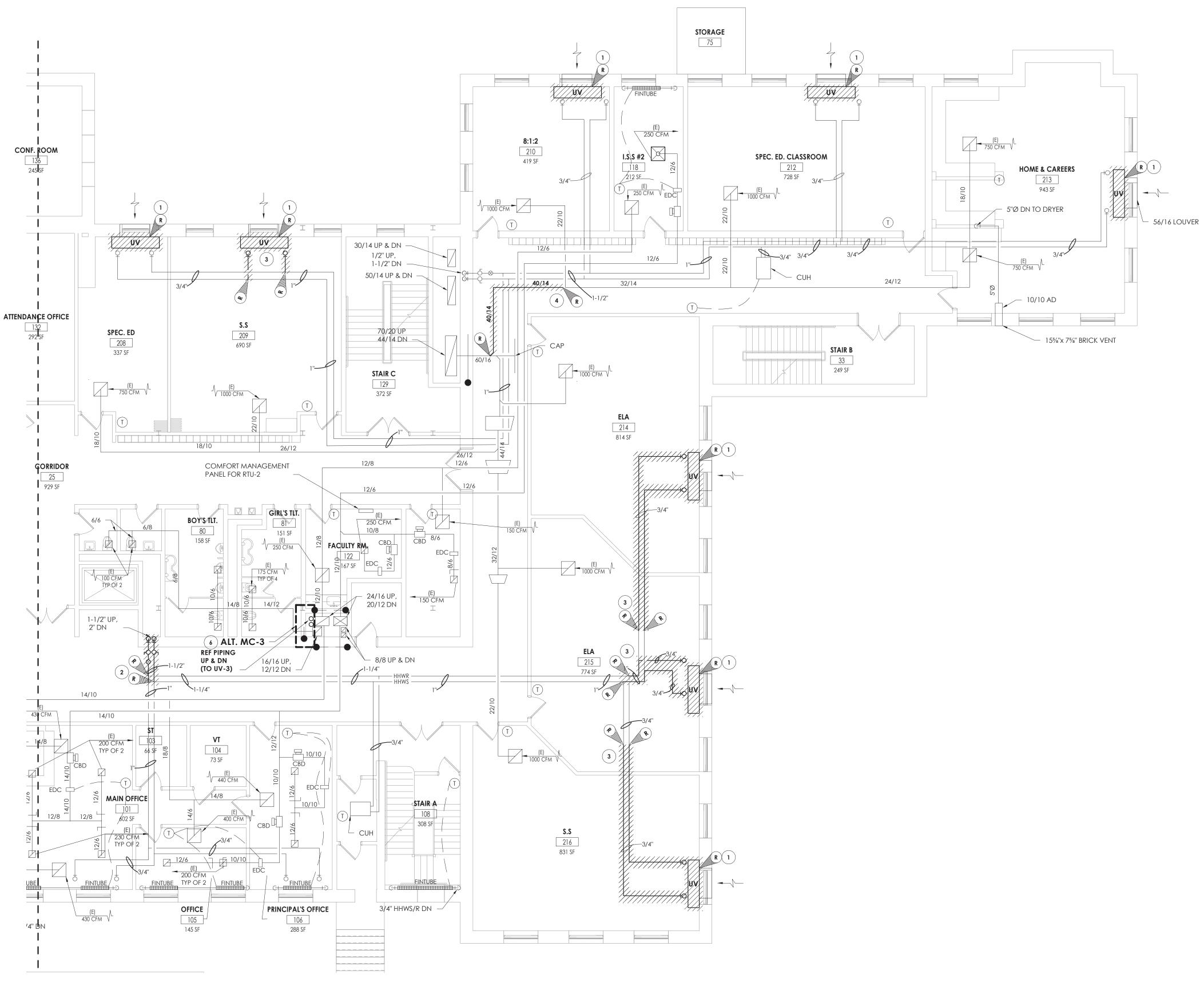
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCU	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
FIRST FLOOR HVA	C DEMOLITION
PLAN - AREA C	

HMS H101C

/2021 3:05:57 PM S:\Projects\Newburgh ECSD\Heritage MS Addtn & Reno\D Design\06 C^IAD\R



1FIRST FLOOR HVAC DEMOLTION PLAN - AREA DH101D1/8" = 1'-0"

KEY NOTES

- 1 REMOVE EXISTING UNIT VENTILATOR, OUTDOOR AIR LOUVER AND CONTROL WIRING. PATCH AND REPAIR WALL OPENING.
- 2 REMOVE PIPING TO MAIN CAP.
- (3) REMOVE PIPING TO POINT INDICATED AND PREPARE FOR NEW CONNECTION.
- (4) REMOVE 40X14 DUCT AND INSULATION FROM POINT INDICATED. CAP AND
- SEAL MAIN. PREPARE BRANCH DUCTWORK FOR NEW CONNECTION.
- 5 REMOVE 30X14 RELIEF AIR RISER FROM THIS POINT TO RELIEF PLENUM IN ATTIC.
- 6 REMOVE EXISTING REFRIGERANT PIPING IN ITS ENTIRITY.



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

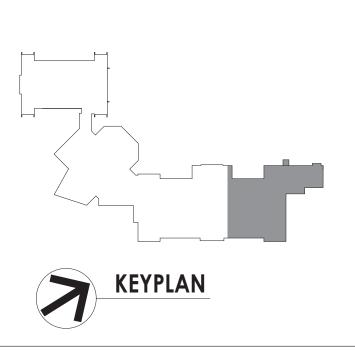
NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

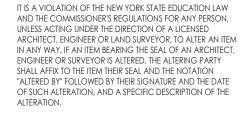
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

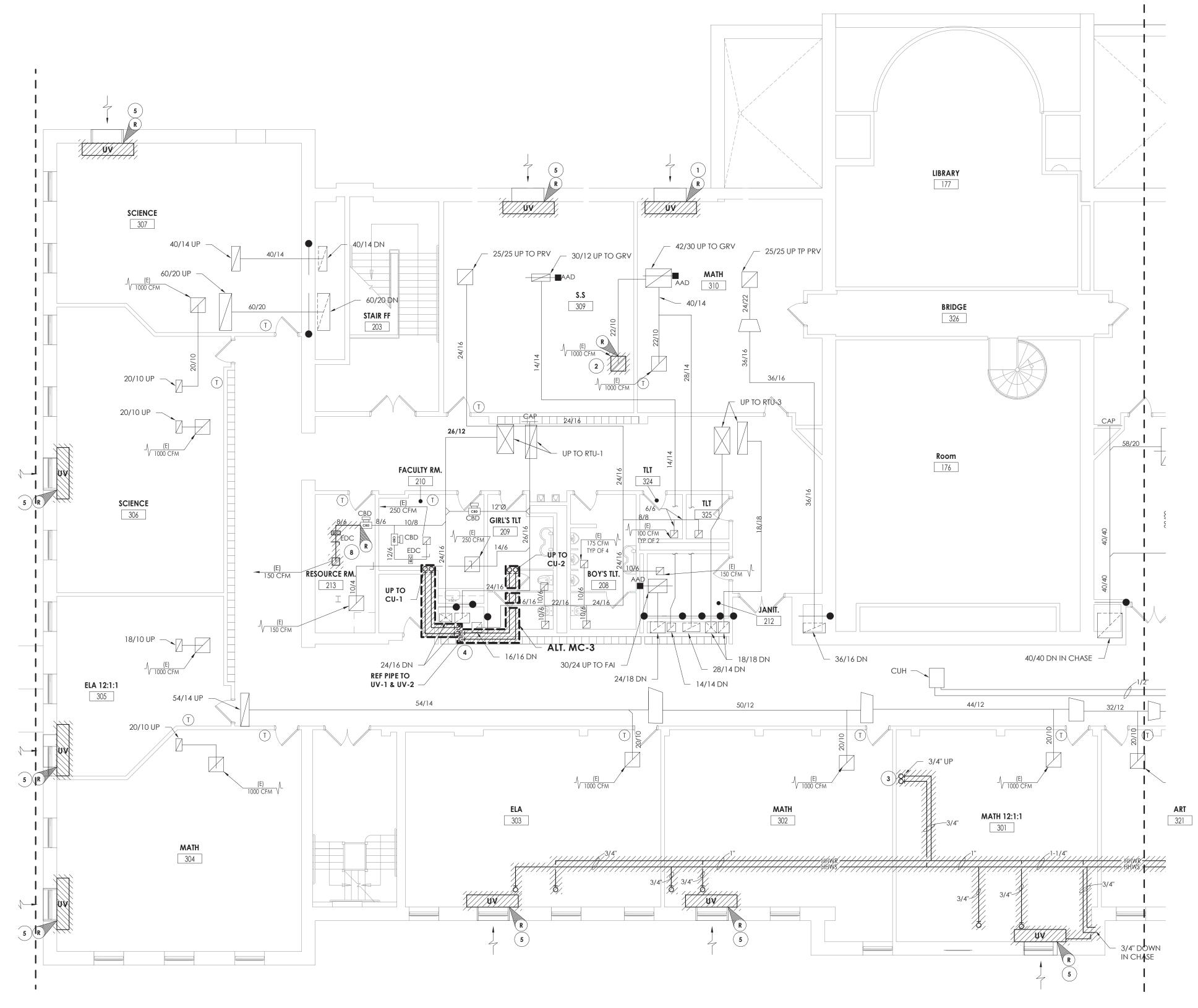




SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCL	JMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
FIRST FLOOR HVA	C DEMOLITION
PLAN - AREA D	

HMS H101D







- 1 REMOVE EXISTING UNIT VENTILATOR, OUTDOOR AIR LOUVER AND CONTROL WIRING. PATCH AND REPAIR OPENING.
- (2) REMOVE EXISTING FAN COIL UNIT AND ASSOCIATED DUCTWORK TO POINT INDICATED. SAVE CONTROLS AND PREPARE HHWS/R PIPING AND DUCTWORK FOR RECONNECTION.
- REMOVE EXISTING UNIT VENTILATOR AND ASSOCIATED DUCTWORK TO POINT INDICATED. SAVE CONTROLS AND CONTROL WIRING FOR NEW UNIT. PREPARE HHWS/R PIPING FOR RECONNECTION.
- $\overbrace{\mathbf{5}}^{-} \text{ REMOVE PIPING TO MAIN CAP.}$
- REMOVE DUCTWORK TO POINT INDICATED AND PREPARE **b** DUCTWORK FOR NEW CONNECTION.
- REMOVE PIPING TO POINT INDICATED AND PREPARE FOR NEW CONNECTION.
- (8) REMOVE EXISTING REFRIGERANT LINES IN ENTIREINTY.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

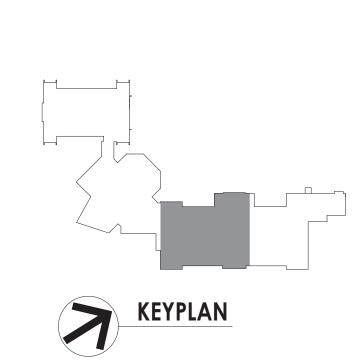
NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

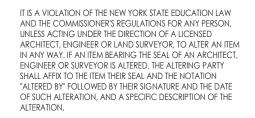
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

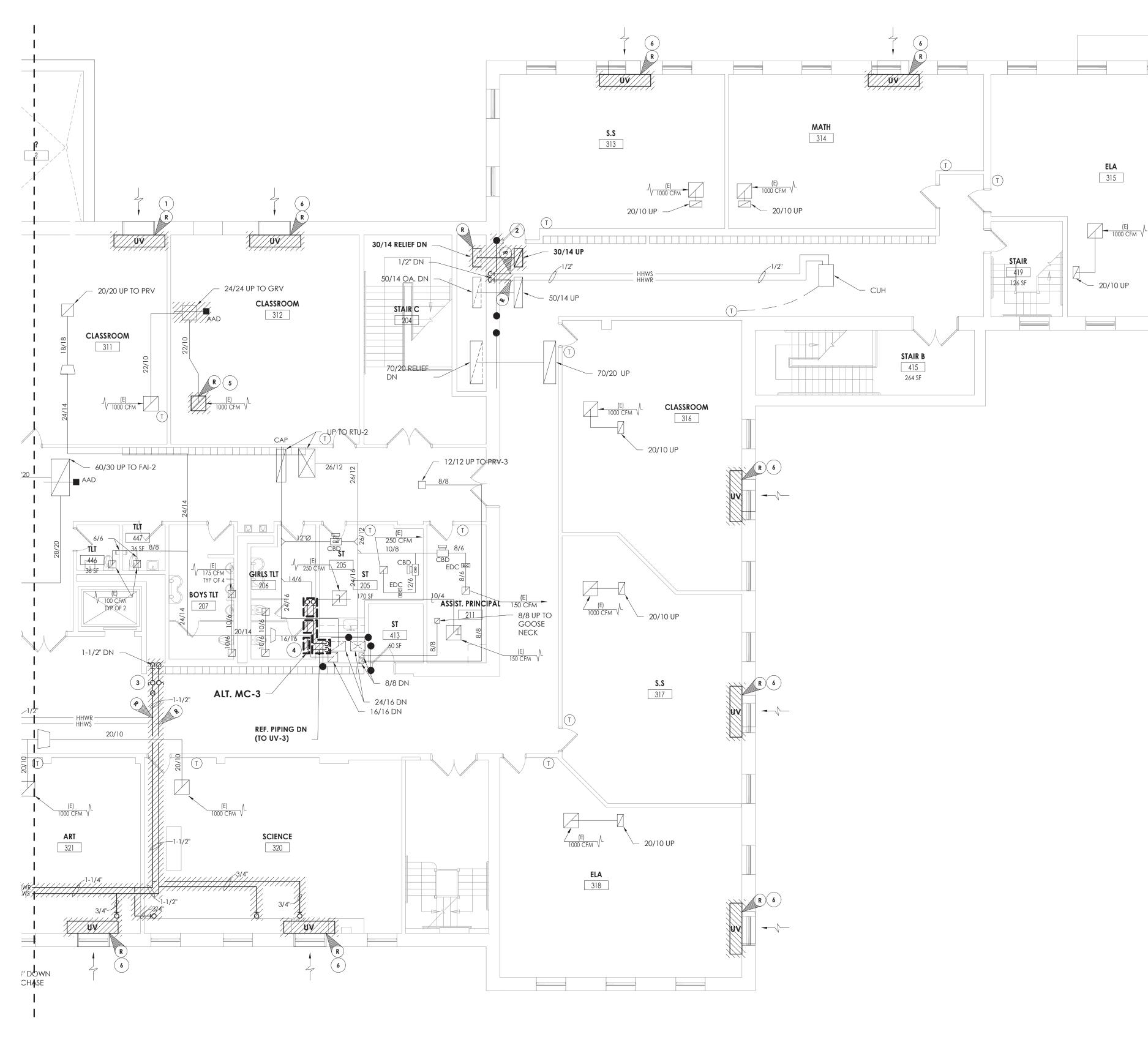




SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DO	DCUMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
SECOND FLOO	R HVAC
DEMOLITION P	LAN - AREA C

HMS H102C





SECOND FLOOR HVAC DEMOLTION PLAN - AREA D 1/8" = 1'-0"

KEY NOTES

ELA 315 (R)(6)

-1-

- 1 REMOVE EXISTING UNIT VENTILATOR, SAVE OUTDOOR AIR LOUVER AND CONTROL WIRING FOR NEW UNIT. PREPARE HHWS/R PIPING FOR RECONNECTION.
- (2) REMOVE 30×14 RELIEF AIR RISER FROM THIS POINT TO RELIEF PLENUM IN ATTIC
- (3) REMOVE HHWS/R PIPING AND PREPARE FORE NEW PIPING.
- (4) REMOVE RSL/RLL PIPING AND CAP.
- 5 REMOVE EXISTING RELIEF DUCTWORK AND PREPARE FOR NEW DUCTWORK.
- (6) REMOVE EXISTING UNIT VENTILATOR, SAVE OUTDOOR AIR LOUVER AND CONTROL WIRING FOR NEW UNIT.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY

SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM

IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION

"ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

Scale

As indicated

Checked By

JJM

HMS

H102D

SHEET INFORMATION

CONSTRUCTION DOCUMENTS

SECOND FLOOR HVAC DEMOLITION PLAN - AREA D

Issued

09/09/2021

Project Status

Drawn By

Drawing Title

Drawing Number

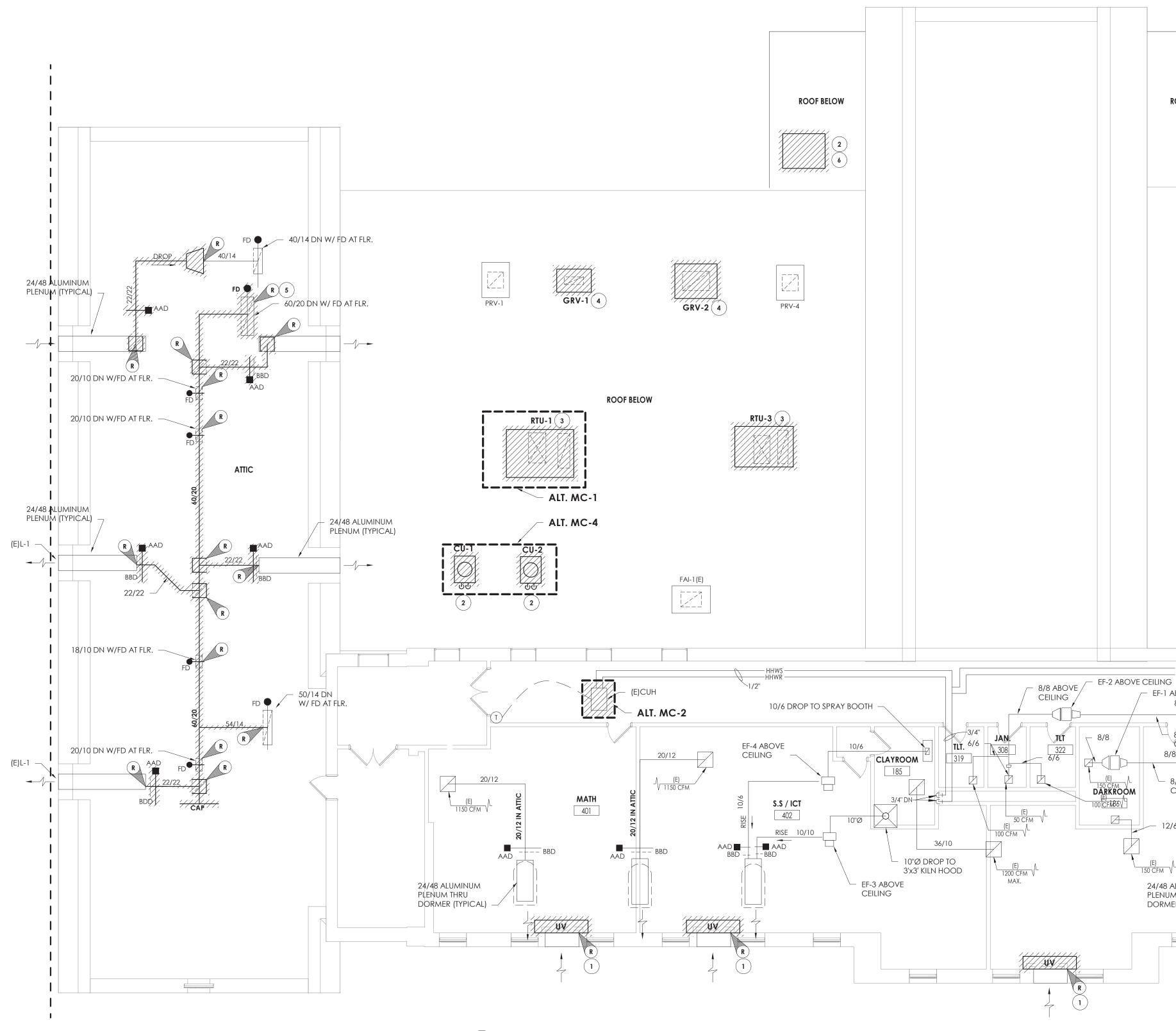
NRH

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description





THIRD FLOOR HVAC DEMOLTION PLAN - AREA C

H103C 1/8" = 1'-0"



1. PRIOR TO CLOSEOUT, SUBMIT ROOFING MAUNFACTURER'S WRITTEN APPROVAL OF ALL ROOFING WORK.

KEY NOTES

ROOF BELOW

HHWR -HHWS

EF-1 ABOVE CEILIN 8/8 RISE TO A

A - 8/8 ABOVE CEILING

8/8 RISE TP ATTI

– 8/8 ABOVE CEILING

12/6

24/48 ALUMINUM PLENUM THRU

DORMER (TYPICAL)

150 CFM

- (1) REMOVE EXISTING UNIT VENTILATOR, SAVE OUTDOOR AIR LOUVER AND CONTROL WIRING FOR NEW UNIT.
- (2) REMOVE EXISTING CONDENSING UNIT. PRIOR TO REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENCY OR ORGANIZATION.
- (3) REMOVE EXISTING ROOF TOP UNIT (RTU) AND CURB IN ITS ENTIRETY. SAVE CONTROLS CONNECTION. PREPARE FOR NEW CURB.
- (4) REMOVE EXISTING RELIEF HOOD. PREPARE CURB FOR NEW FAN.
- (5) REMOVE RELIEF AIR DUCT MAIN. DISCONNECT AT POINTS INDICATED. PREPARE REMAINING DUCTS FOR RE-CONNECTION.
- (6) REMOVE EXISTING SPLIT SYSTEM COMPRESSOR ON ROOF. REMOVE ALL ASSOCIATED PIPING AND BRACING TO ALLOW FOR ROOF WORK. SAVE ALL EQUIPMENT FOR REINSTALLATION.

KEYPLAN



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT

Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

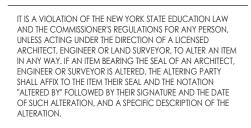
405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

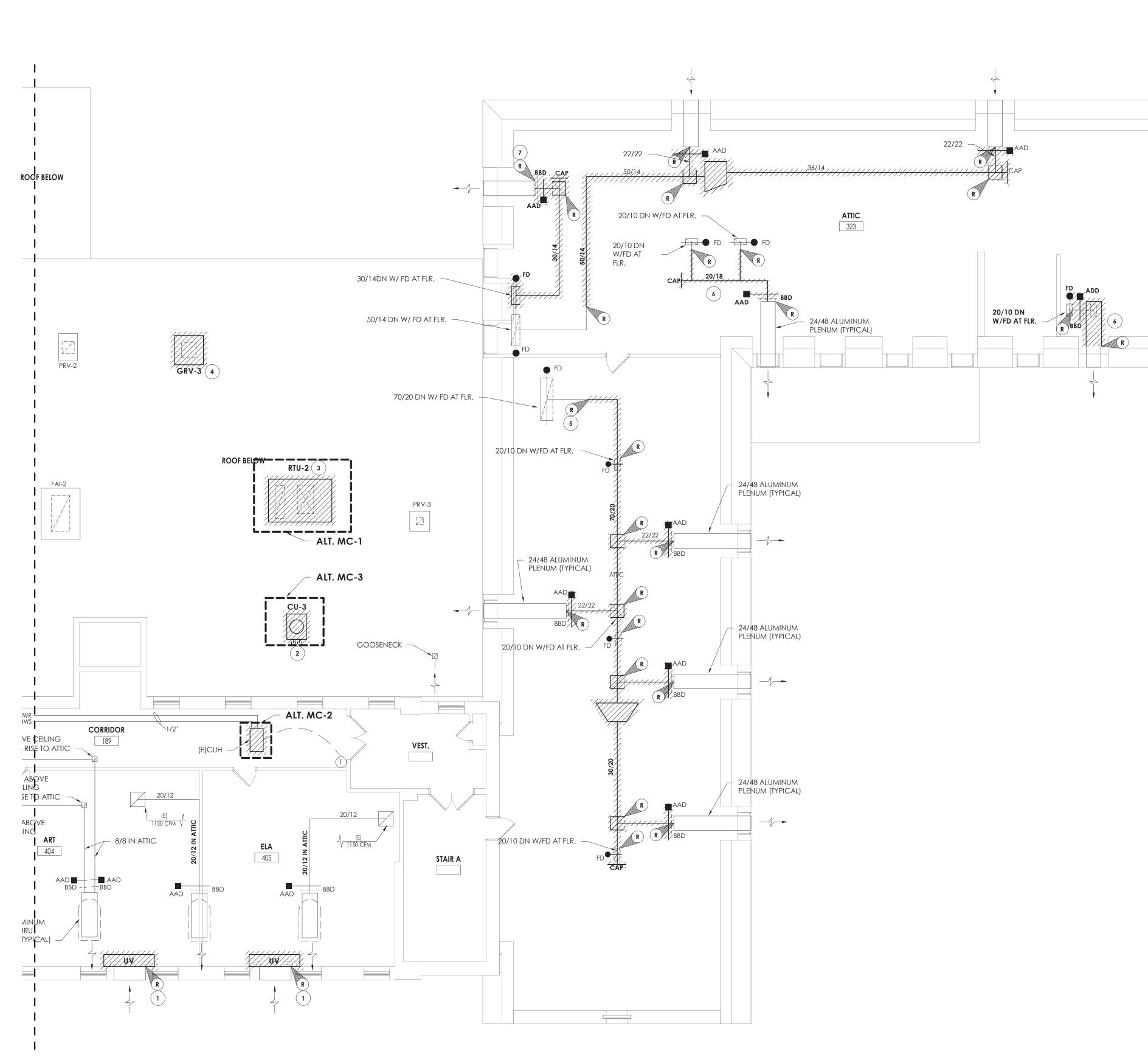
 Description



SHEET INFORMATION

lssued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOC	CUMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
THIRD FLOOR H	AC DEMOLITION
PLAN - AREA C	

Drawing Number HMS H103C



THIRD FLOOR HVAC DEMOLTION PLAN - AREA D

H103D 1/8" = 1'-0"

GENERAL NOTES

1. PRIOR TO CLOSEOUT, SUBMIT ROOFING MAUNFACTURER'S WRITTEN APPROVAL OF ALL ROOFING WORK.

KEY NOTES

- (1) REMOVE EXISTING UNIT VENTILATOR, SAVE OUTDOOR AIR LOUVER AND CONTROL WIRING FOR NEW UNIT.
- (2) REMOVE EXISTING CONDENSING UNIT. PRIOR TO REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENCY OR ORGANIZATION.
- (3) REMOVE EXISTING ROOF TOP UNIT (RTU) IN ITS ENTIRETY. SAVE CONTROLS CONNECTION. PREPARE FOR NEW CURB.
- (4) REMOVE EXISTING RELIEF HOOD. PREPARE ROOF FOR NEW FAN AND CURB.
- (5) REMOVE RELIEF AIR DUCT MAIN. DISCONNECT AT POINTS INDICATED. PREPARE REMAINING DUCTS FOR RE-CONNECTION.
- ($\boldsymbol{\delta}$) REMOVE DUCTWORK TO POINTS INDICATED. PREPARE DUCT FOR NEW FAN AND RECONNECTION.

KEYPLAN

(7) REMOVE 30×14 RELIEF AIR RISER FROM THIS POINT TO RELIEF PLENUM IN ATTIC.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT

Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description

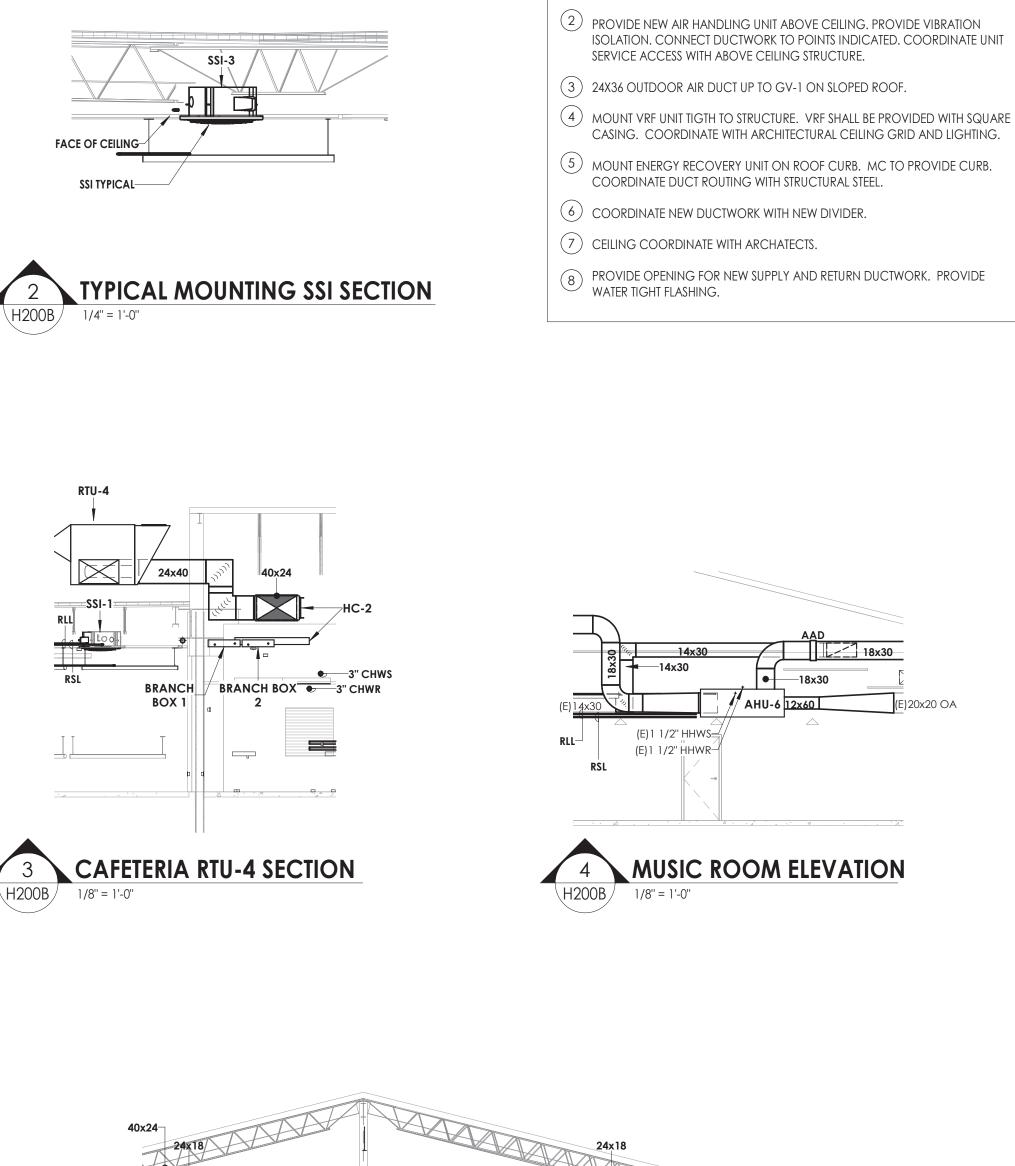
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN TIEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

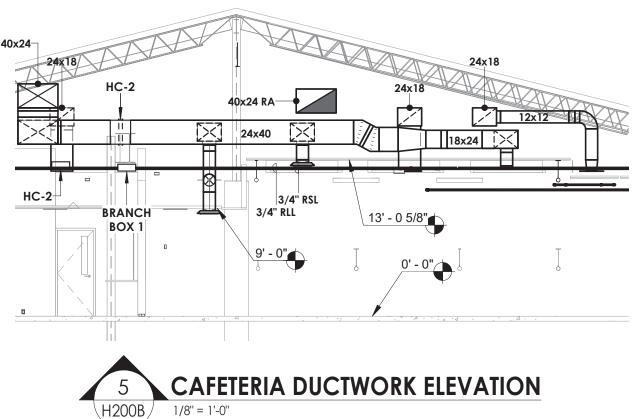
SHEET INFORMATION

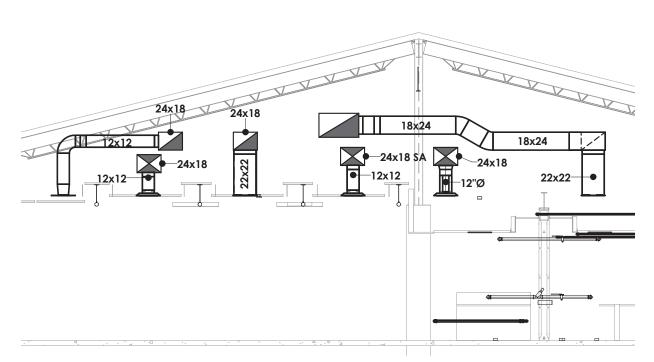
Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DO	CUMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
THIRD FLOOR HVAC DEMOLITION	
PLAN - AREA D	

Drawing Number HMS H103D







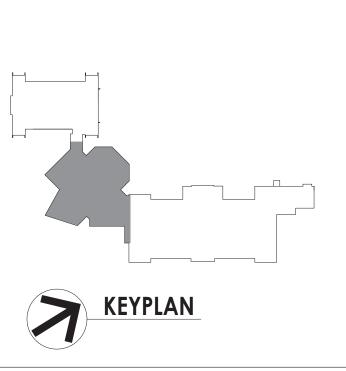






- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- ISOLATION. CONNECT DUCTWORK TO POINTS INDICATED. COORDINATE UNIT

- (8) PROVIDE OPENING FOR NEW SUPPLY AND RETURN DUCTWORK. PROVIDE



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

CPL | Architecture Engineering Planning

Project Address 405 Union Avenue, New Windsor, NY 12553

IMPROVEMENT PROJECT

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

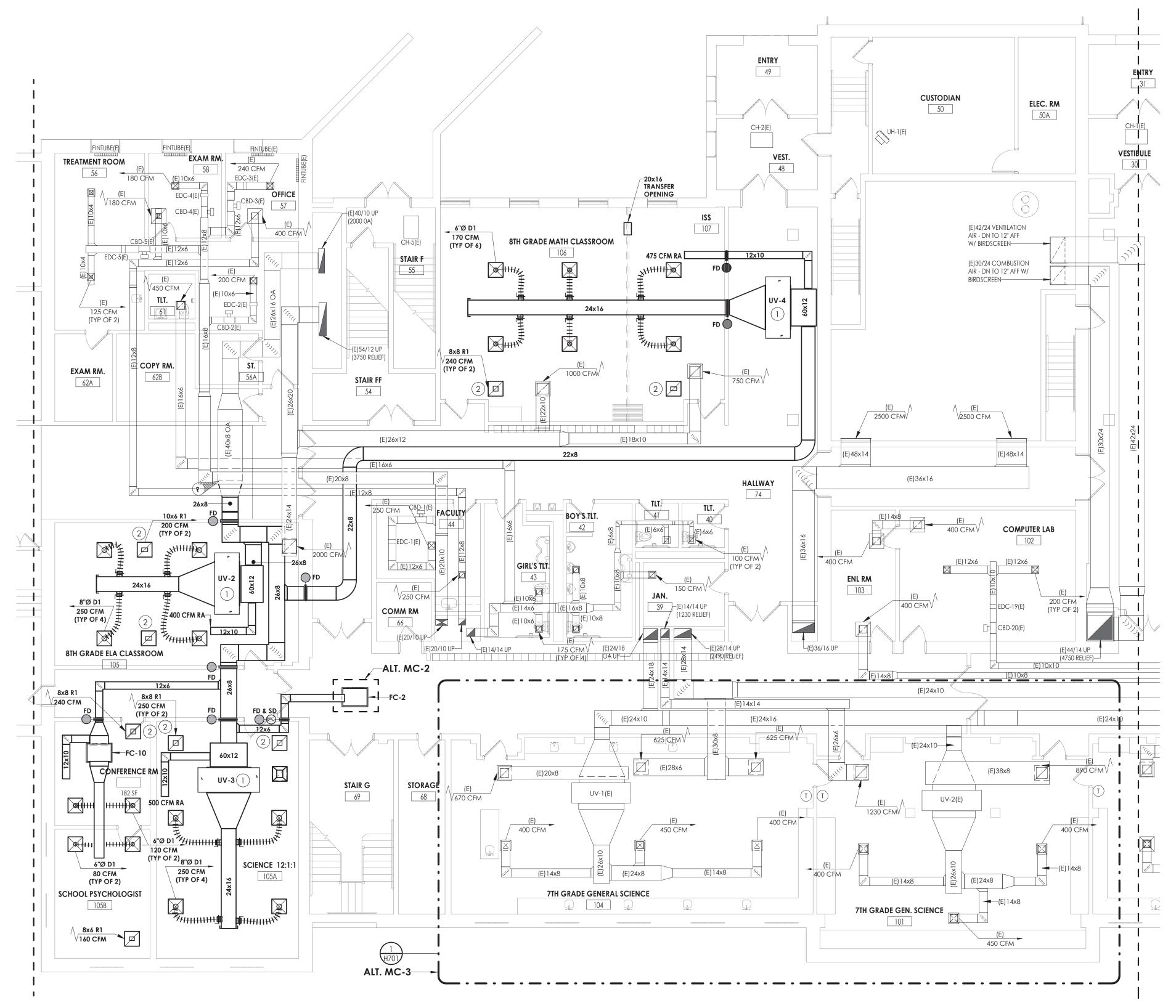
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION Issued Scale 09/09/2021 As indicated Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By NRH JJM Drawing Title

GROUND FLOOR HVAC DUCTWORK PLAN - AREA B

Drawing Number HMS H200B





GROUND FLOOR HVAC DUCTWORK - AREA C

KEY NOTES

(1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.

2 PLENUM RETURN.



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

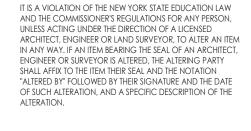
PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

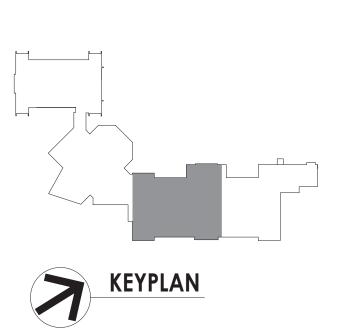
 No.
 Date
 Description

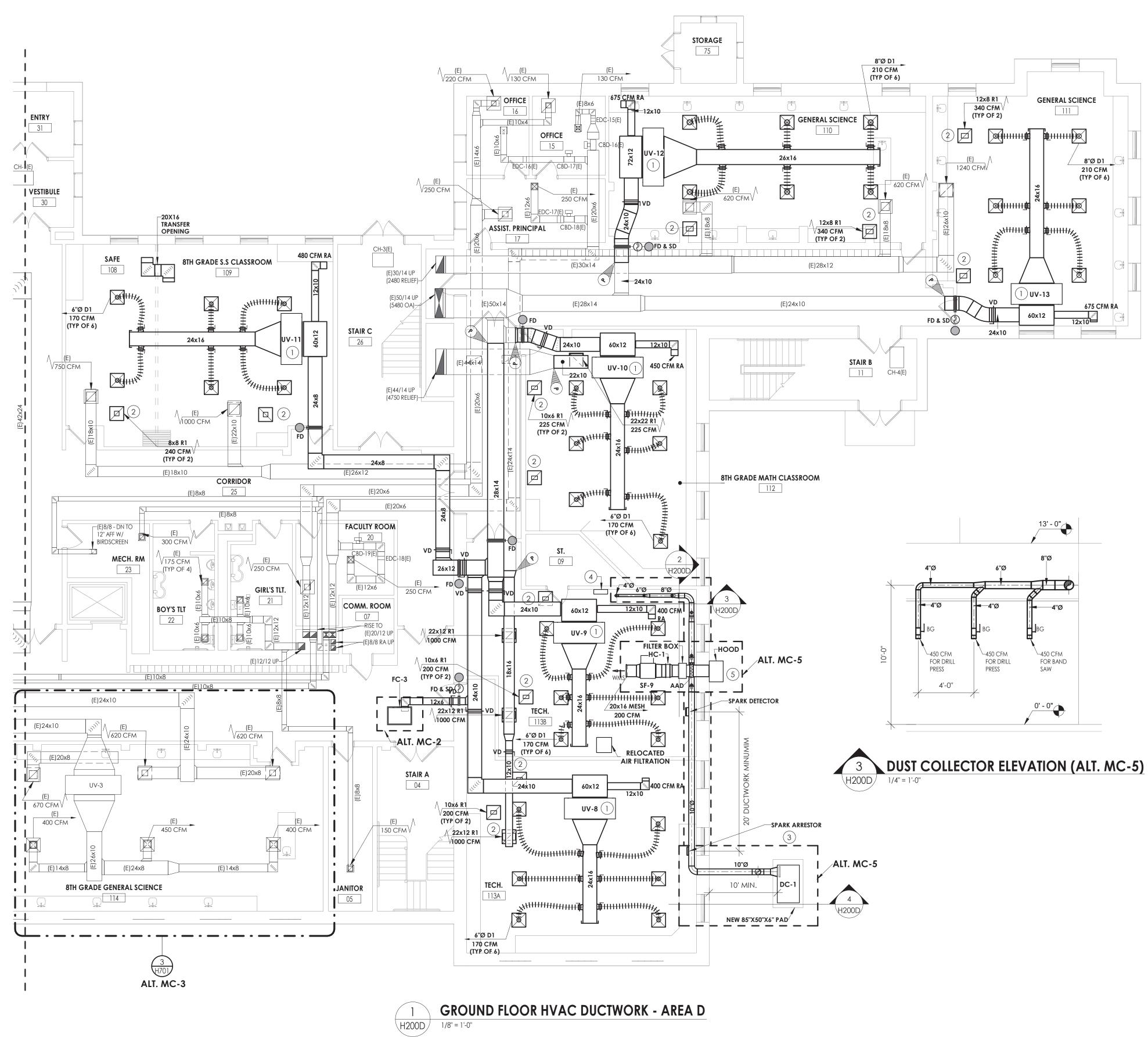


SHEET INFORMATION Issued

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
GROUND FLOOR HVAC	
DUCTWORK PLAN - AREA C	

Drawing Number HMS H200C

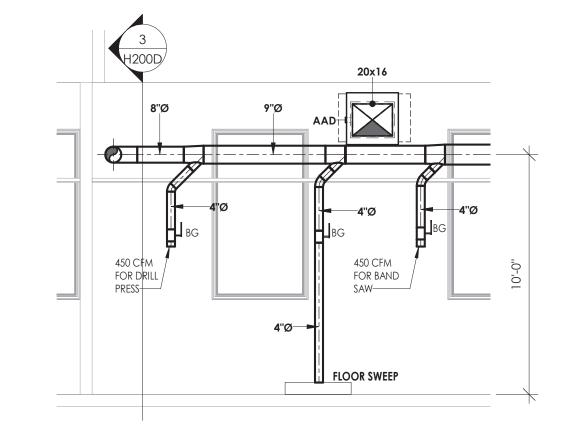




KEY NOTES

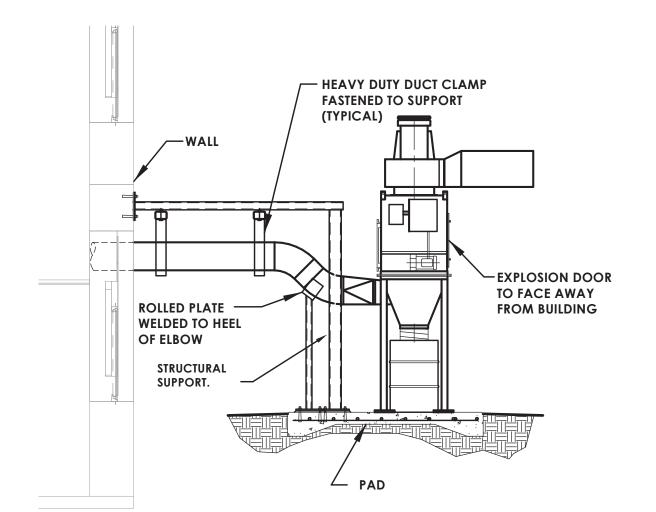
- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (3) ROUTE DUST COLLECTOR MAIN AS HIGH AS POSSIBLE BELOW CEILING. COORDINATE WITH MAKE-UP AIR FAN, COIL AND DUCTWORK.
- (4) MOUNT DUST COLLECTOR CONTROL PANEL 45" AFF.
- (5) HOOD COLOR SHALL MATCH EXISTING EXTERIOR BRICK COLOR. PROVIDE WITH A 36X24 HOOD. BLAST GATES SHALL BE PROVIDED AT EVERY TOOL DROP.

CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

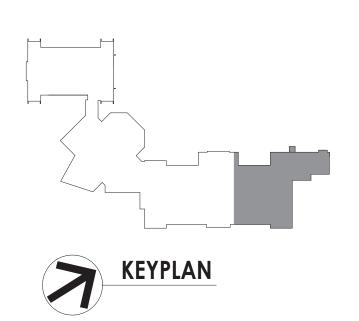




2 DUST COLLECTOR SECTION (ALT. MC-5)







PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL **IMPROVEMENT PROJECT**

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

Project Address

 PROJECT ISSUE SCHEDULE

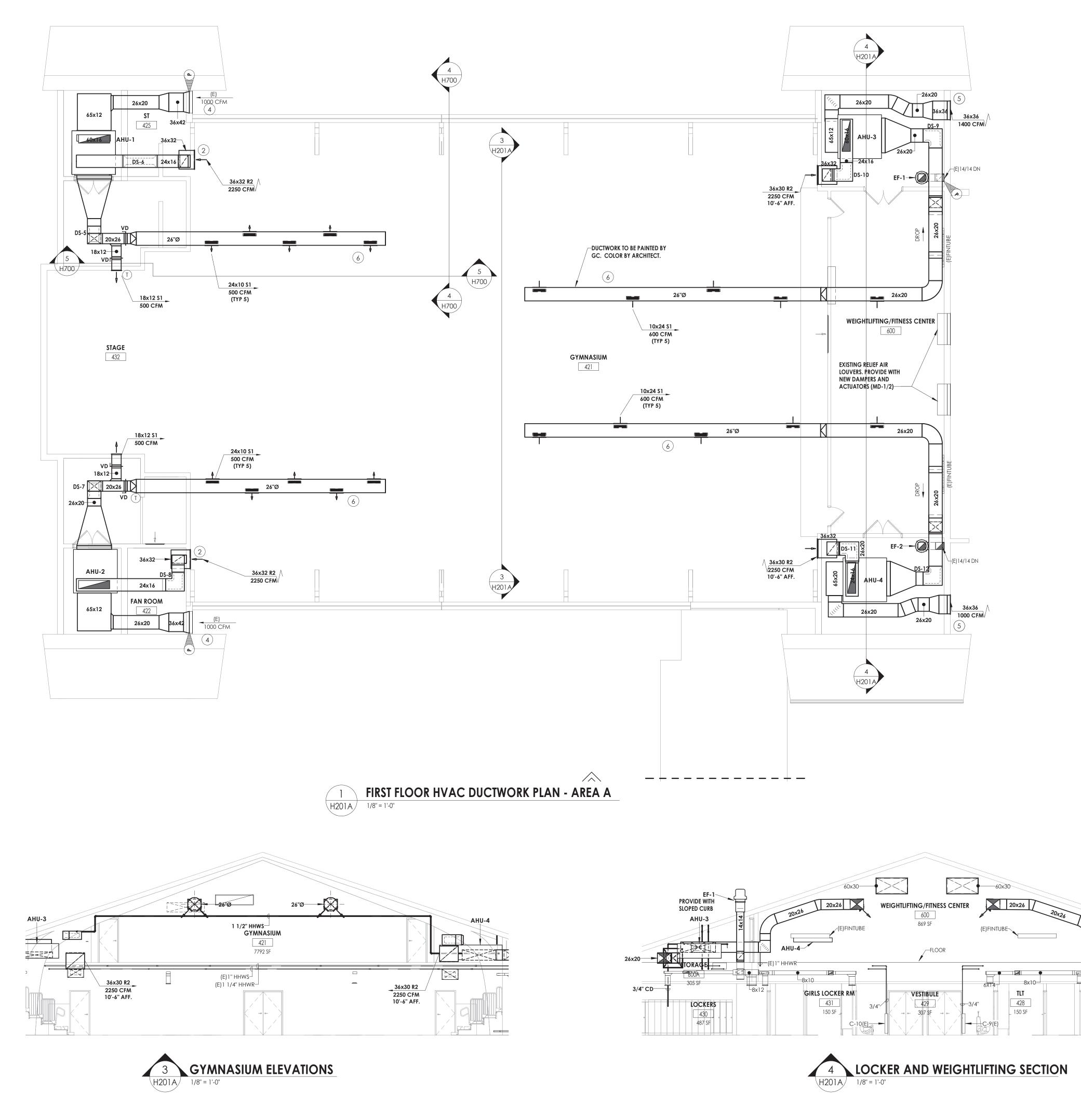
 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCU	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
GROUND FLOOR	HVAC
DUCTWORK PLAN	I - AREA D

Drawing Number HMS H200D



/2021 3:06:13 PM S:\Proiects\Newburgh ECSD\Heritage MS Addtn & Reno\D Design\06 CAD\Revit

KEY NOTES

- 1 MOUNT AIR HANDLING UNIT 12" ABOVE FINISHED FLOOR. MAINTAIN EQUIPMENT ACCESS REQUIREMENTS. EXTEND EXISTING CONTROLS TO NEW UNIT.
- (2) RE-USE EXISTING OPENING IN WALL. PROVIDE NEW LOUVER.
- (3) PROVIDE NEW RETURN AIR LOUVER. COLOR BY ARCHITECT.
- (4) REUSE EXISTING 36"×42" SUPPLY AIR LOUVER.
- 5 PROVIDE NEW OUTDOOR AIR LOUVER. PROVIDE WITH BIRDSCREEN AND
- (6) HANG DUCTWORK WITH CABLE.

DRAINABLE BLADES.

CPL | Architecture Engineering Planning

50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 **CPLteam.com**

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

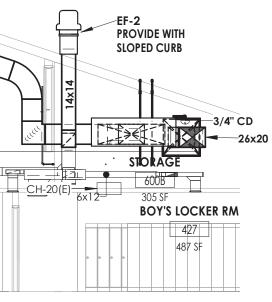
405 Union Avenue, New Windsor, NY 12553

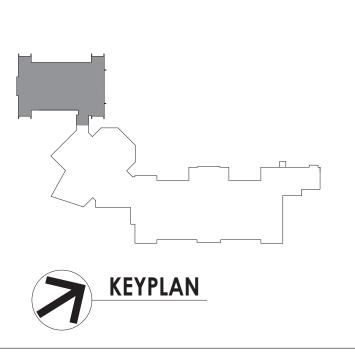
SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description



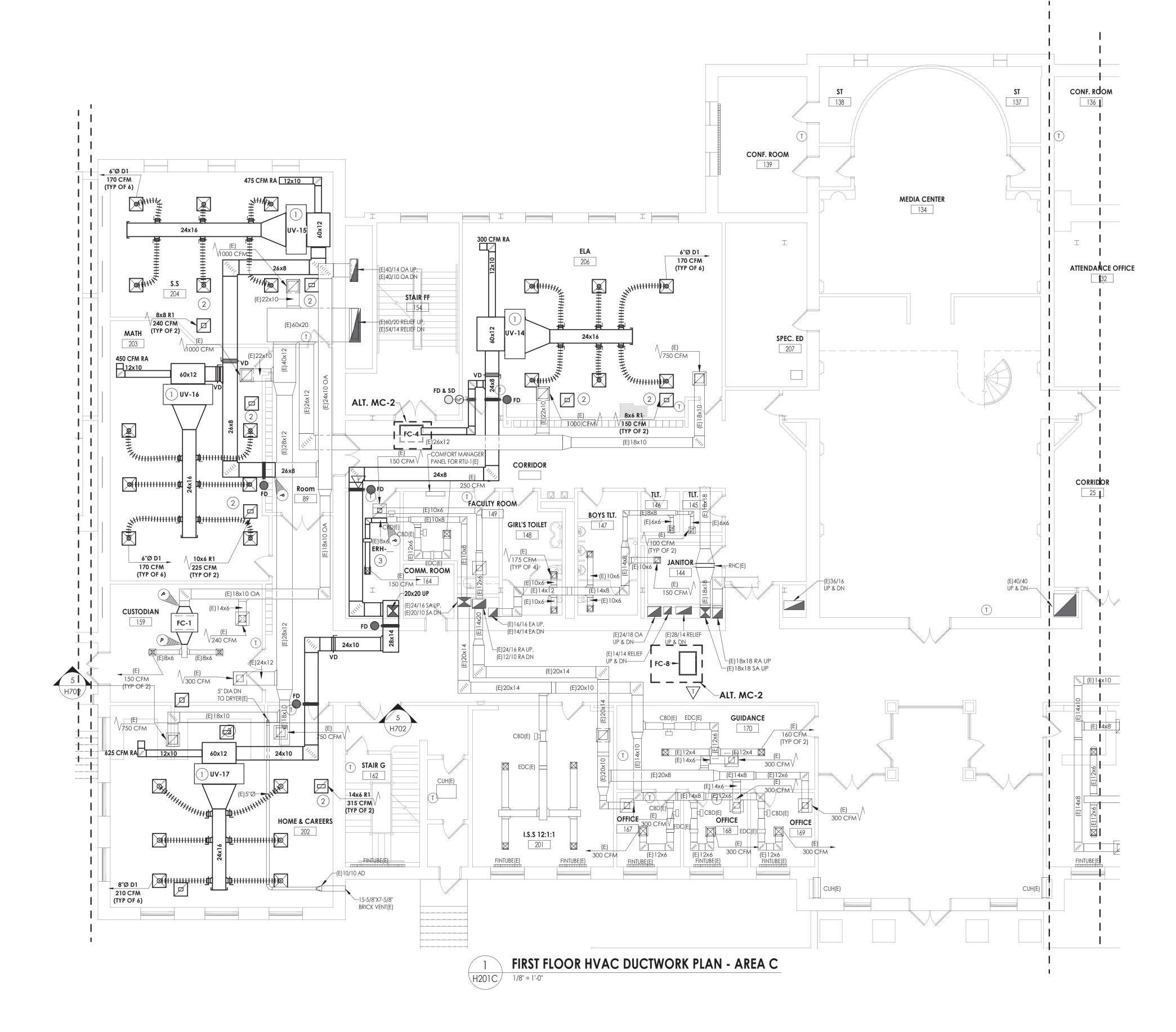


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCL	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
FIRST FLOOR HVA PLAN - AREA A	C DUCTWORK

HMS H201A



KEY NOTES

- 1 MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (3) REROUTE EXISTING DUCTWORK TO ALLOW FOR NEW INSTALLATION.





PROJECT INFORMATION Project Number 13940.18 Client Name **NEWBURGH ENLARGED CITY SCHOOL DISTRICT** Project Name **PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT**

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

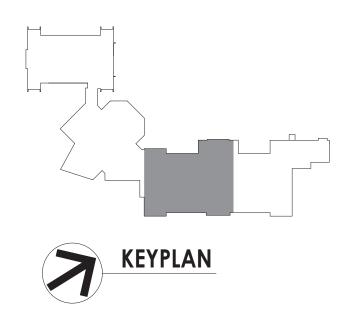
 Description

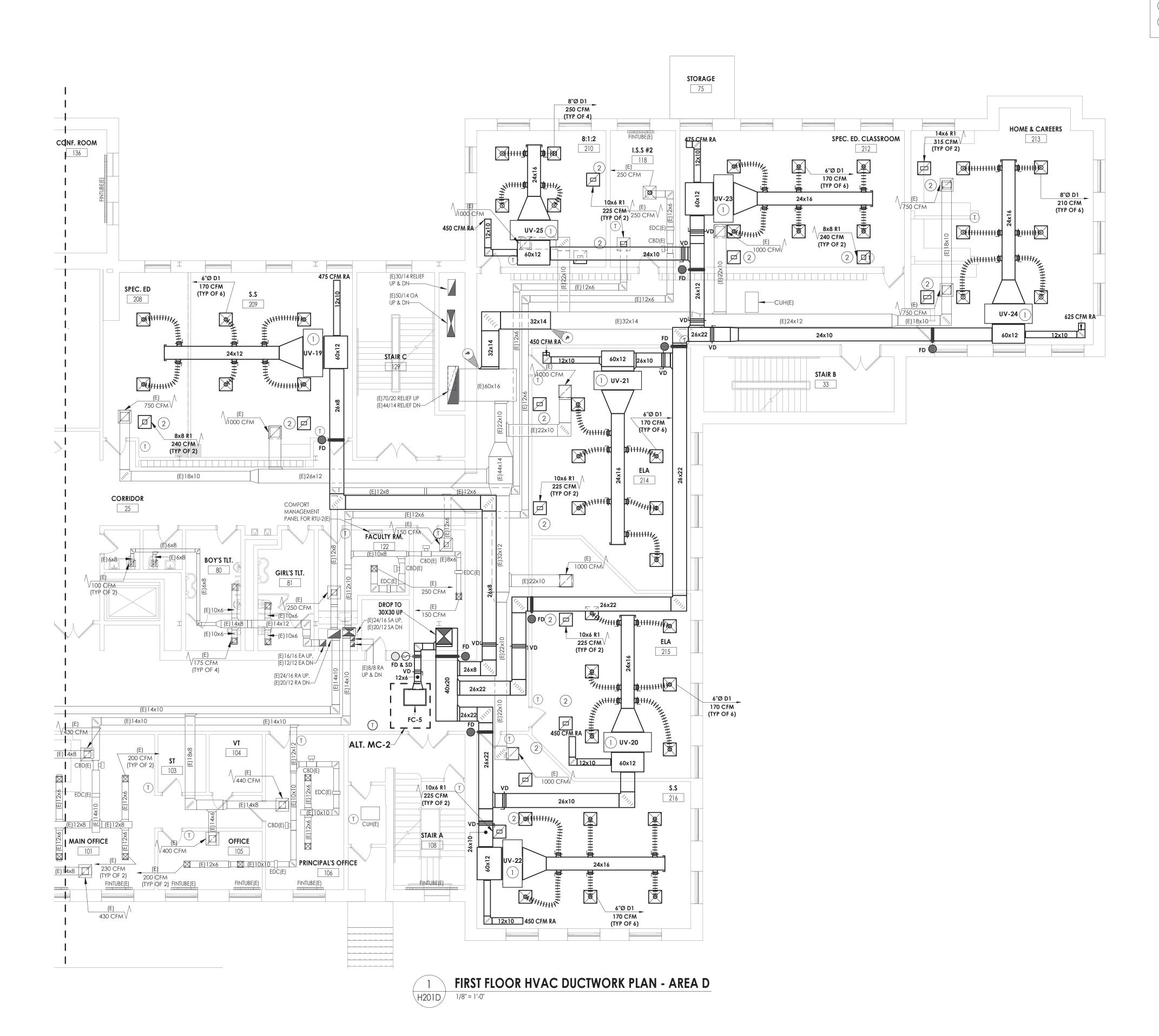
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION	Documents
Drawn By	Checked By
NRH	MLL
Drawing Title	
FIRST FLOOR	HVAC DUCTWORI
PLAN - AREA	С

HMS H201C





KEY NOTES

1 MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.

2 PLENUM RETURN

(3) REROUTE EXISTING DUCTWORK TO ALLOW FOR NEW INSTALLATION.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550

CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

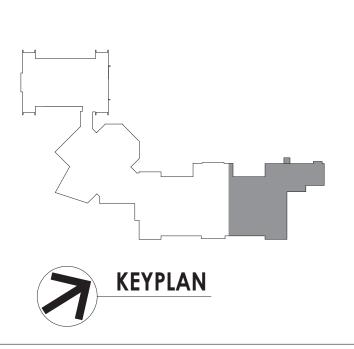
NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

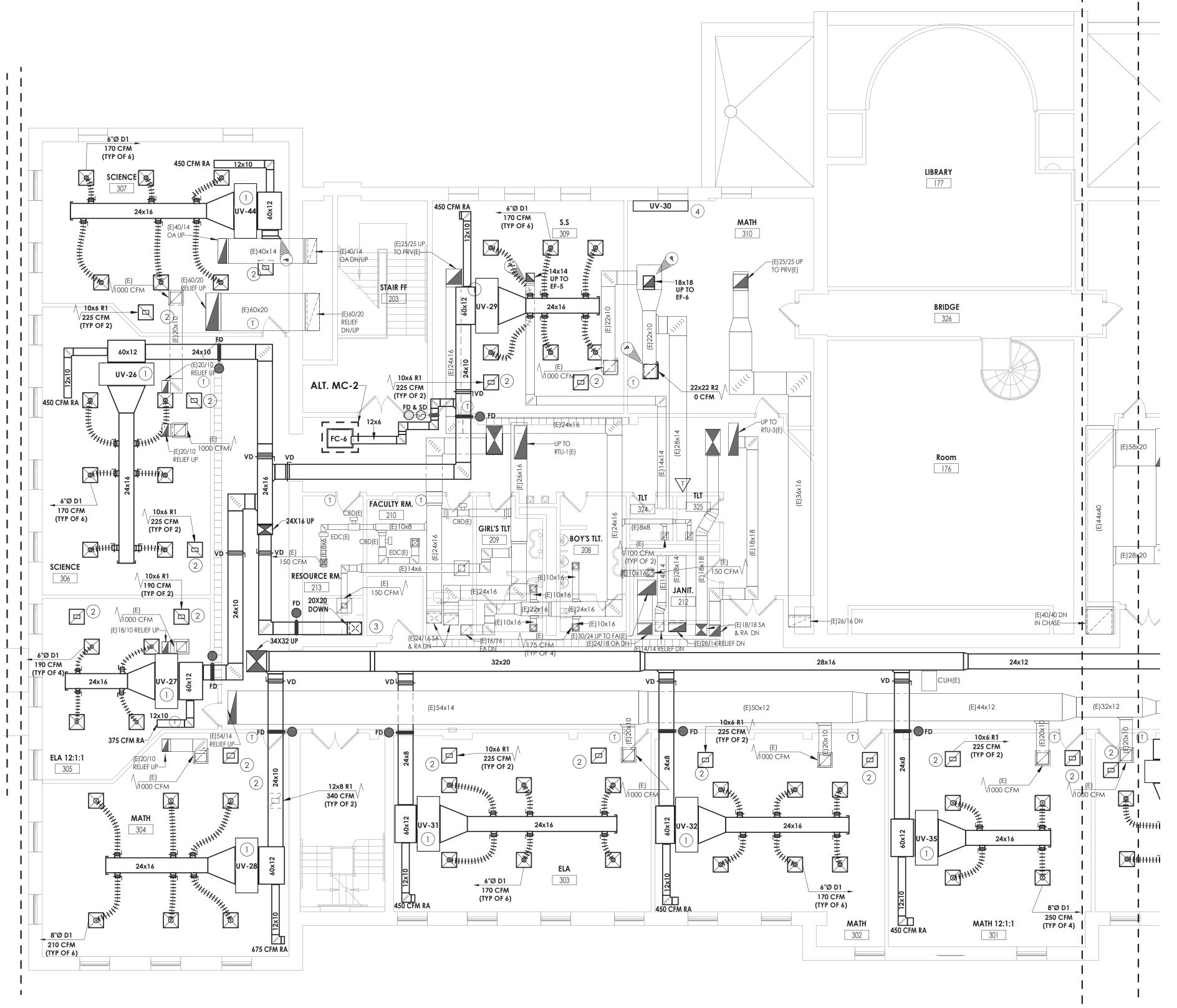


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCI	JMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title FIRST FLOOR HVA PLAN - AREA D	C DUCTWORK

HMS H201D



SECOND FLOOR HVAC DUCTWORK PLAN - AREA C

KEY NOTES

- 1 MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (3) REMOVE EXISTING DUCTWORK TO ALLOW FOR NEW INSTALLATION.
- 4 PROVIDE NEW UNIT VENTILATOR IN SAME LOCATION AS EXISTING. CONNECT TO EXISTING UTILITIES. (MODIFY EXISTING CASEWORK AS NEEDED FOR INSTALLATION OF NEW UNIT VENTILATOR.)



PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

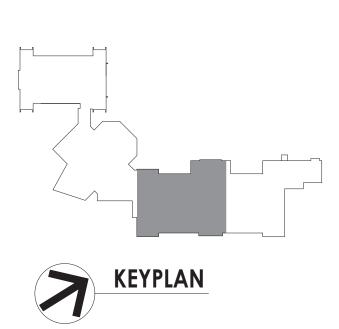
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description

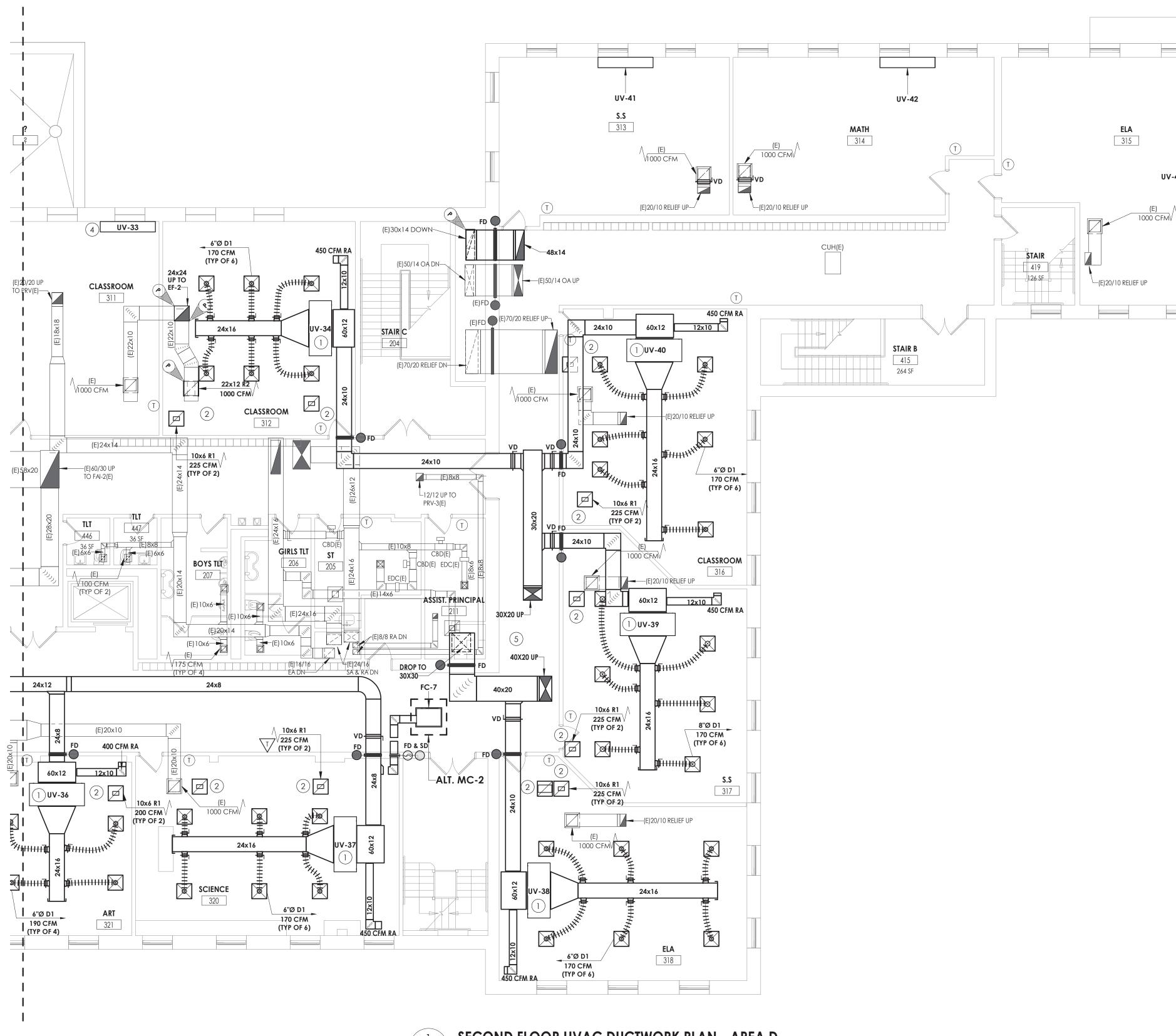


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCI	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
SECOND FLOOR HVAC	
DUCTWORK PLAN - AREA C	

HMS H202C



SECOND FLOOR HVAC DUCTWORK PLAN - AREA D H202D 1/8" = 1'-0"



- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.

UV-43—

- (3) DUCTWORK LOCATED IN ATTIC SPACE.
- 4 PROVIDE NEW UNIT VENTILATOR IN EXISTING LOCATION. EXTEND EXISTING UTILITIES TO NEW UNIT. COORDINATE NEW INSTALLATION WITH EXISTING CABINETS.
- (5) REROUTE EXISTING DUCTWORK AS NEEDED TO ACCOMMODATE NEW INSTALLATION.



50 FRONT ST. SUITE 202

NEWBURGH, NY 12550

CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

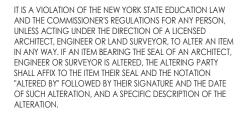
SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description

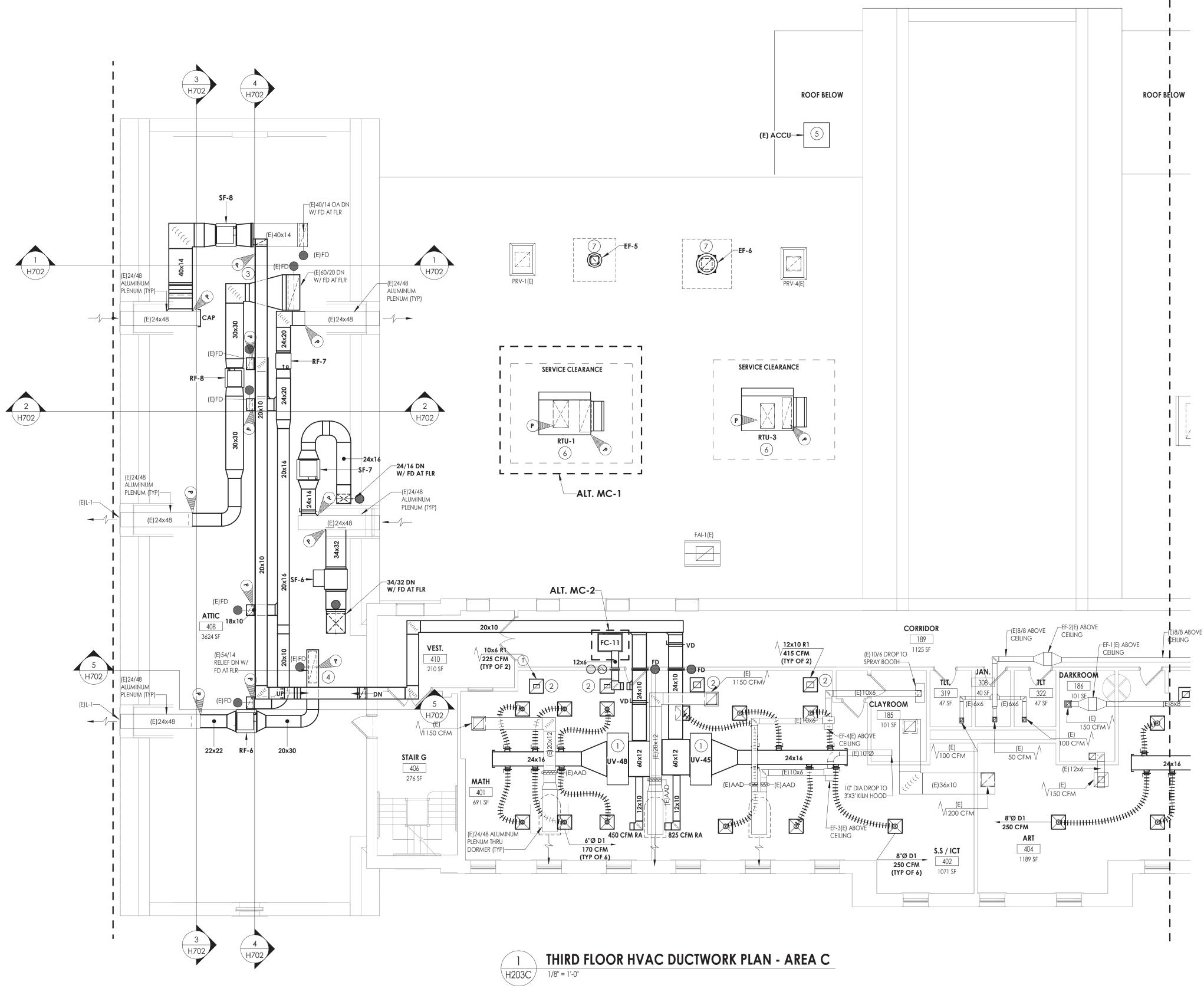


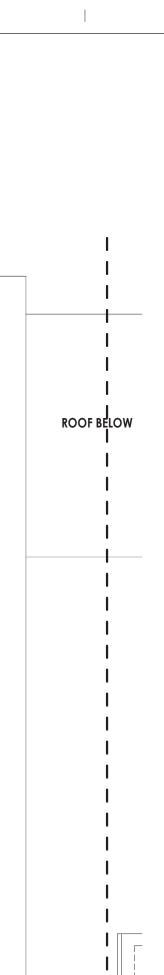


SHEET INFORMATION

Scale	
As indicated	
JMENTS	
Checked By	
JJM	
SECOND FLOOR HVAC	
DUCTWORK PLAN - AREA D	

Drawing Number HMS H202D





KEY NOTES

- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (3) CONNECT TO EXISTING DUCTWORK. EXTEND OUTDOOR AIR TO NEW UNITS.
- (4) CONNECT TO EXISTING RELIEF DUCTWORK. EXTEND DUCTWORK TO CLASSROOMS.
- (5) REINSTALL EXISTING ACCU. RECONNECT EXISTING REFRIGERANT PIPING. PROVIDE NEW REFRIGERANT CHARGE. RE-USE EXISTING WOOD SLEEPERS. CONFIRM OPERATION OF EIXISTNG AC UNIT IS CUSTODIAL OFFICE.
- (6) ROOF TOP UNIT SHALL BE PROVIDED WITH NEW CURB. CONNECT TO EXISTING DUCT RISERS.
- (7) EXHAUST FANS SHALL BE PROVIDED WITH NEW CURB. CONNECT TO EXISTING DUCT RISERS.
- (8) SUPPLY DUCT SHALL BE ROUTED THROUGH ROOF. ROOF WORK SHALL BE CONDUCTED BY CERTIFIED ROOFING INSTALLERS. DUCTWORK SHALL BE MOUNTED ON WIND RATED ROOF SUPPORTS.
- (9) RETURN DUCT SHALL BE ROUTED THROUGH ROOF. ROOF WORK SHALL BE CONDUCTED BY CERTIFIED ROOFING INSTALLERS. DUCTWORK SHALL BE MOUNTED ON WIND RATED ROOF SUPPORTS.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name

PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

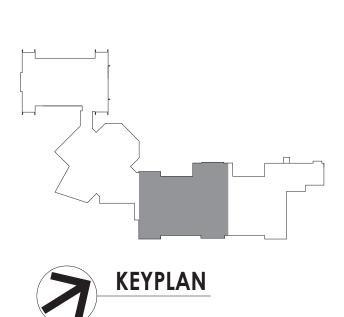
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description

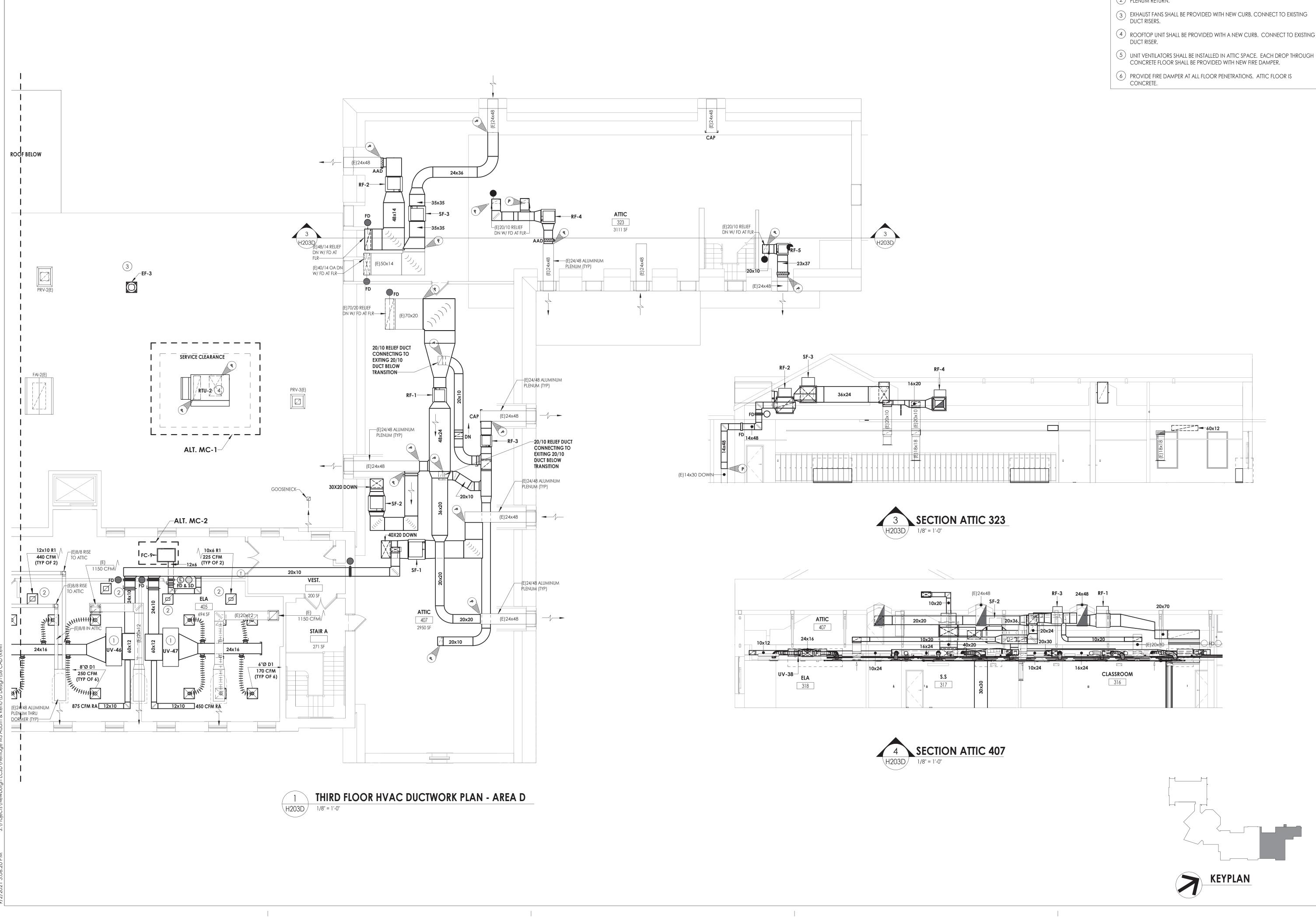


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
THIRD FLOOR HV.	AC DUCTWORK
PLAN - AREA C	

Drawing Number HMS H203C



KEY NOTES

- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (4) rooftop unit shall be provided with a new curb. Connect to existing



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

IMPROVEMENT PROJECT

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

Project Address

 PROJECT ISSUE SCHEDULE

 No.
 Date

 Description

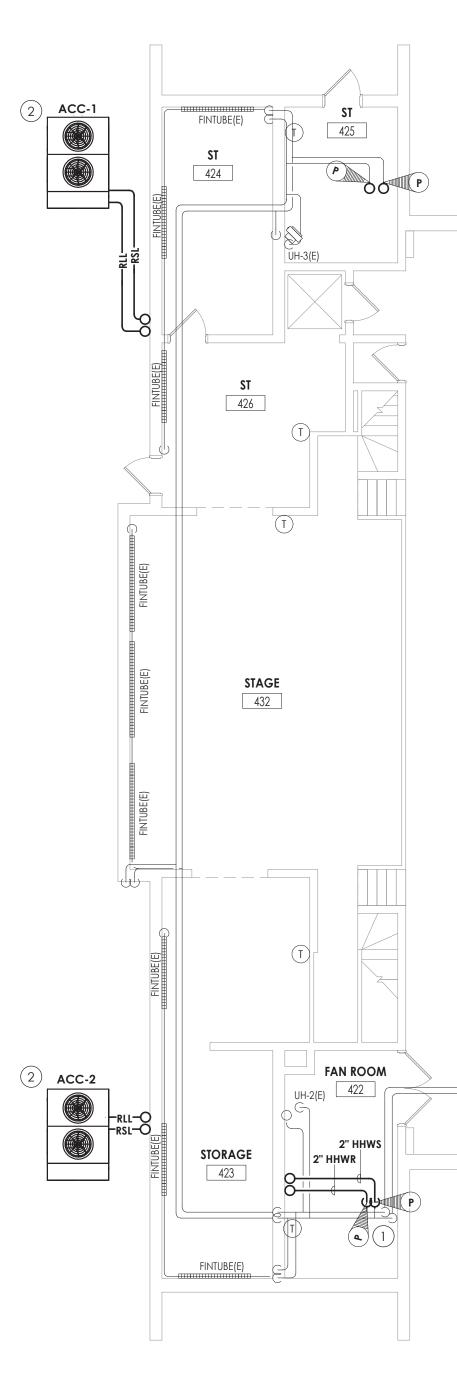
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

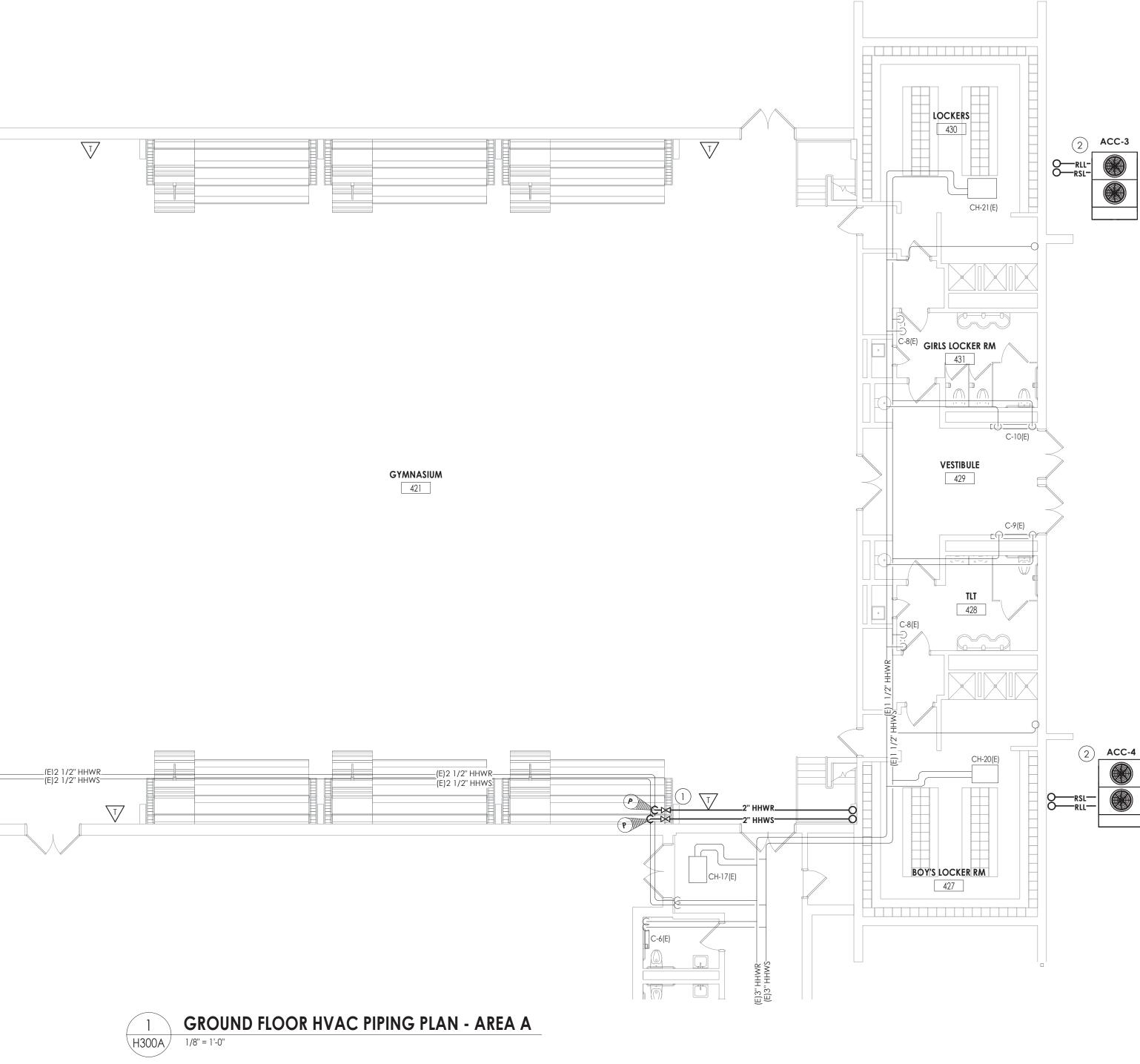
SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCU	JMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
THIRD FLOOR HVAC DUCTWORK	
PLAN - AREA D	

Drawing Number HMS H203D

2/2021 3:06:21 PM S:/Projects/Newburgh ECSD/Heritage MS Addtn & Reno/D Design/06 CAD/Re



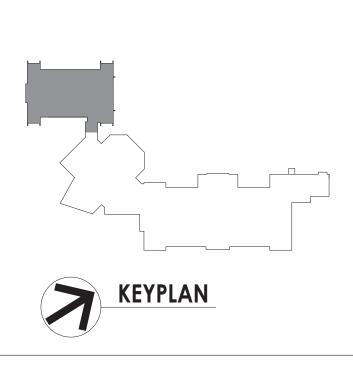


GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com



Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

PROJECT INFORMATION

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

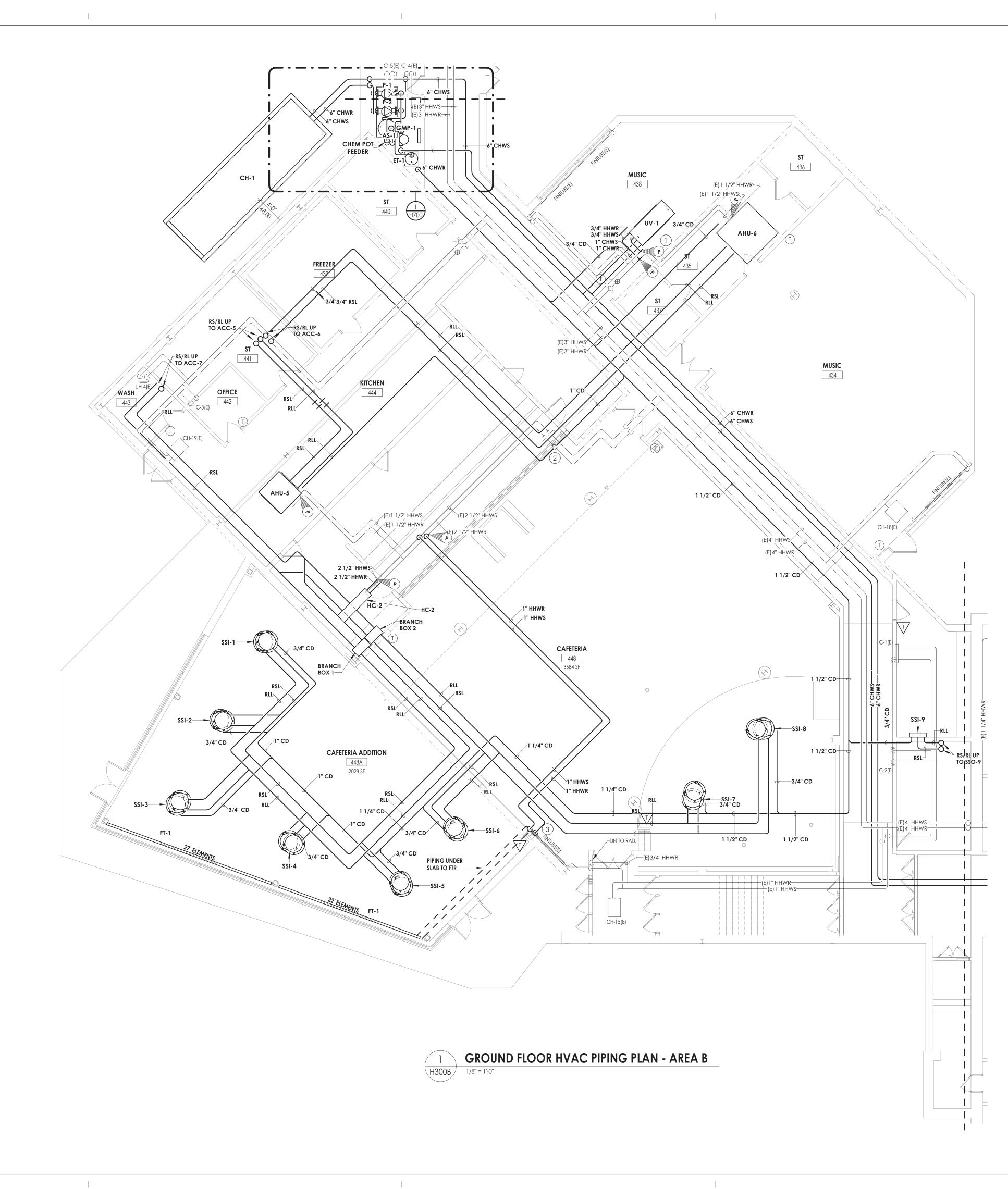
 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCL	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
GROUND FLOOR	HVAC PIPING
PLAN - AREA A	

HMS H300A



GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- 1 CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICATED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- (2) REBALANCE EXISTING BALANCING VALVE TO NEW FLOW.
- (3) ROUTE PIPING DOWN COLUMN ENCLOSURE.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

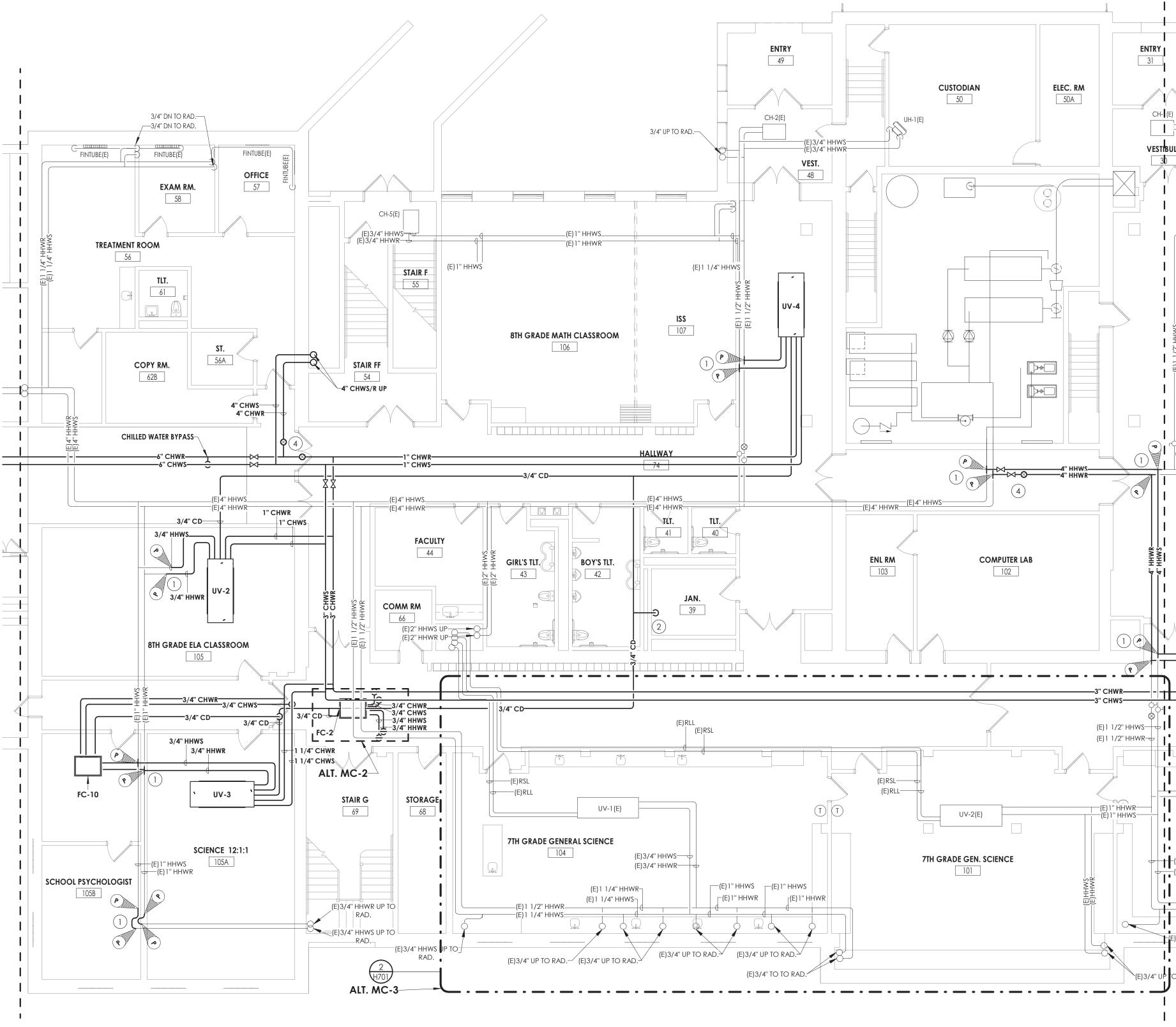
SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DO	CUMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
GROUND FLOC	R HVAC PIPING
PLAN - AREA B	

Drawing Number HMS H300B

KEYPLAN

2/2021 3:06:25 PM S:\Projects\Newburgh ECSD\Heritage MS Addtn & Reno\D Design\06 CAD\



GROUND FLOOR HVAC PIPING PLAN - AREA C 1/8" = 1'-0"

1 H300C

GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- 1 CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- (2) SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.
- 3 REMOVE 50' OF EXISTING 1" HOT WATER PIPING. REINSTALL PIPING TIGHT TO STEEL AND STACK TO ALLOW FOR NEW INSTALATION OF CHILLED WATER PIPING.
- 4 BALANCE SYSTEM BRANCH. COORDINATE WITH SCHEDULES AND SUBMITTED EQUIPMENT.



NEWBURGH, NY 12550 CPLteam.com

50 FRONT ST. SUITE 202

PROJECT INFORMATION
Project Number
13940.18
Client Name
NEWBURGH ENLARGED CITY
SCHOOL DISTRICT

Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

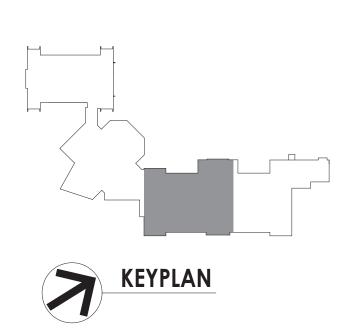
 No.
 Date

 Description

(E) 1" HHWR (E) 1" HHWS

(E)3/4" UP TO RAD.

O RAD.

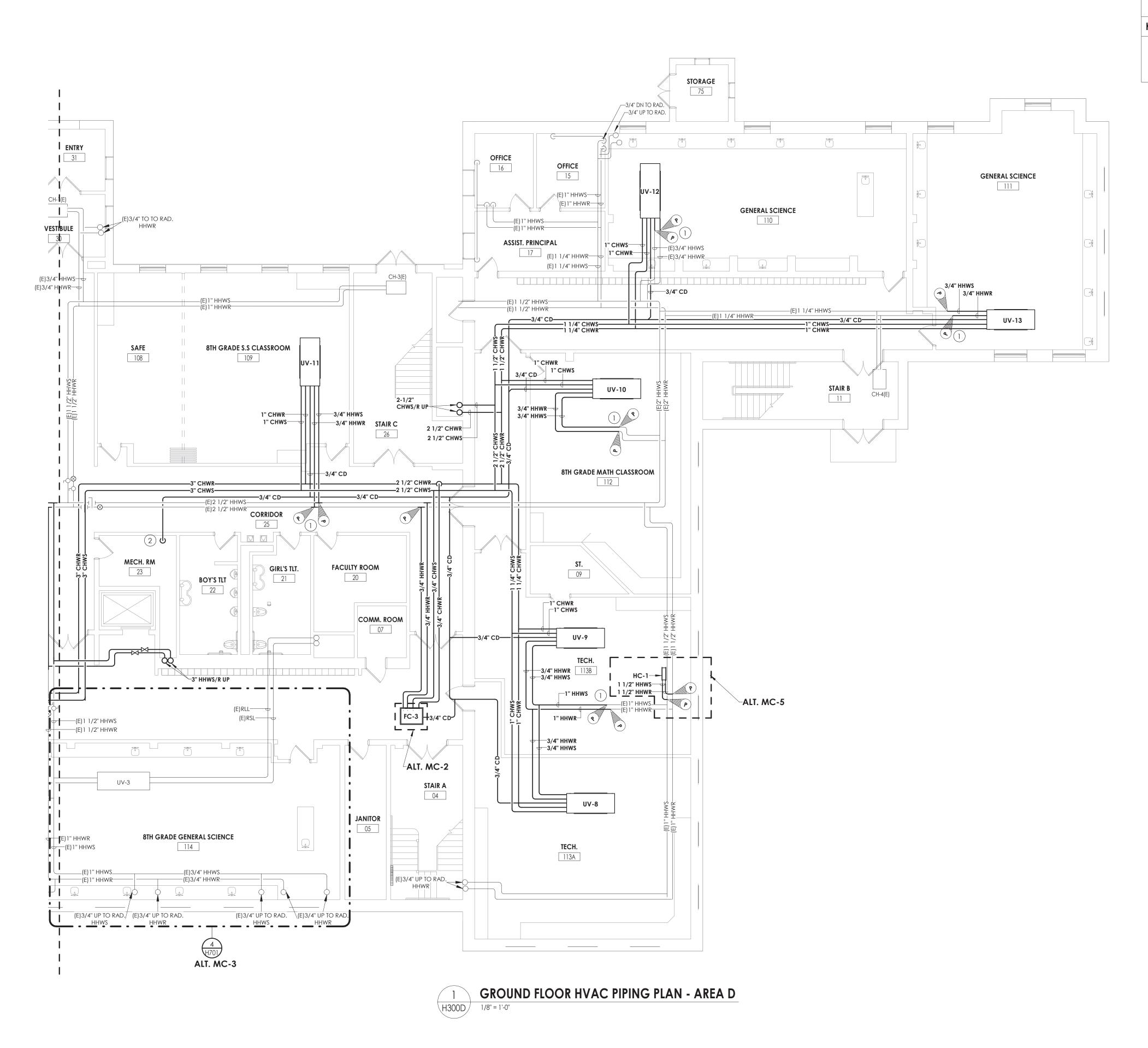


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCL	JMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
GROUND FLOOR	HVAC PIPING
PLAN - AREA C	

HMS H300C



GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- 2 SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name

PROJECT INFORMATION

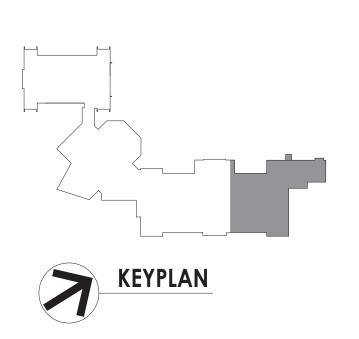
PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

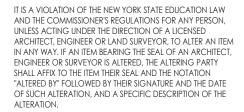
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description



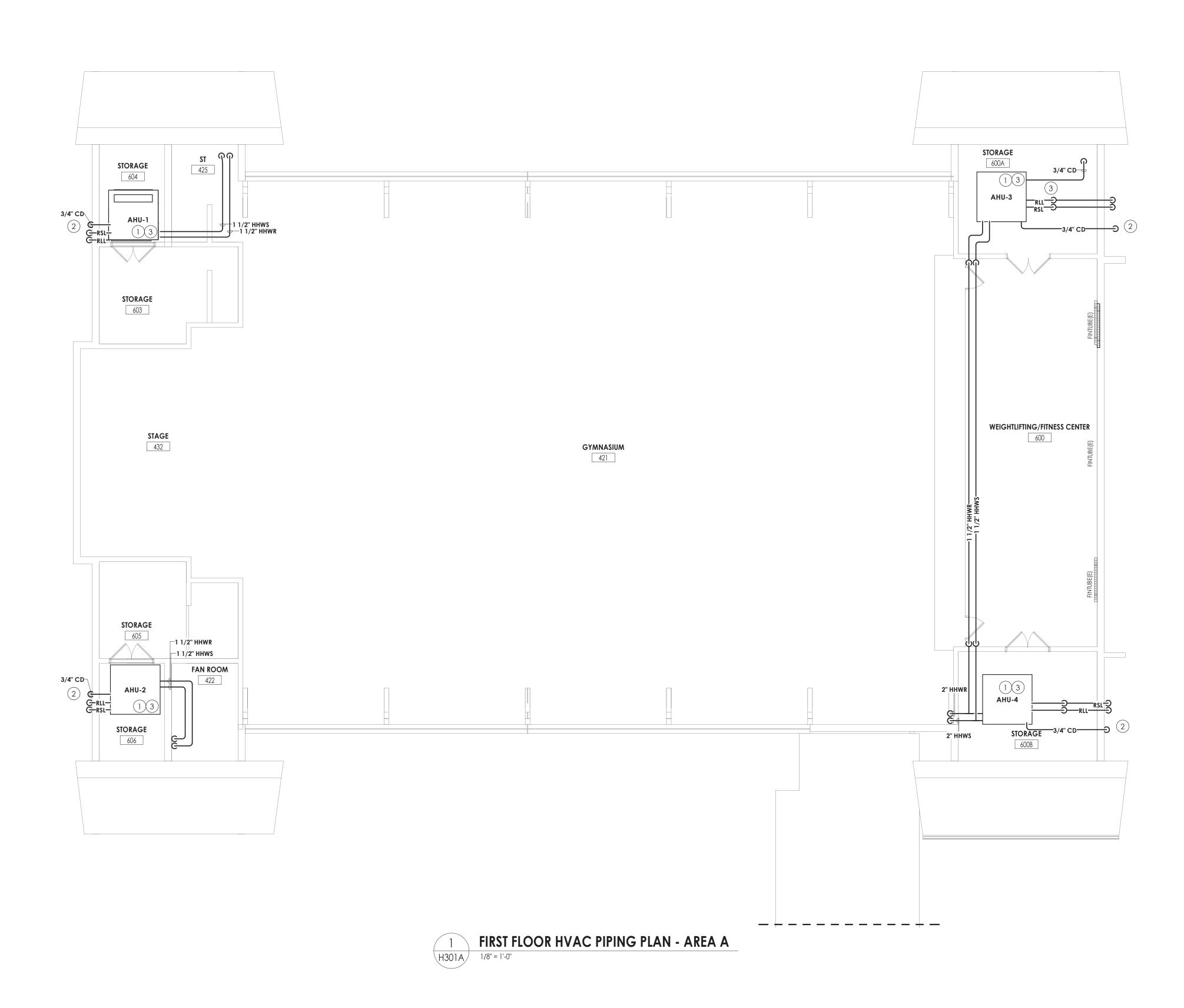


SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title GROUND FLOOR PLAN - AREA D	HVAC PIPING

HMS H300D

2/2021 3:06:27 PM S:/Projects/Newburgh ECSD/Heritage MS Addtn & Reno/D Design/06 C/AD/Re²



GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

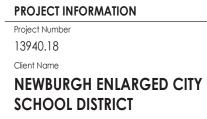
KEY NOTES

- 1) REFER TO H300 FOR TEMPERATURE SENSORS.
- (2) CONDENSATE SHALL BE ROUTED TO NEAREST EXTERNAL WALL.
- 3 AIR HANDLING UNITS SHALL BE FLOOR MOUNTED. PROVIDE VIBRATION ISOLATION.



50 FRONT ST. SUITE 202

NEWBURGH, NY 12550 CPLteam.com



Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

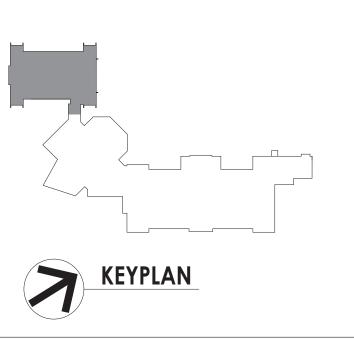
Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description



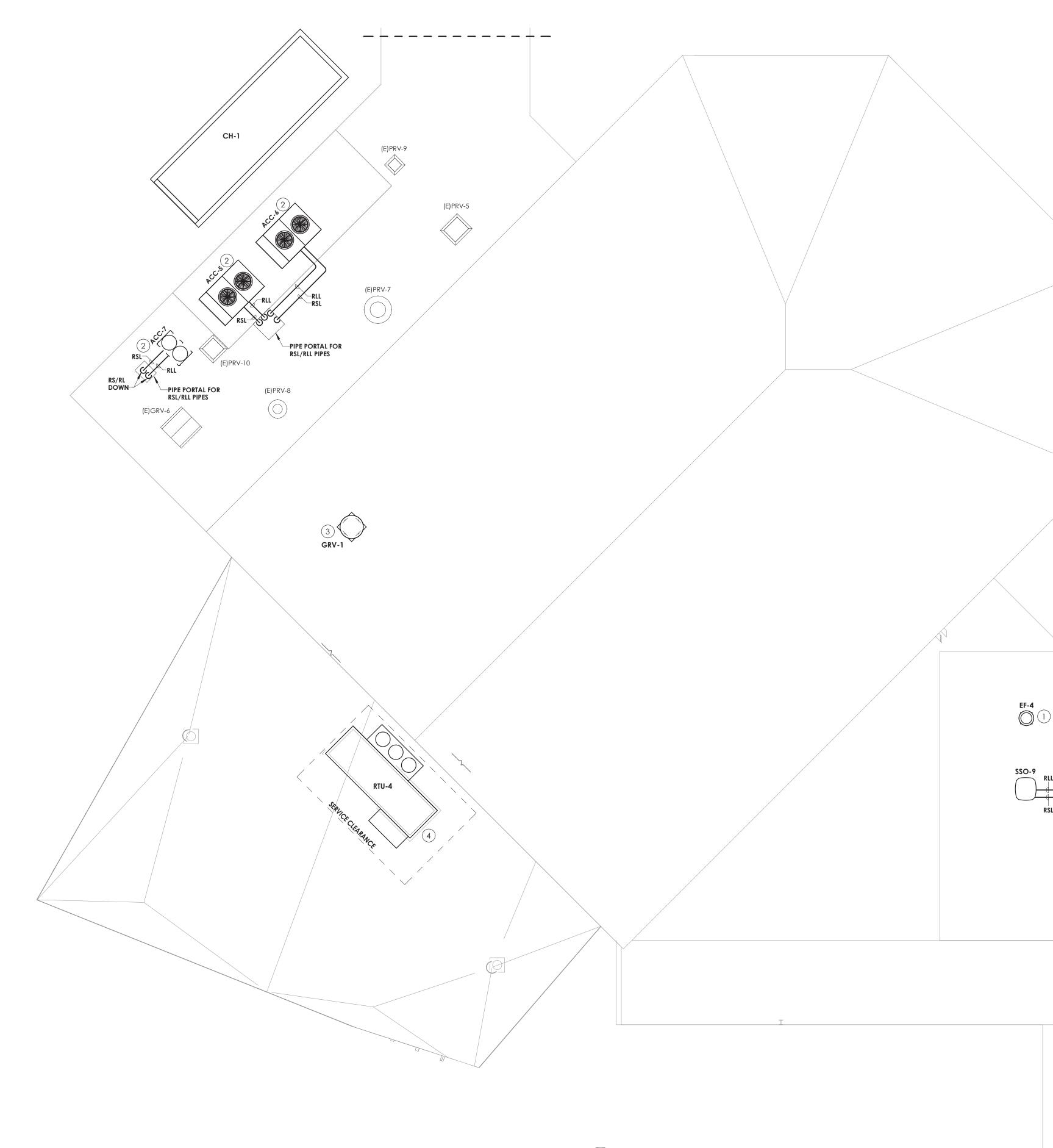
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DOCI	JMENTS	
Drawn By	Checked By	
NRH	JJW	
Drawing Title		
FIRST FLOOR HVAC PIPING PLAN -		
AREA A		

HMS H301A

/2/2021 3:06:28 PM S:\Projects\Newburgh ECSD\Heritage MS Addtn & Reno\D Design\06 CAD\Revi



1FIRST FLOOR HVAC PIPING PLAN - AREA BH301B1/8" = 1'-0"

GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- 1 INSTALL NEW RELIEF FAN ON EXISTING CURB.
- 2 PROVIDE NEW RAILS WITH VIBRATION ISOLATION FOR NEW CONDENSING UNIT.

3 PROVIDE NEW GRAVITY INTAKE AND SLOPED CURB. FIELD VERIFY ROOF SLOPE.

4 PROVIDE NEW ROOFTOP UNIT WITH 12" CURB.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 **CPLteam.com**

PROJECT INFORMATION
Project Number
13940.18
Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

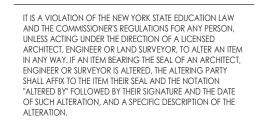
Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

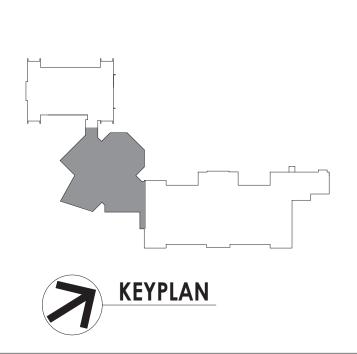
 No.
 Date
 Description



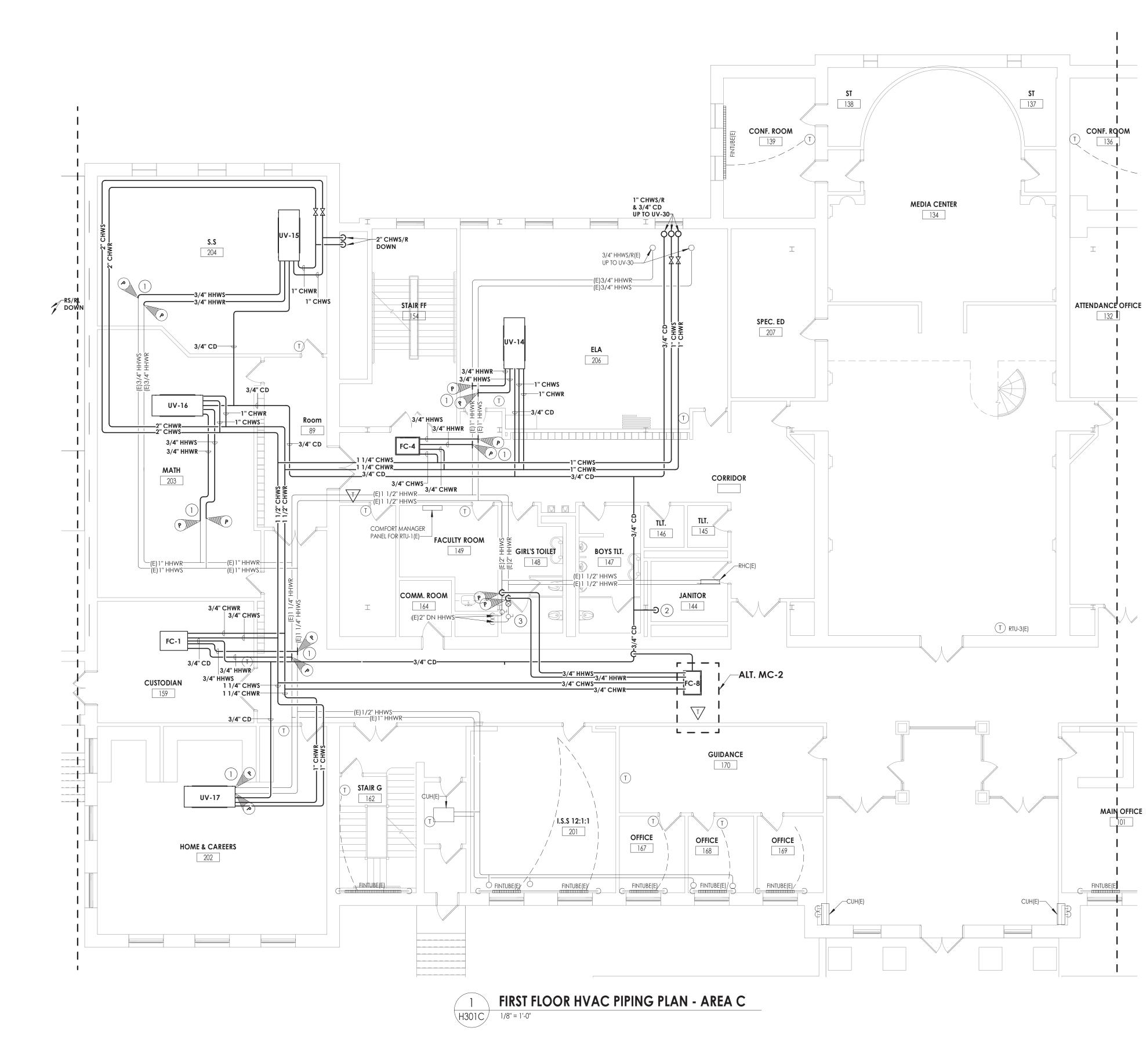
SHEET INFORMATION

Issued	2cale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DO	ocuments	
Drawn By	Checked By	
NRH	MLL	
Drawing Title		
FIRST FLOOR HVAC PIPING PLAN		
AREA B		

HMS H301B



2/2021 3:06:29 PM S:\Projects\Newburgh ECSD\Heritage MS Addth & Reno\D Design\06 CAD\Re



GENERAL NOTES

- ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- 1 CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- (2) SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.
- 3 BALANCE SYSTEM BRANCH. COORDINATE WITH SCHEDULES AND SUBMITTED EQUIPMENT.

KEYPLAN



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION
Project Number
13940.18
Client Name

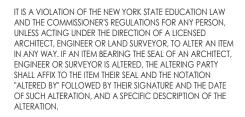
NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

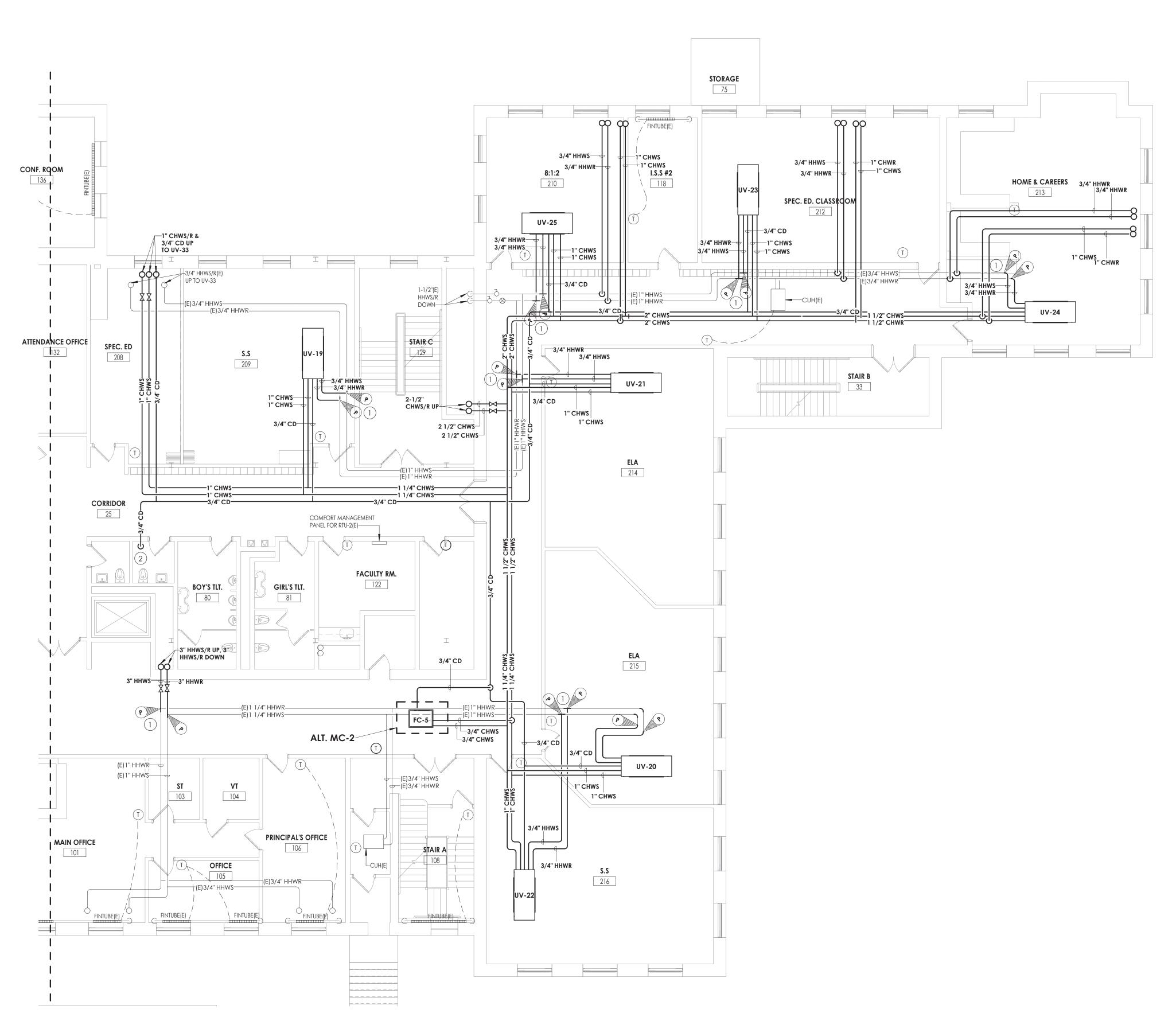
 No.
 Date
 Description



SHEET INFORMATION

lssued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DO	DCUMENTS	
Drawn By	Checked By	
NRH	JJW	
Drawing Title		
FIRST FLOOR HVAC PIPING PLAN		
AREA C		

HMS H301C



1 **FIRST F** H301D 1/8" = 1'-0"

FIRST FLOOR HVAC PIPING PLAN - AREA D

GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- (1) CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- 2 SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

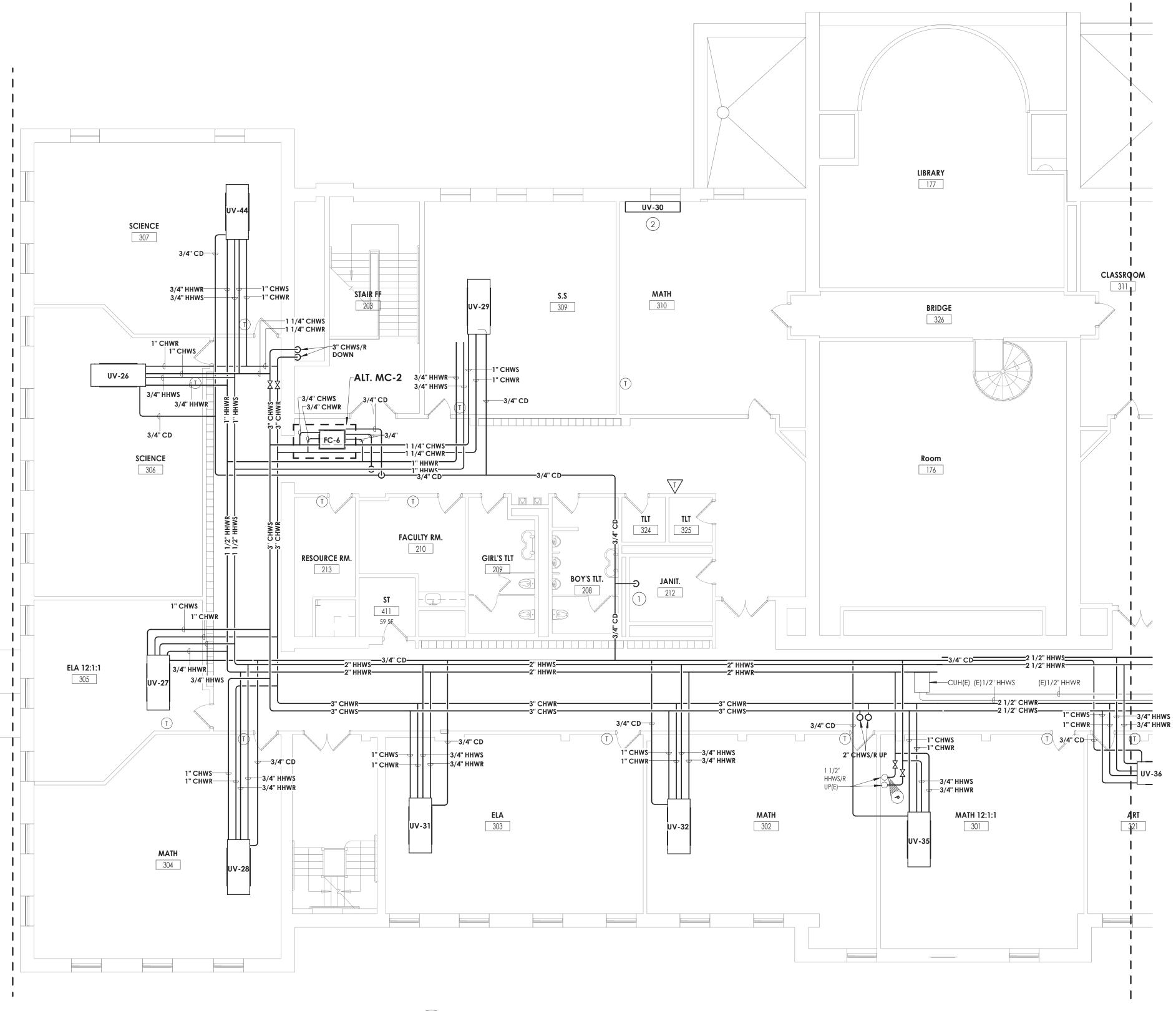


IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DOCU	JMENTS	
Drawn By	Checked By	
NRH	MLL	
Drawing Title		
FIRST FLOOR HVAC PIPING PLAN AREA D		

HMS H301D



SECOND FLOOR HVAC PIPING PLAN - AREA C

1 **SECON** H302C 1/8" = 1'-0"

GENERAL NOTES

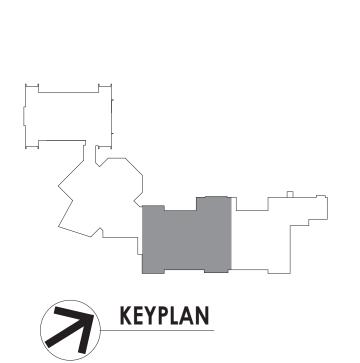
- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- 1) SPILL 3/4" CONDENSATE INTO EXISTING MOP RECEPTOR.
- 2 CONNECT PIPING FROM BELOW. CONNECT TO EXISTING LOUVER.







Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

IMPROVEMENT PROJECT

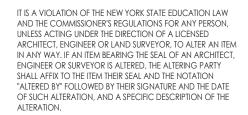
PROJECT INFORMATION

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

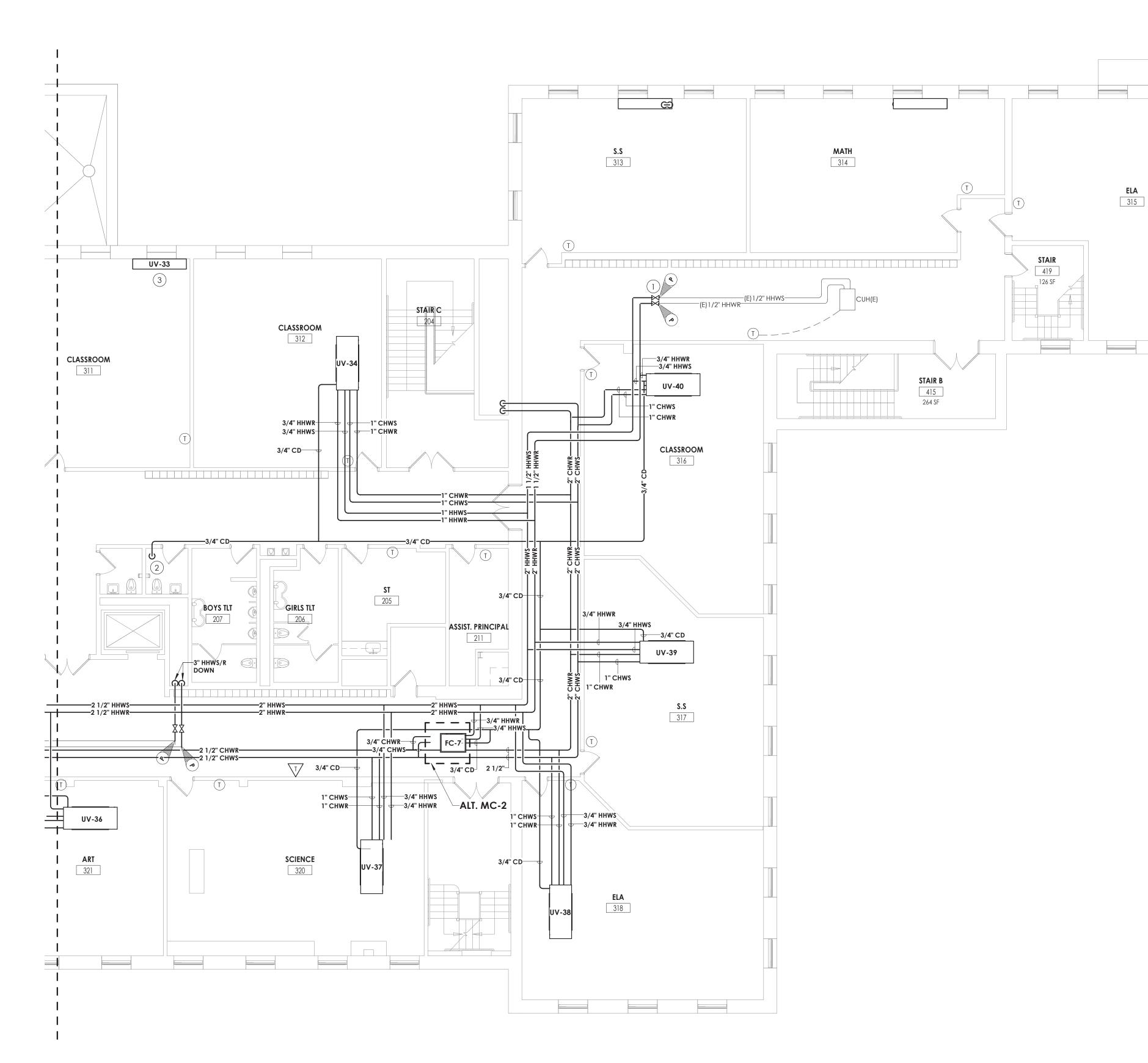
 No.
 Date
 Description



SHEET INFORMATION

Issued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DOCL	JMENTS	
Drawn By	Checked By	
NRH	JJW	
Drawing Title		
SECOND FLOOR HVAC PIPING		
PLAN - AREA C		

HMS H302C



1 SECON H302D 1/8" = 1'-0"

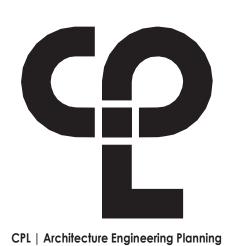
SECOND FLOOR HVAC PIPING PLAN - AREA D

GENERAL NOTES

- ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- (1) CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- 2 SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.
- 3 CONNECT PIPING FROM BELOW. CONNECT TO EXISTING LOUVER.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name

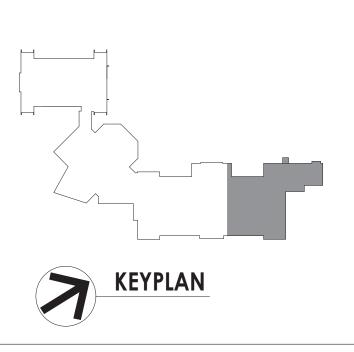
NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

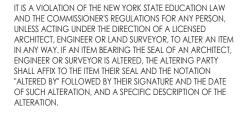
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

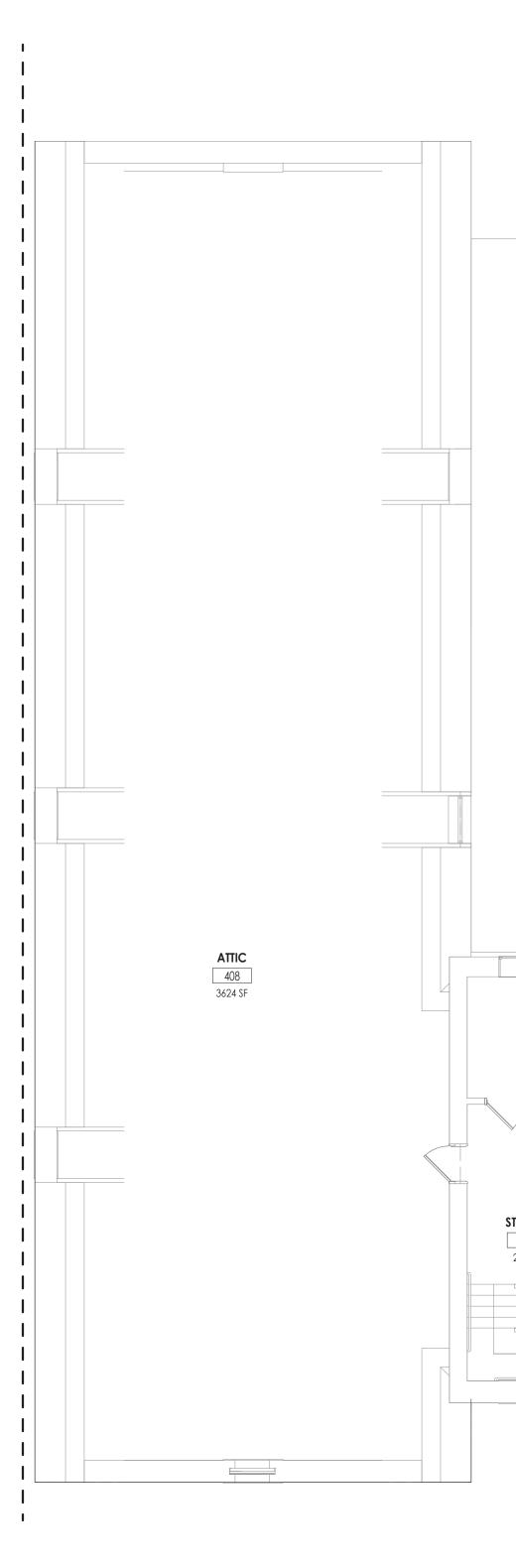


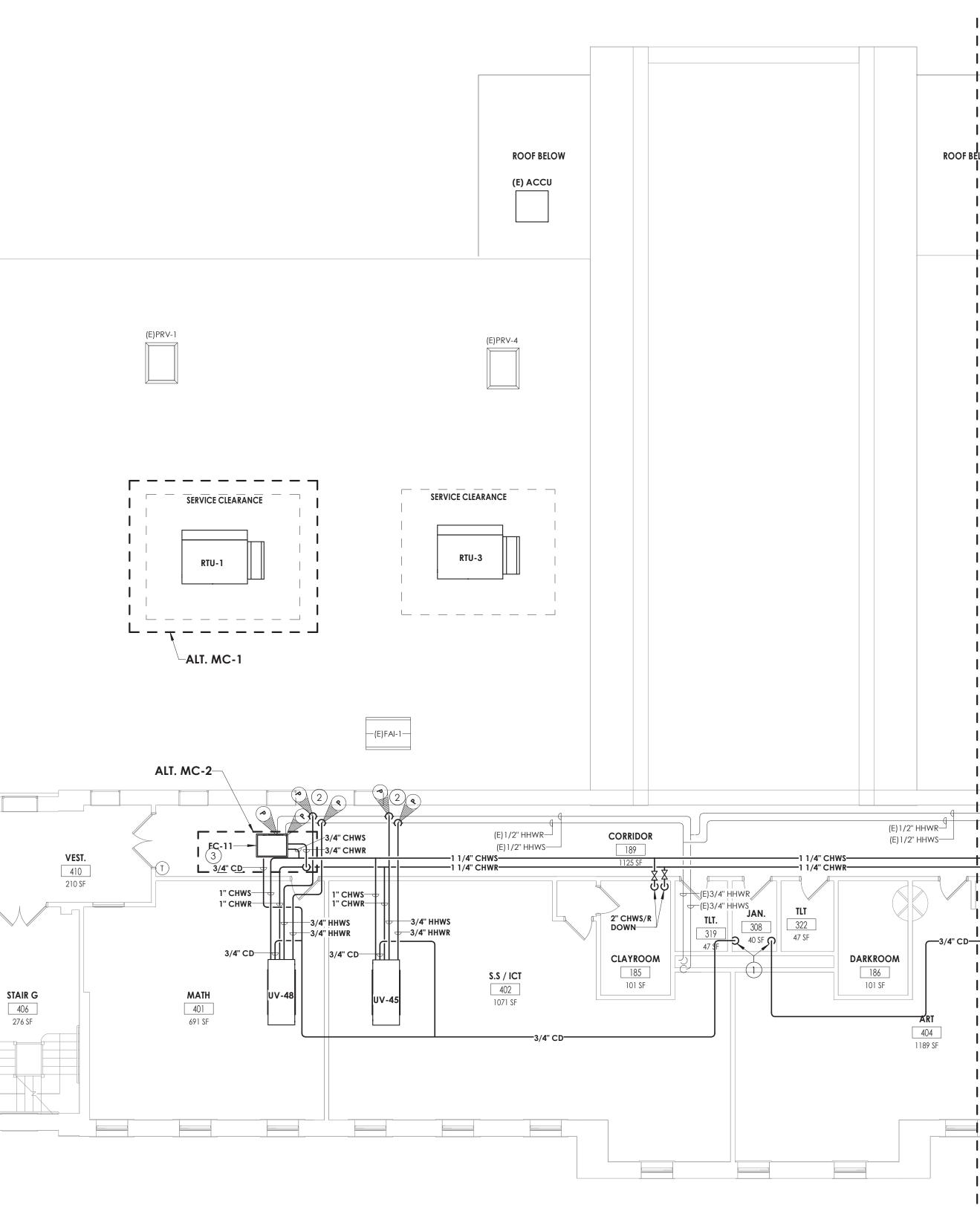


SHEET INFORMATION

Issued	Scale
09/09/2021	As indicated
Project Status	
CONSTRUCTION DOCL	JMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
SECOND FLOOR I	HVAC PIPING
PLAN - AREA D	

HMS H302D





 1
 THIRD FLOOR HVAC PIPING PLAN - AREA C

 H303C
 1/8" = 1'-0"

GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- (1) SPILL CONDENSATE INTO EXISTING MOP RECEPTOR.
- (2) CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- (3) CONNECT TO EXSTING TEMPERATURE CONTROLS.

ROOF BELOW



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18

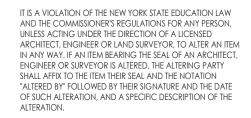
Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

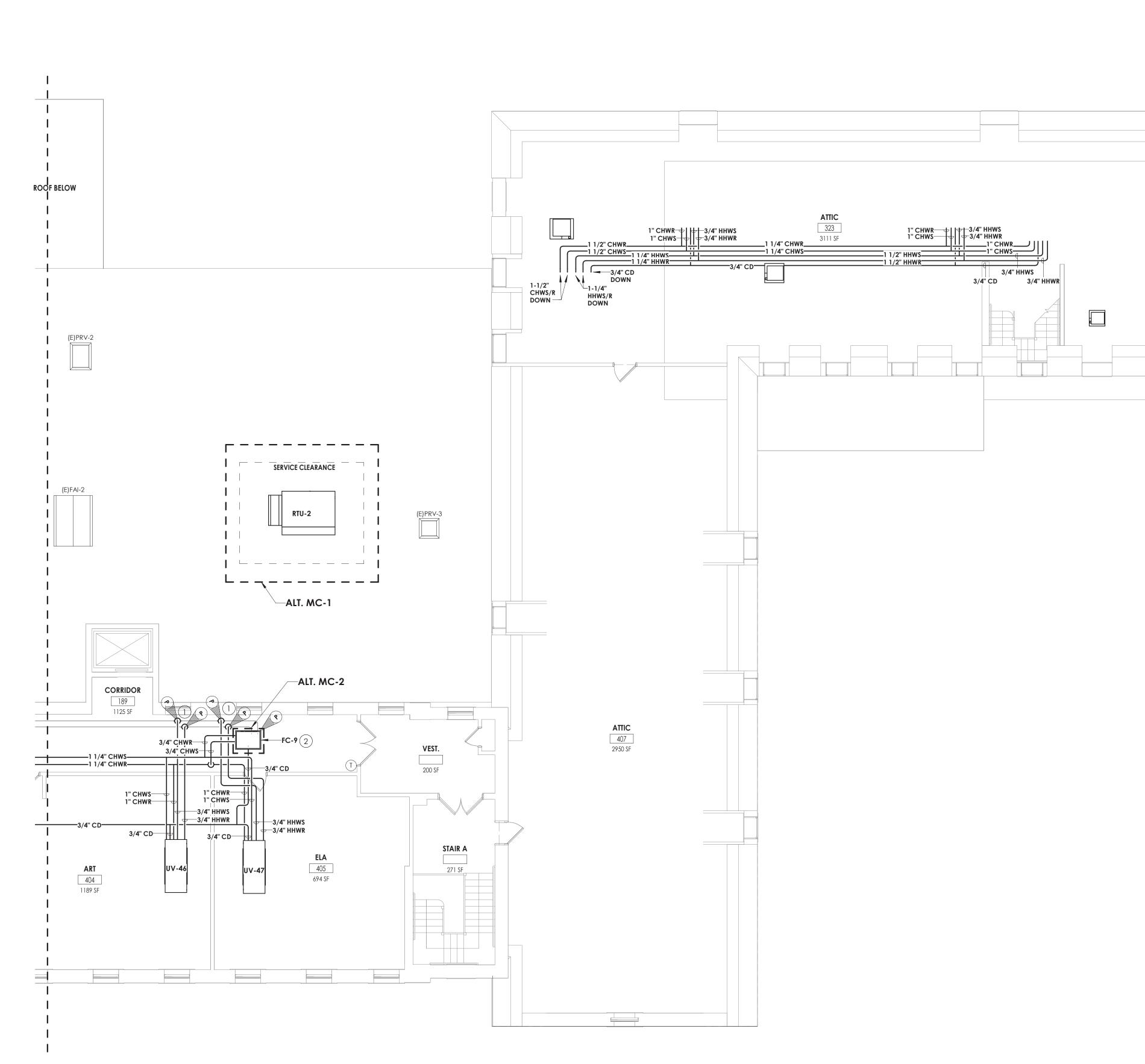


SHEET INFORMATION

Issued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DOC	CUMENTS	
Drawn By	Checked By	
NRH	JJW	
Drawing Title		
THIRD FLOOR HVAC PIPING PLAN		
- AREA C		

Drawing Number HMS H303C

/2021 3:06:32 PM S:\Projects/Newburgh ECSD\Heritage MS Addth & Reno\D Design\06 CAD\



 1
 THIRD FLOOR HVAC PIPING PLAN - AREA D

 H303D
 1/8" = 1'-0"

GENERAL NOTES

- 1. ALL COOLING EQUIPMENT ABOVE THE CEILING SHALL HAVE SECONDARY DRAIN PANS WITH FLOAT OVERFLOW ALARM CONNECTED TO THE BMS.
- 2. EXTEND ALL EXISTING CONTROL WIRING TO NEW UNITS. COORDINATE WITH JOHNSON CONTROLS SYSTEMS. SENSORS BY JCS.

KEY NOTES

- (1) CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.
- 2 CONNECT TO EXISTING TEMPERATURE CONTROLS.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION
Project Number
13940.18
Client Name

NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

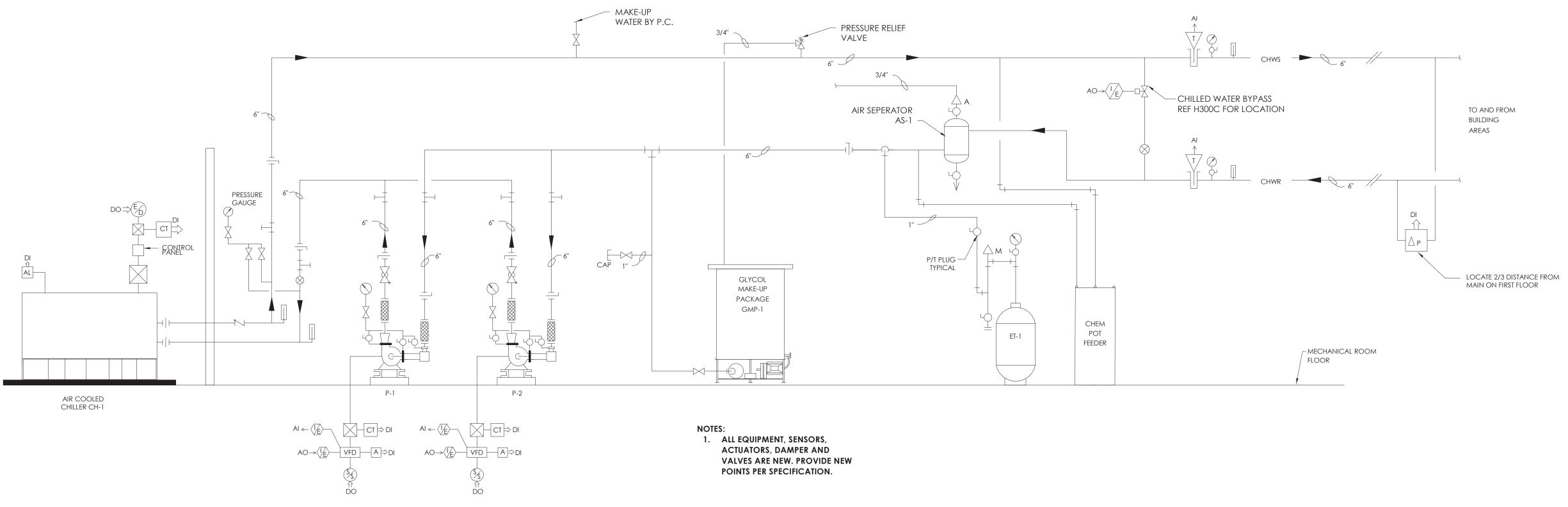
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale	
09/09/2021	As indicated	
Project Status		
CONSTRUCTION DOC	UMENTS	
Drawn By	Checked By	
NRH	JJM	
Drawing Title		
THIRD FLOOR HVAC PIPING PLAN		
- AREA D		

HMS H303D

KEYPLAN







CHILLED WATER SYSTEM CONTROL SCHEMATIC

- CONTROLS NOTES: CONFIRM ALL EXISTING CONTROLS AND SEQUENCES BEFORE REMOVAL OF ANY KIND.
- ALL CLASSROOM TEMPERATURE SENSORS ARE TO REMAIN EXISTING AND WILL BE PRE INSTALLED BY JOHNSON CONTROLS BEFORE THIS PROJECT HAS INITIATED.
- UNIT VENTILATORS THAT HAVE BEEN REMOVED SHALL HAVE THE CONTROLS WIRING EXTENDED TO THE NEW LOCATION, NEW CONTROL VALVES AND NEW COOLING CONTROL POINTS.
- UNIT VENTILATOR HEATING VALVES, DAMPERS AND FAN CONTROL POINTS ARE ALREADY PART OF THE BMS ARCHITECTURE AND SHALL BE CONFIRMED PRIOR TO WORK.
- REFER TO THE INDIVIDUAL CONTROL DIAGRAMS AND SCHEDULES FOR MORE CONTROLS INFORMATION.

CPL | Architecture Engineering Planning

50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT

Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number

44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

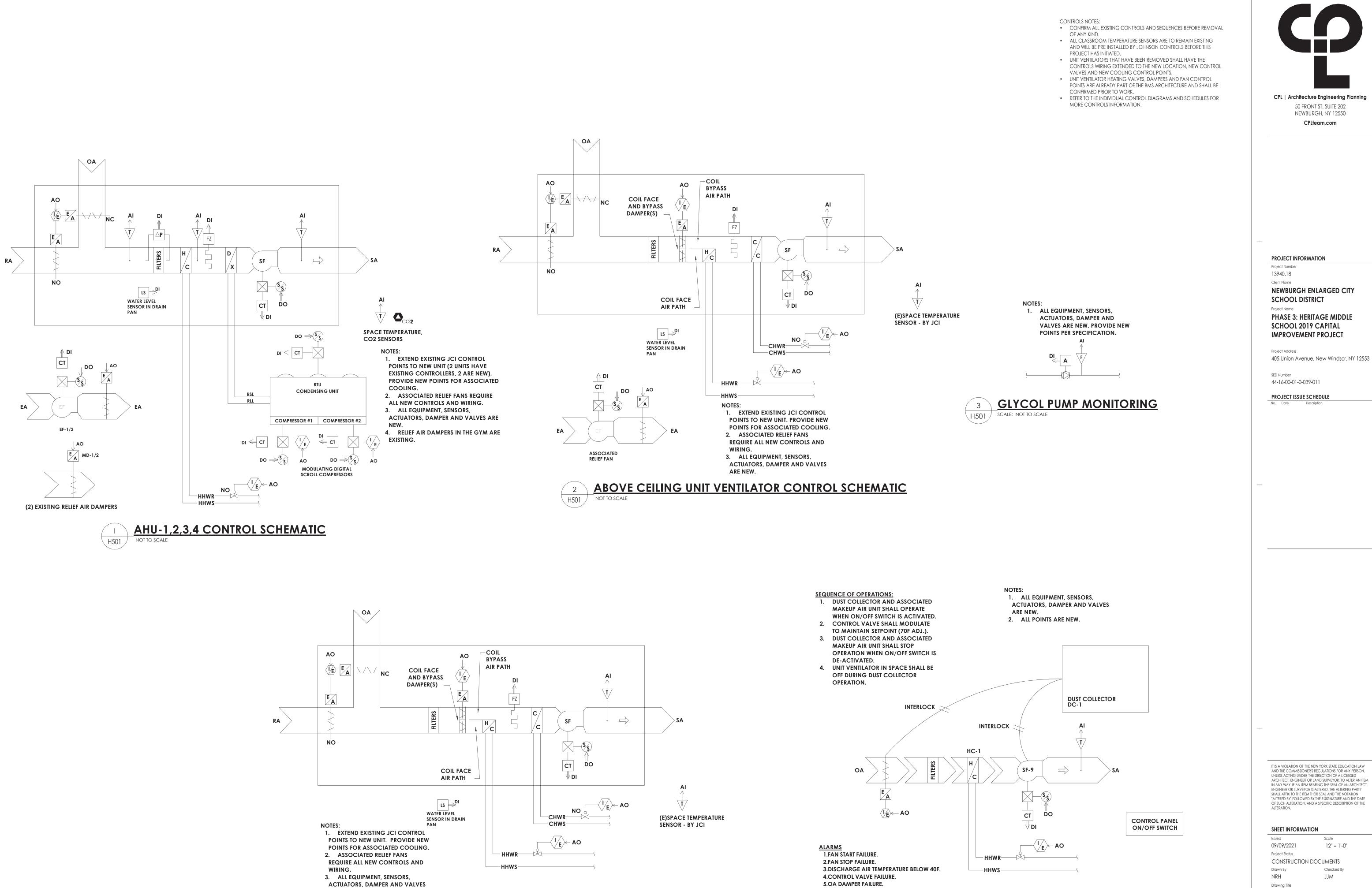
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

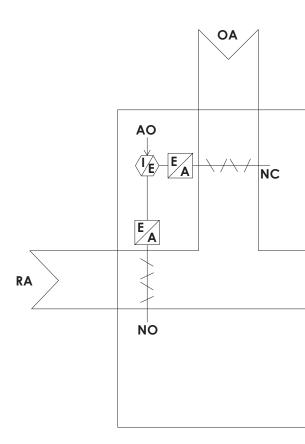
SHEET INFORMATION

Issued	Scale
09/09/2021	12" = 1'-0"
Project Status	
CONSTRUCTION DOCI	UMENTS
Drawn By	Checked By
NRH	MLL
Drawing Title	
HVAC CONTROL	SCHEMATICS

Drawing Number

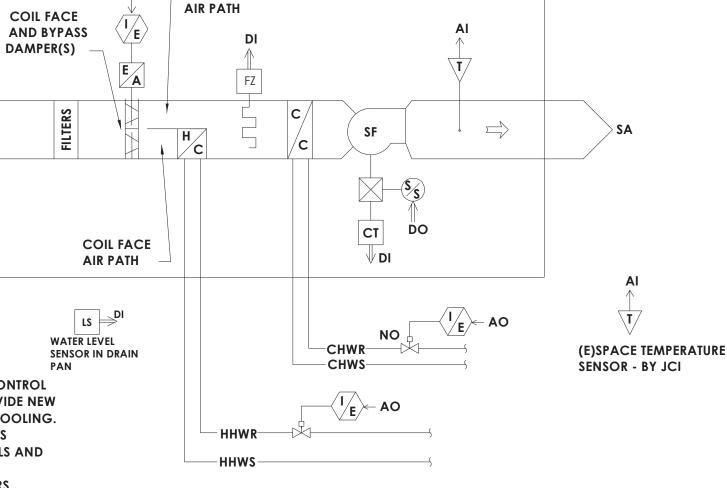


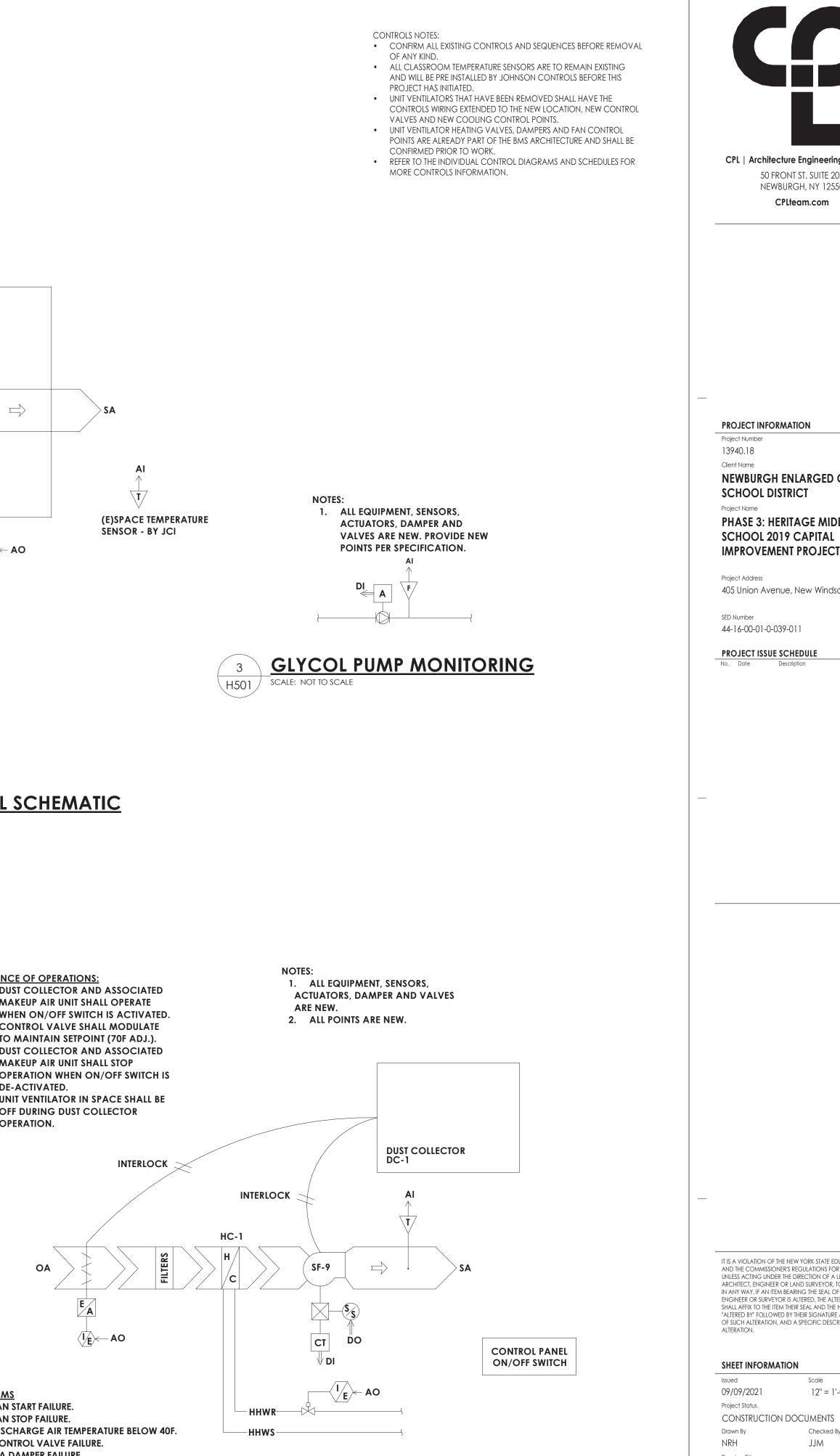




ACTUATORS, DAMPER AND VALVES ARE NEW.







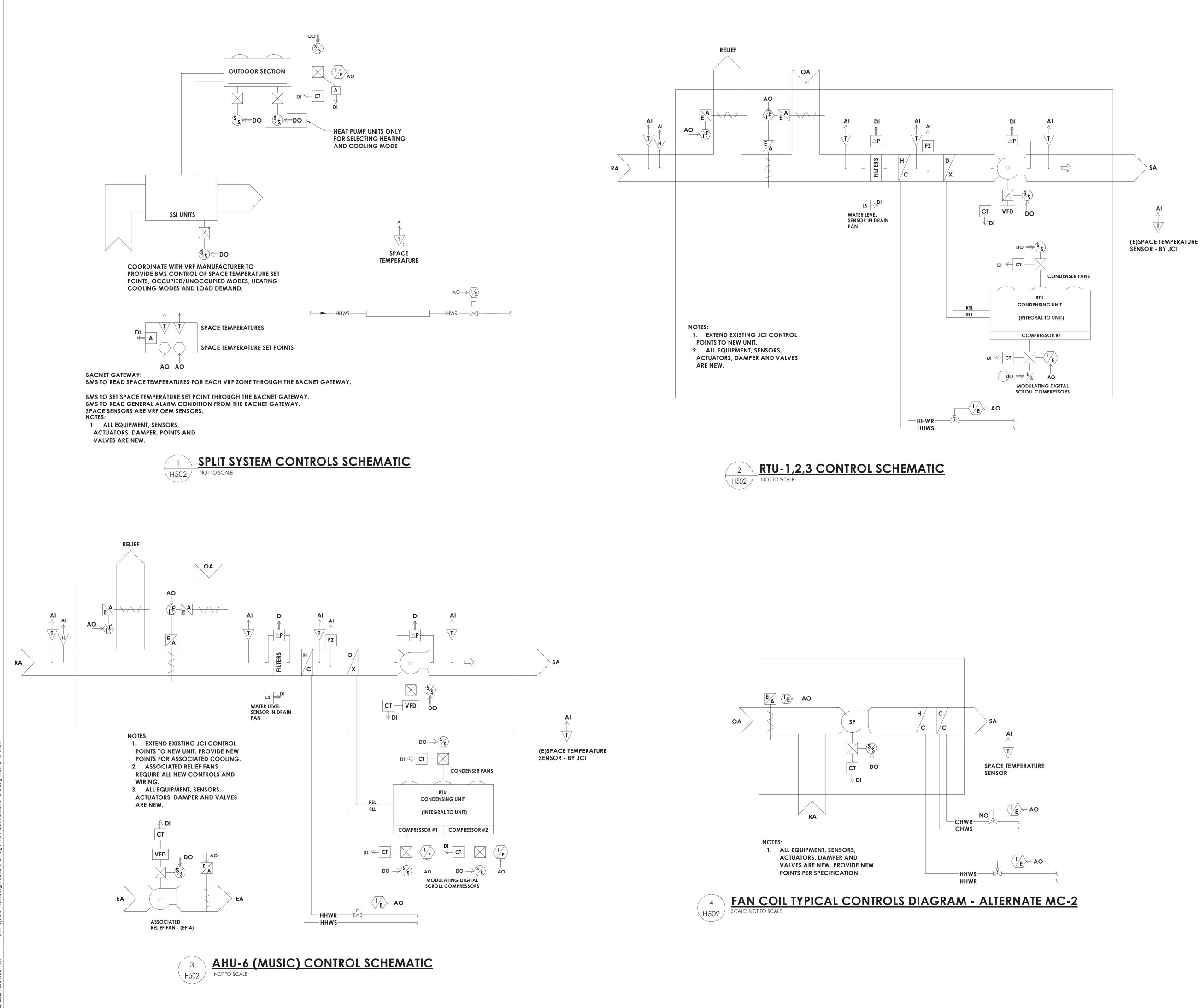
5.OA DAMPER FAILURE.

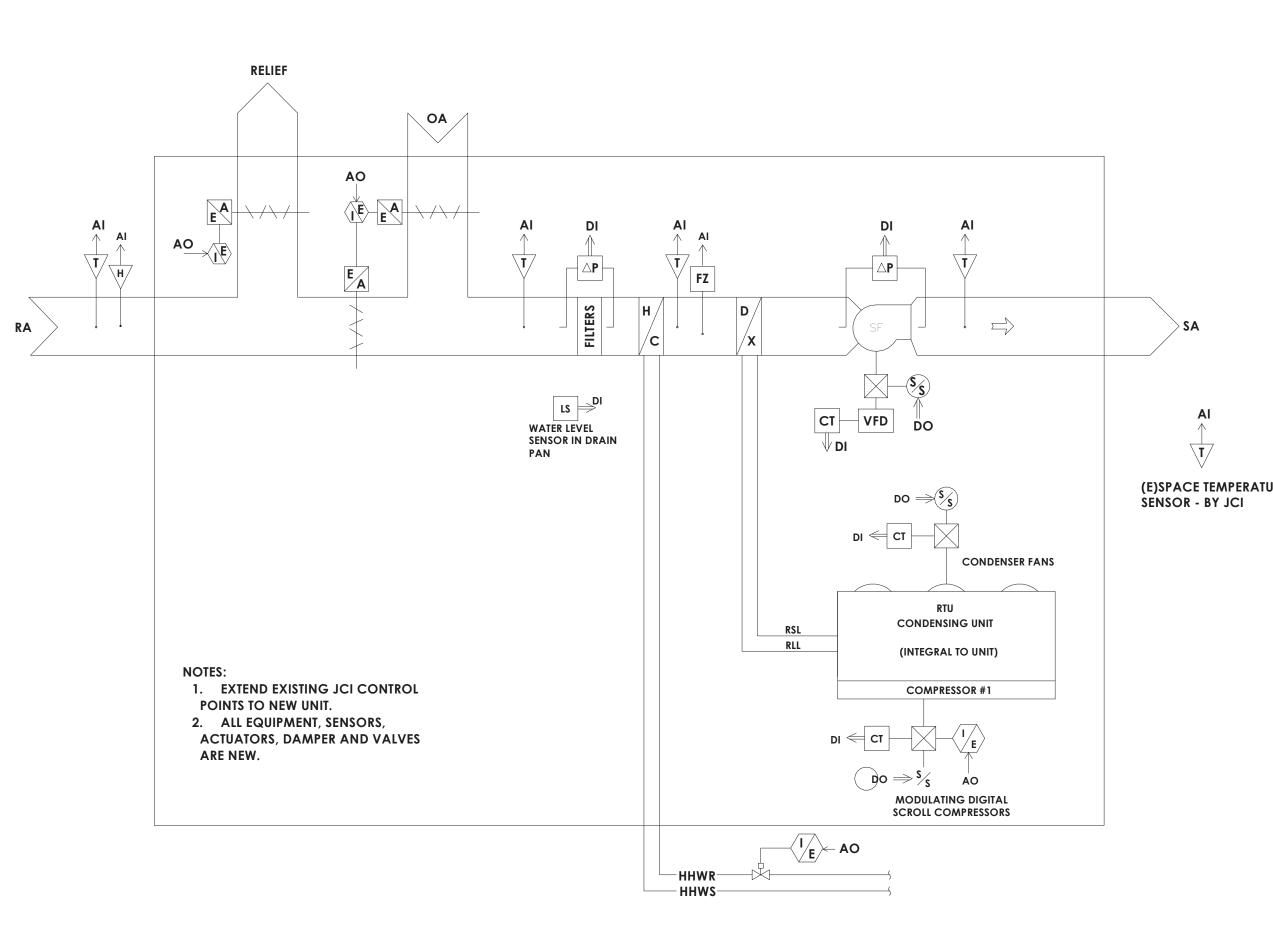


DUST COLLECTOR MAKEUP AIR CONTROL SCHEMATIC

Drawing Number HMS H501

HVAC CONTROL SCHEMATICS







CONTROLS NOTES: CONFIRM ALL EXISTING CONTROLS AND SEQUENCES BEFORE REMOVAL OF ANY KIND.

- ALL CLASSROOM TEMPERATURE SENSORS ARE TO REMAIN EXISTING AND WILL BE PRE INSTALLED BY JOHNSON CONTROLS BEFORE THIS
- PROJECT HAS INITIATED. UNIT VENTILATORS THAT HAVE BEEN REMOVED SHALL HAVE THE CONTROLS WIRING EXTENDED TO THE NEW LOCATION, NEW CONTROL
- VALVES AND NEW COOLING CONTROL POINTS. UNIT VENTILATOR HEATING VALVES, DAMPERS AND FAN CONTROL
- POINTS ARE ALREADY PART OF THE BMS ARCHITECTURE AND SHALL BE CONFIRMED PRIOR TO WORK.
- REFER TO THE INDIVIDUAL CONTROL DIAGRAMS AND SCHEDULES FOR MORE CONTROLS INFORMATION.

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name

PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL **IMPROVEMENT PROJECT**

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

PROJECT ISSUE SCHEDULE No. Date Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION Issued

Scale 09/09/2021 12" = 1'-0" Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By NRH JJM Drawing Title HVAC CONTROL SCHEMATICS

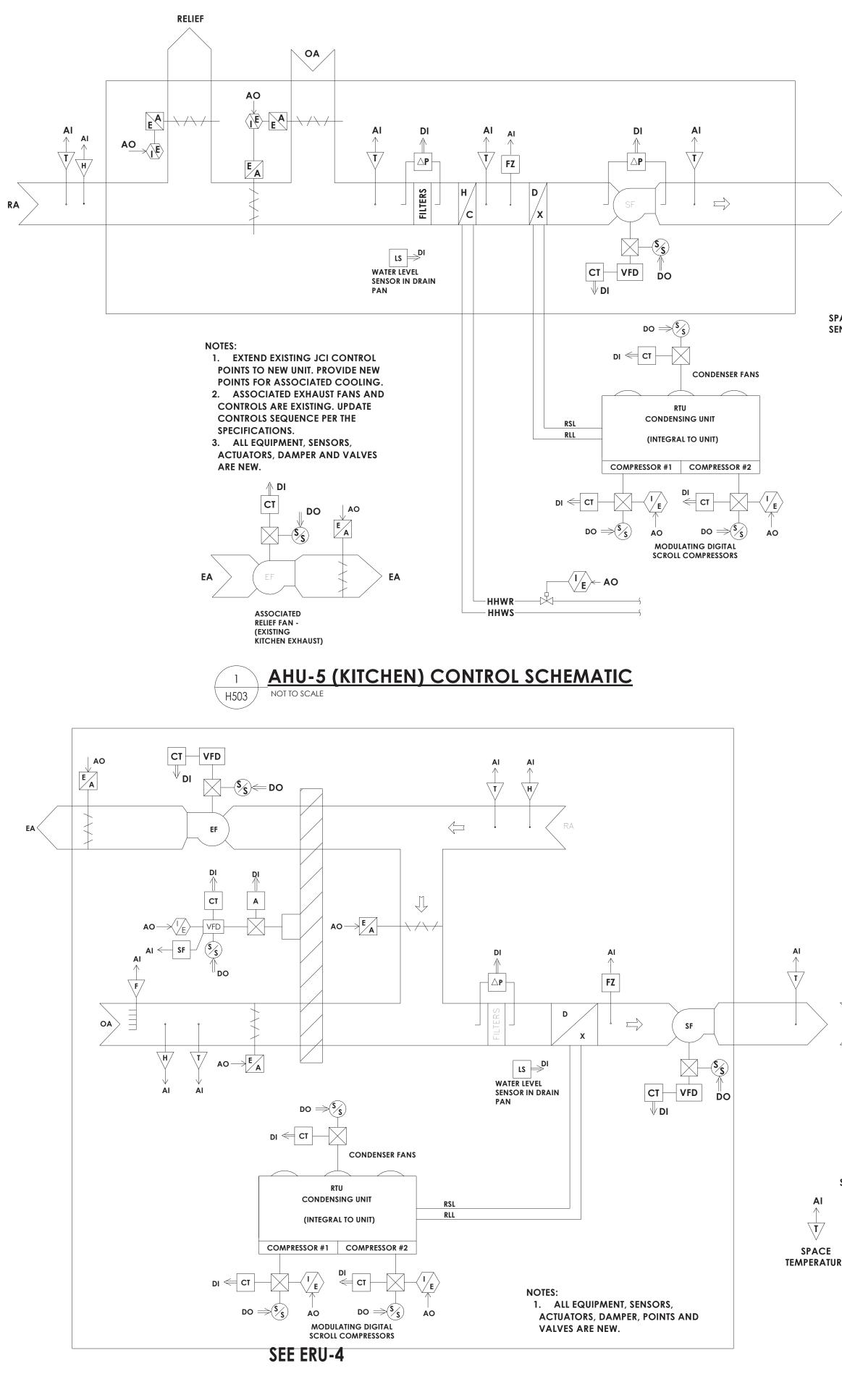
H502

Drawing Number HMS



NEWBURGH, NY 12550

CPLteam.com

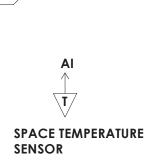


2 H503 NOT TO SCALE

|

CONTROLS NOTES:
CONFIRM ALL EXISTING CONTROLS AND SEQUENCES BEFORE REMOVAL OF ANY KIND.

- ALL CLASSROOM TEMPERATURE SENSORS ARE TO REMAIN EXISTING AND WILL BE PRE INSTALLED BY JOHNSON CONTROLS BEFORE THIS PROJECT HAS INITIATED.
- UNIT VENTILATORS THAT HAVE BEEN REMOVED SHALL HAVE THE CONTROLS WIRING EXTENDED TO THE NEW LOCATION, NEW CONTROL VALVES AND NEW COOLING CONTROL POINTS.
- UNIT VENTILATOR HEATING VALVES, DAMPERS AND FAN CONTROL POINTS ARE ALREADY PART OF THE BMS ARCHITECTURE AND SHALL BE CONFIRMED PRIOR TO WORK.
- REFER TO THE INDIVIDUAL CONTROL DIAGRAMS AND SCHEDULES FOR MORE CONTROLS INFORMATION.



>SA



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550

CPLteam.com

PROJECT INFORMATION Project Number 13940.18

Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL

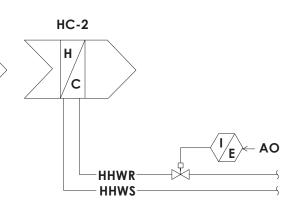
IMPROVEMENT PROJECT

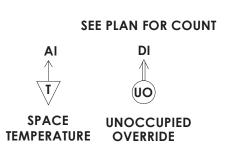
Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description



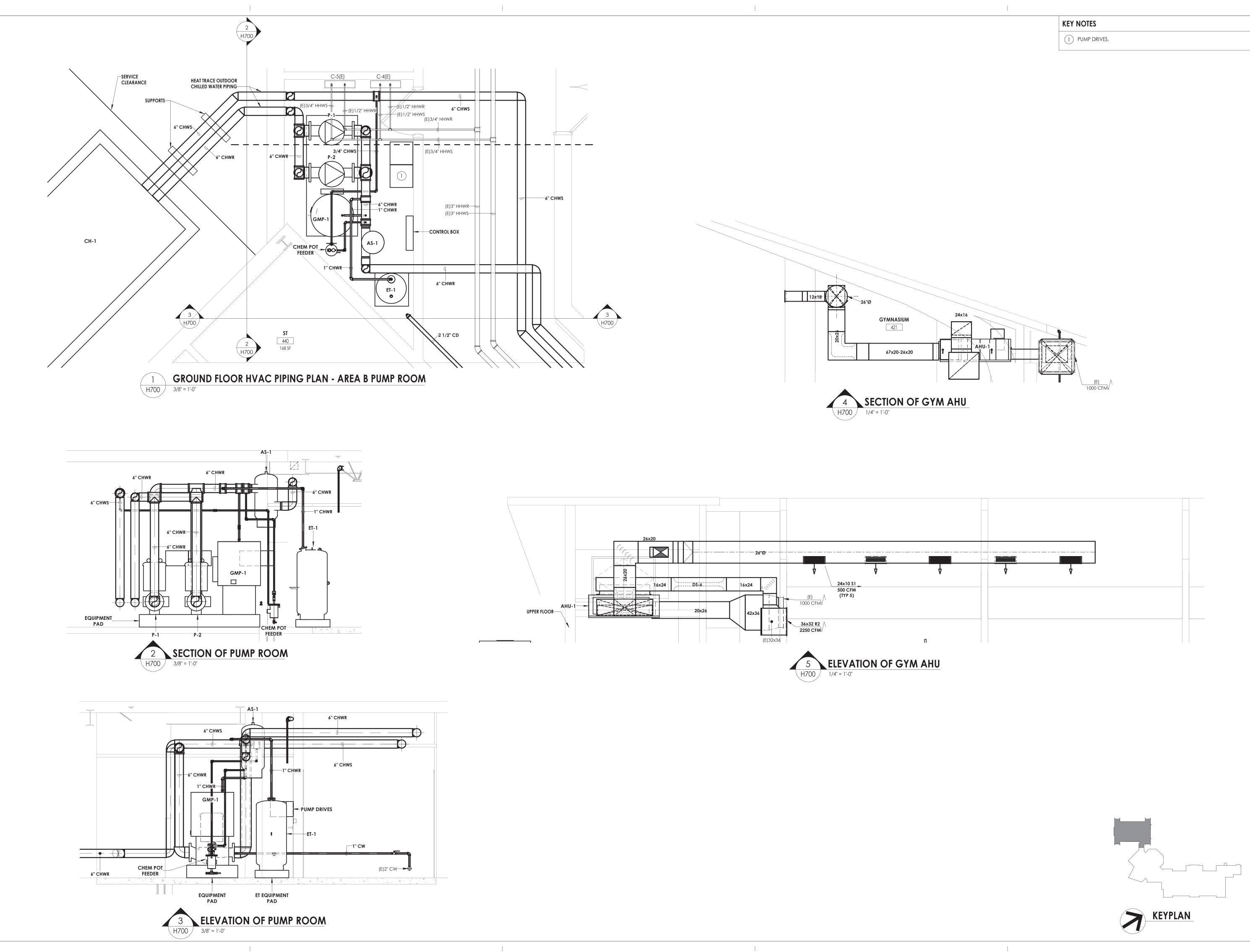


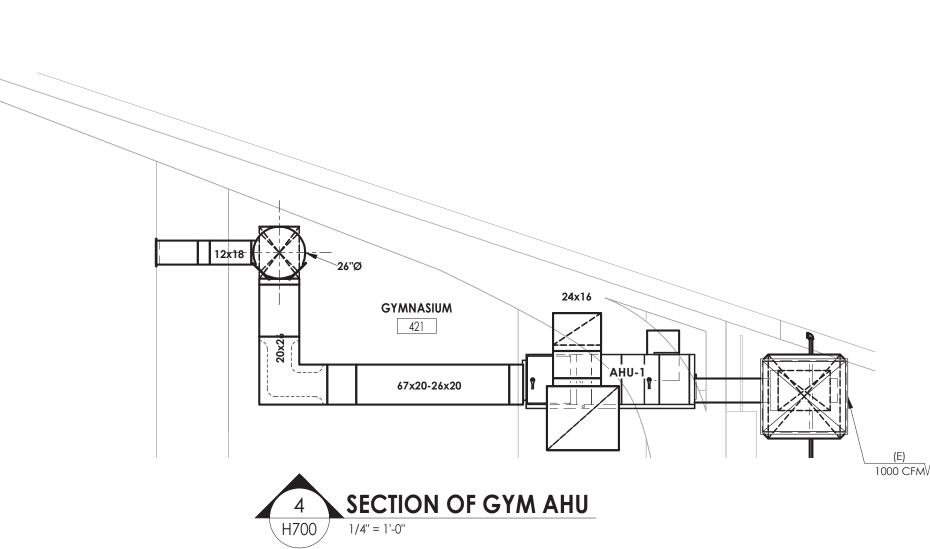
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued	Scale
09/09/2021	12" = 1'-0"
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
HVAC CONTROL	SCHEMATICS









CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

Project Address

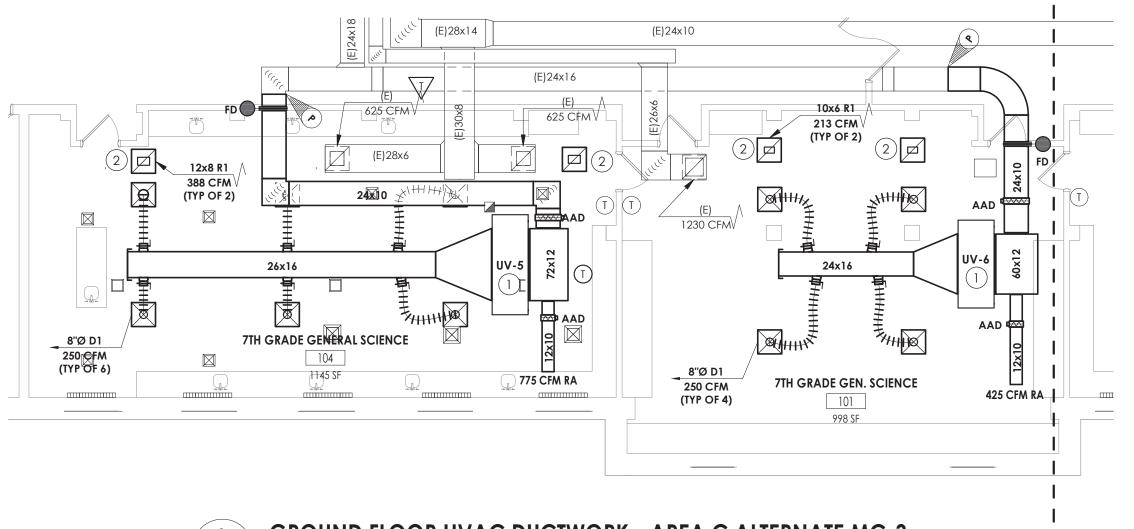
 PROJECT ISSUE SCHEDULE

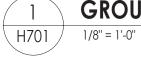
 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued Scale 09/09/2021 As indicated Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By NRH JJM Drawing Title hvac enlarged plans

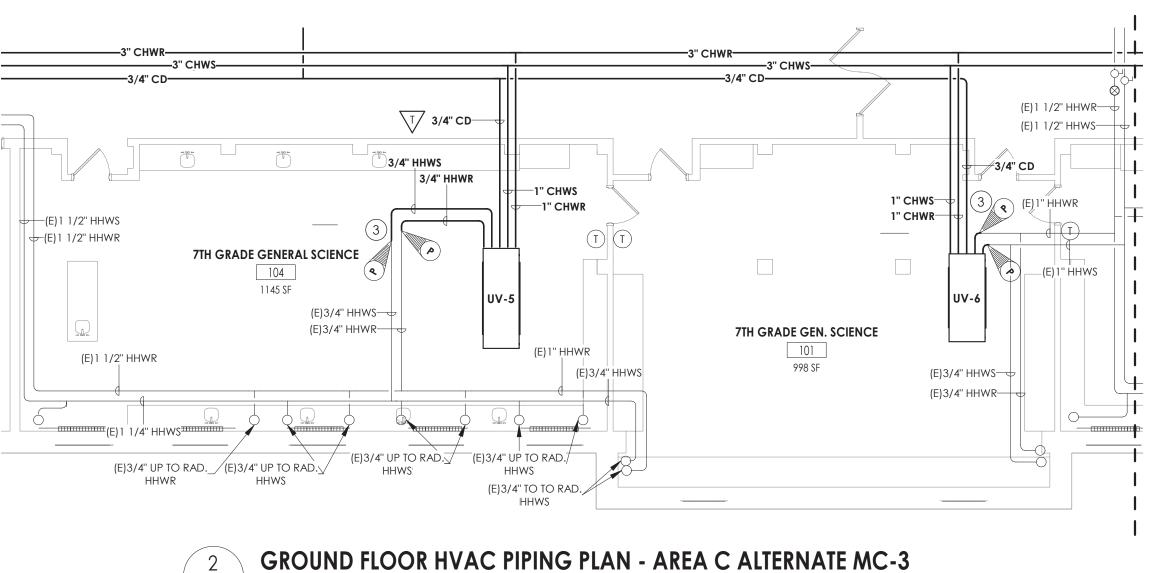




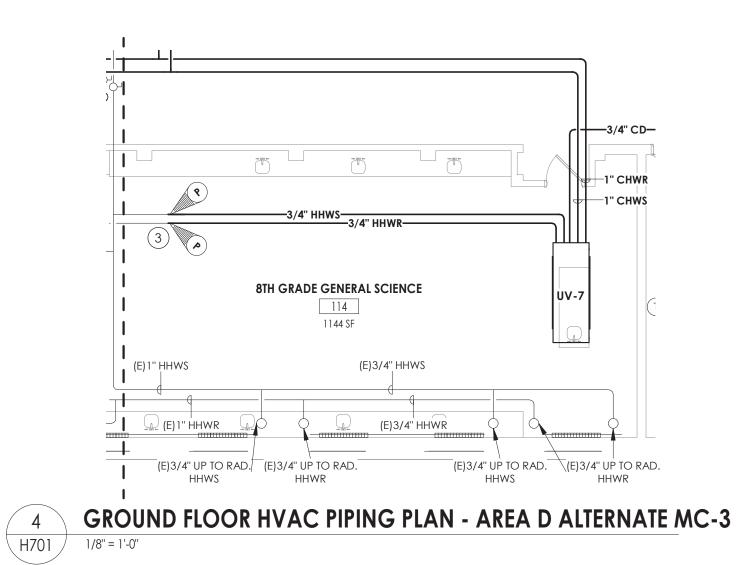
H701

1/8" = 1'-0"

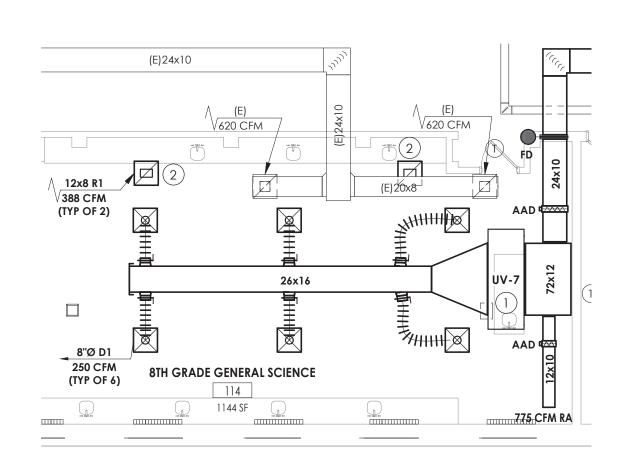
GROUND FLOOR HVAC DUCTWORK - AREA C ALTERNATE MC-3











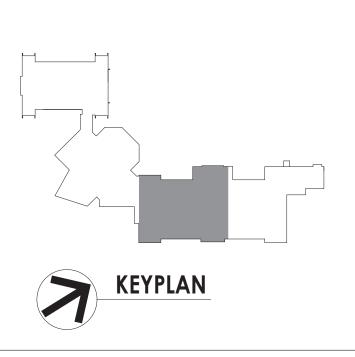
KEY NOTES

- (1) MOUNT UNIT VENTILATOR ABOVE CEILING. COORDINATE WITH ANY CEILING UTILITIES. MAINTAIN ACCESS FOR FILTER CHANGES. ALL SUPPLY AND RETURN DUCTWORK SHALL BE LINED. EXTEND EXISTING CONTROLS TO NEW UNIT LOCATION.
- 2 PLENUM RETURN.
- (3) CONNECT NEW PIPING TO EXISTING PIPING AT POINTS INDICTAED. RE-INSULATE ANY EXISTING PIPING AT CONNECTED LOCATIONS.



50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

GROUND FLOOR HVAC DUCTWORK - AREA D ALTERNATE MC-3



PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name

PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

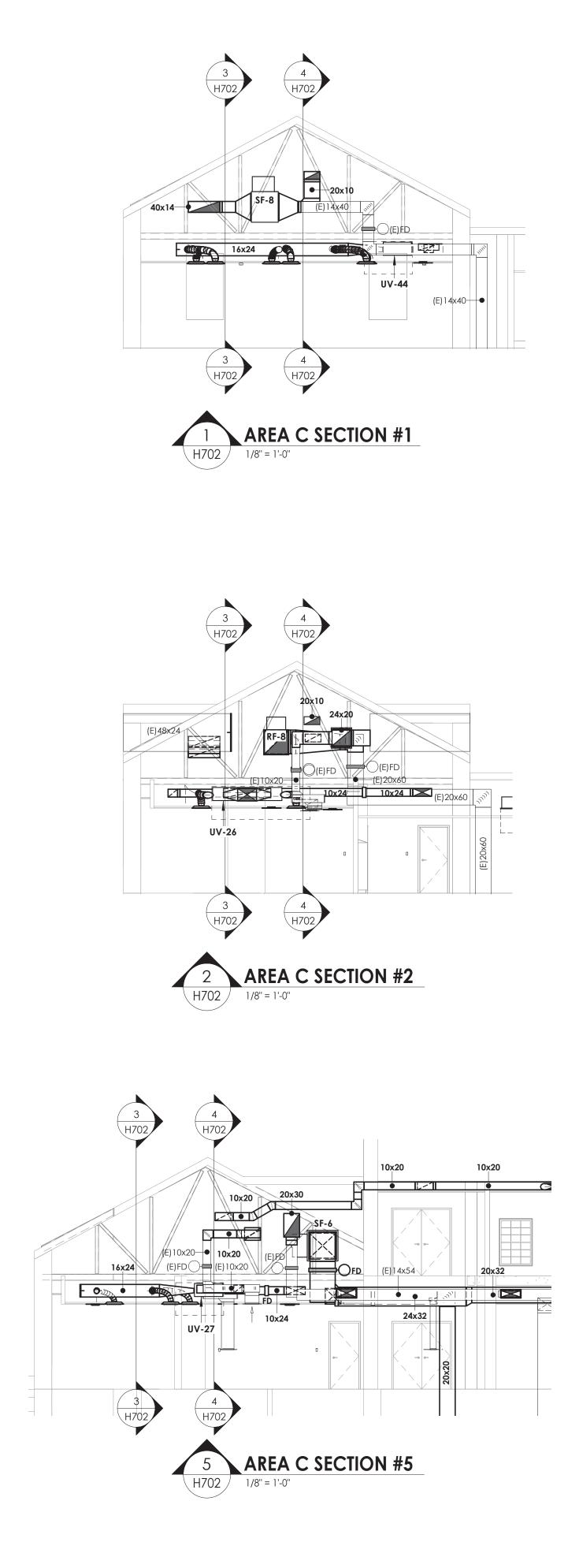
 PROJECT ISSUE SCHEDULE

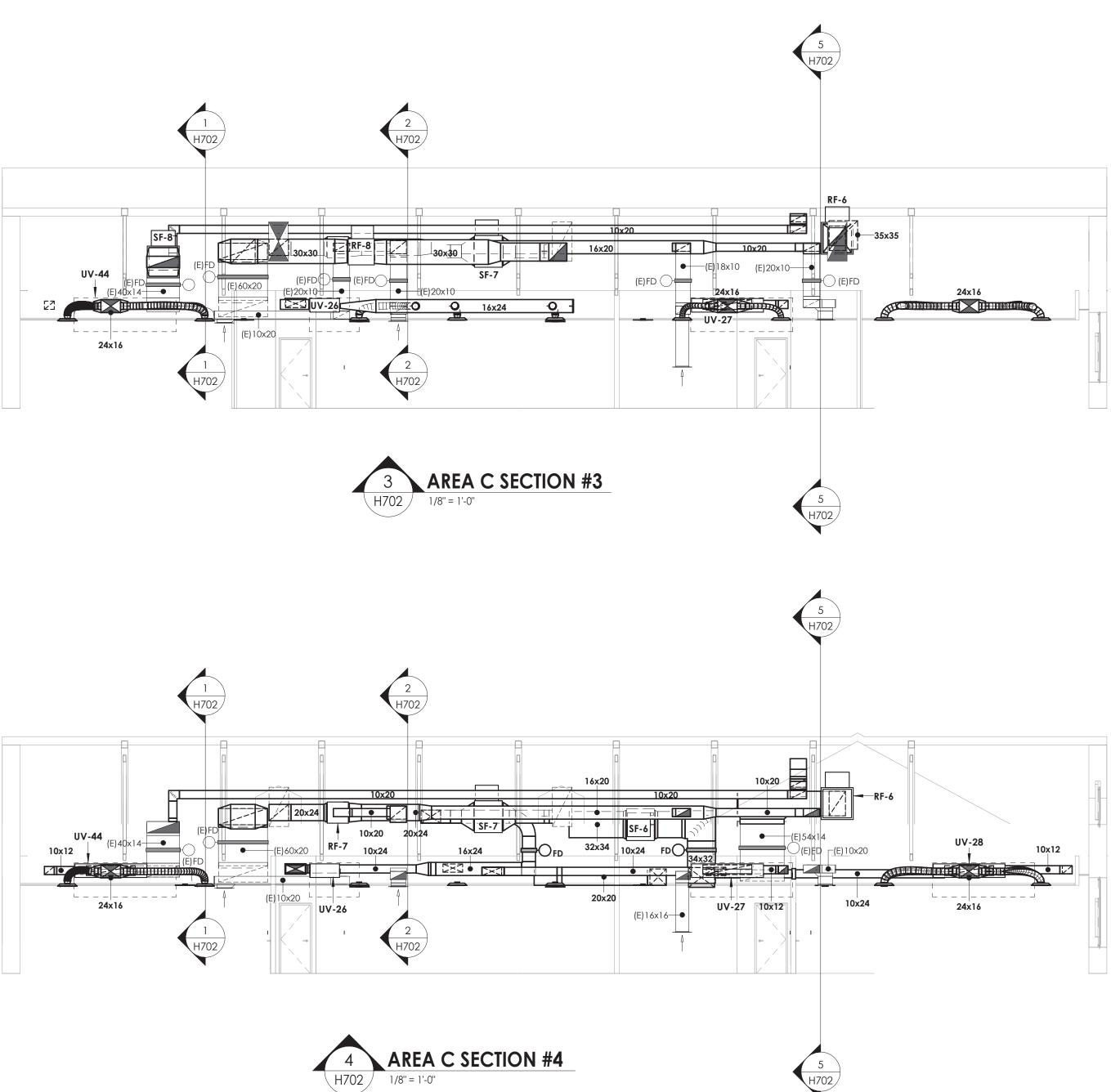
 No.
 Date
 Description

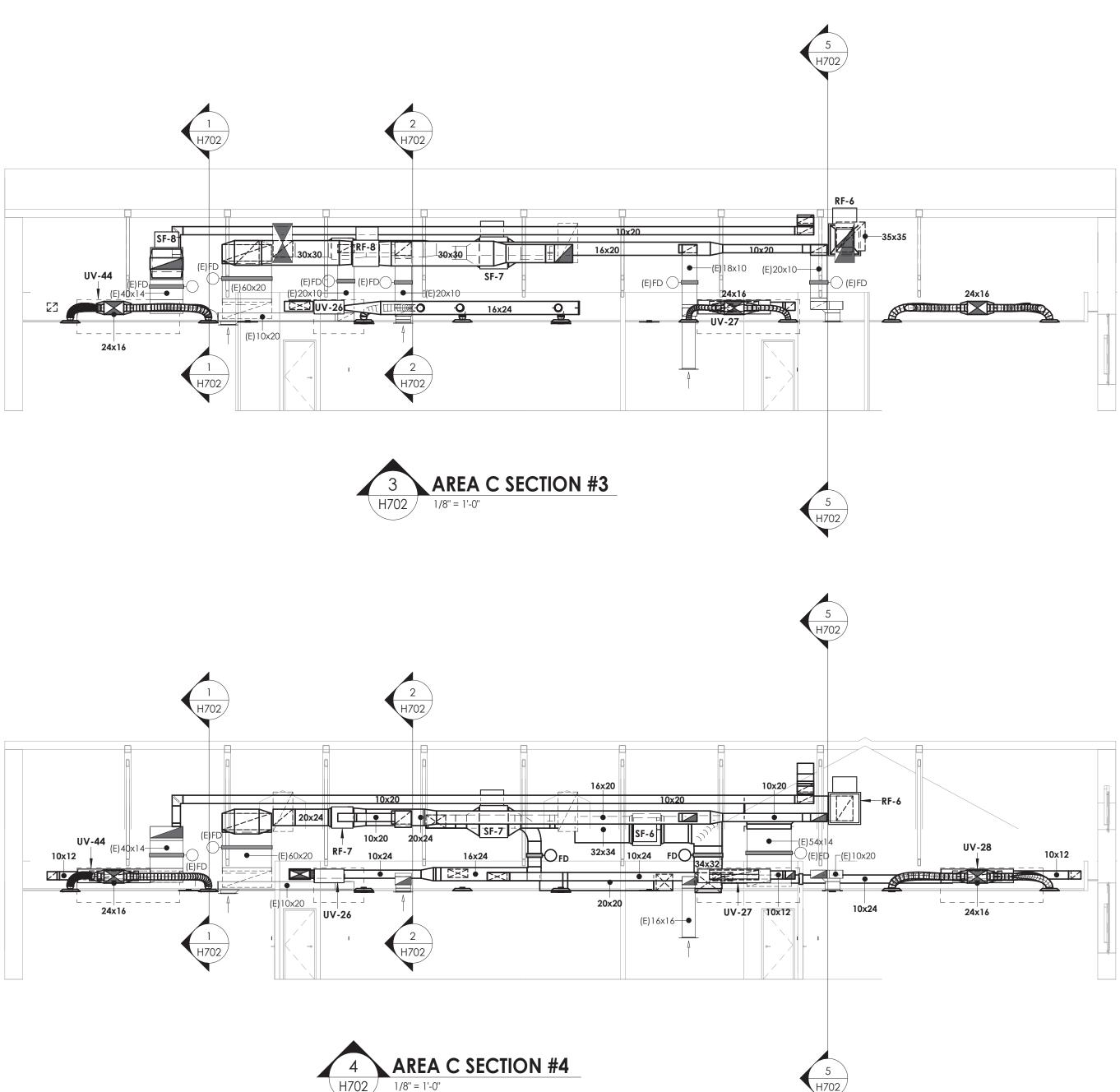
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN TIEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Scale
As indicated
JMENTS
Checked By
JJM
PLANS









CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY

SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

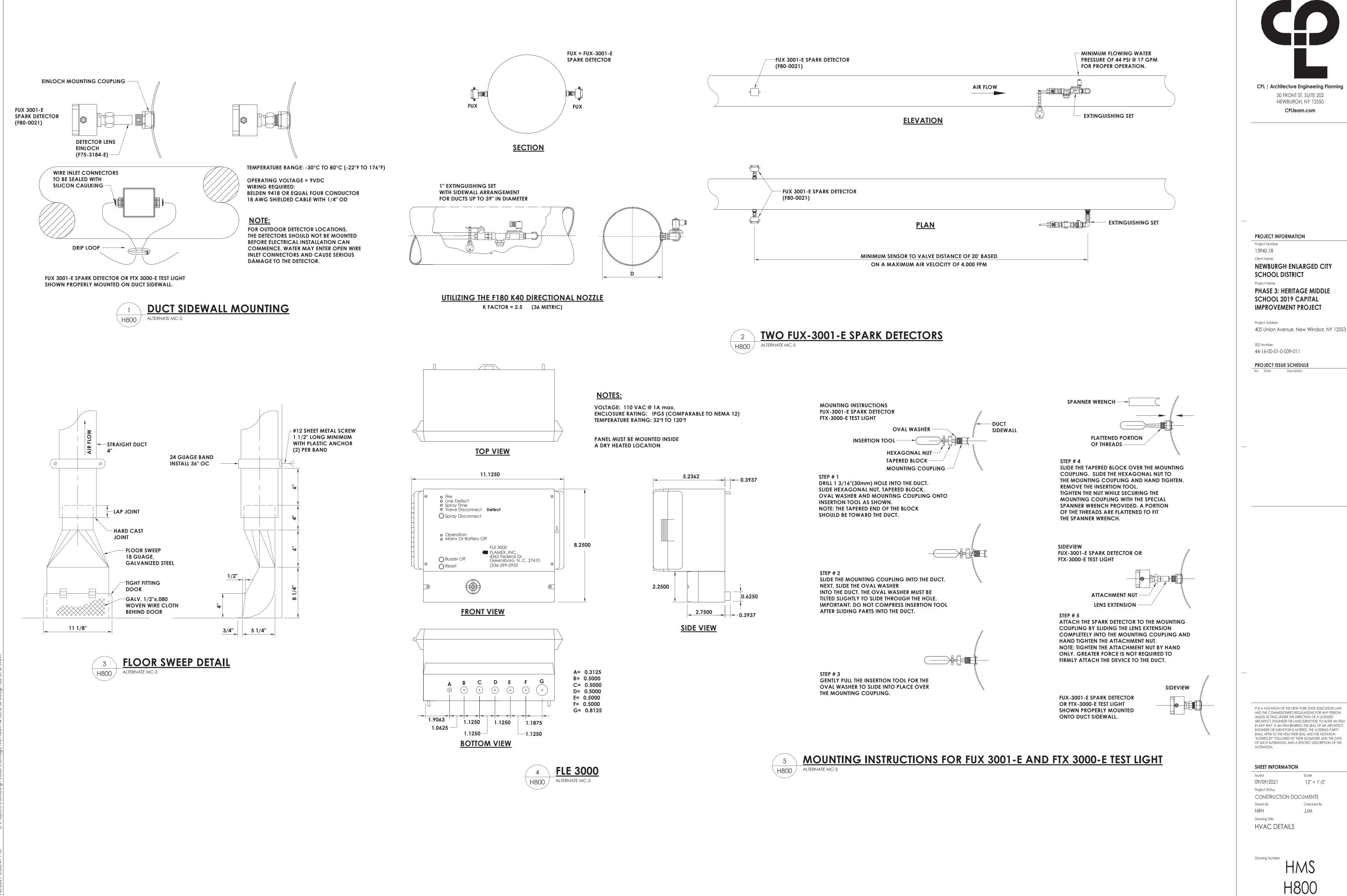
 No.
 Date
 Description

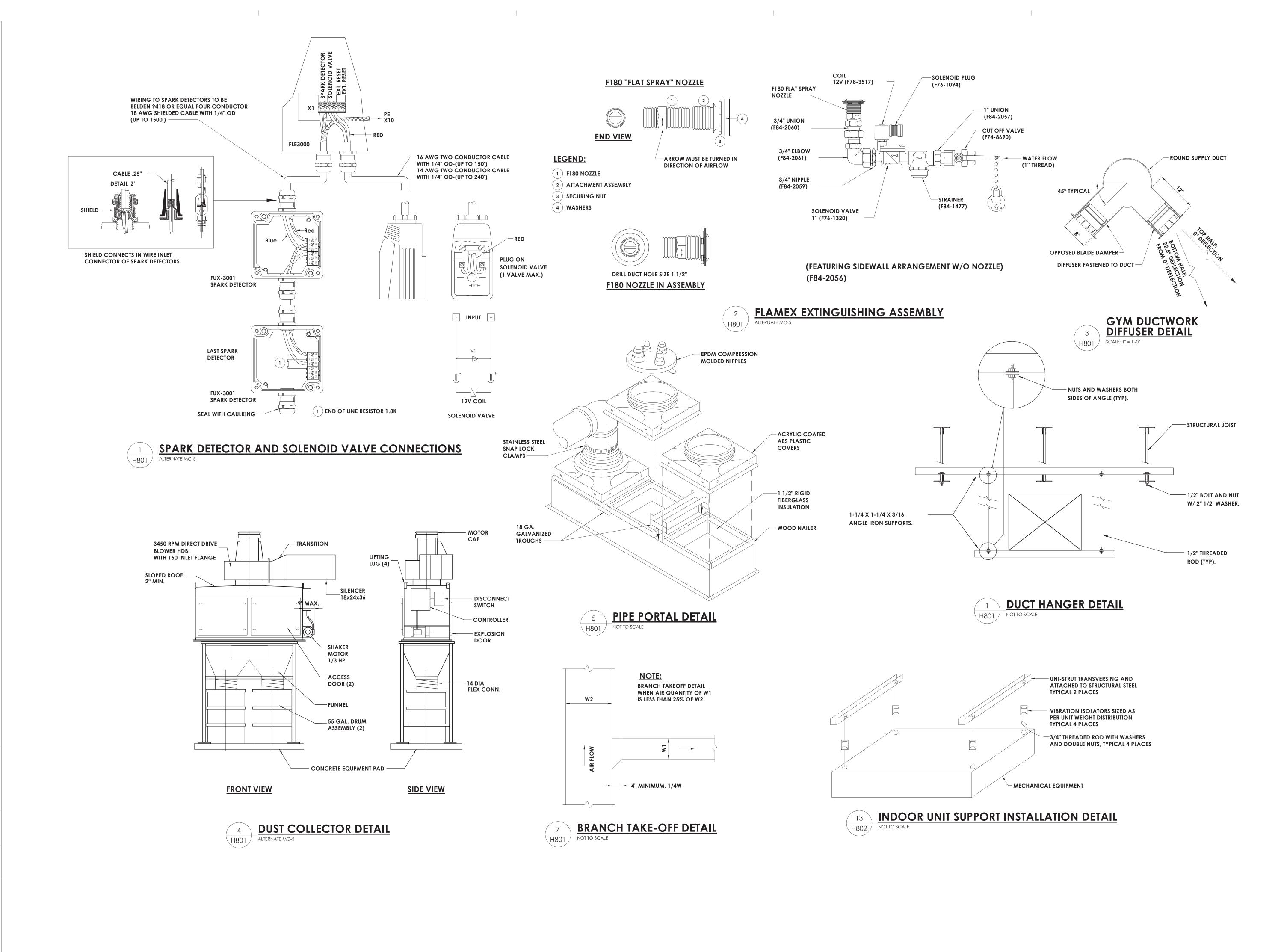
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued Scale 07/13/21 1/8" = 1'-0" Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By Author Checker Drawing Title hvac sections







IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE

CPL | Architecture Engineering Planning

50 FRONT ST. SUITE 202

NEWBURGH, NY 12550

CPLteam.com

PROJECT INFORMATION

SCHOOL DISTRICT

NEWBURGH ENLARGED CITY

PHASE 3: HERITAGE MIDDLE

405 Union Avenue, New Windsor, NY 12553

SCHOOL 2019 CAPITAL

IMPROVEMENT PROJECT

Project Number

13940.18

Client Name

Project Name

Project Address

SED Number

44-16-00-01-0-039-011

PROJECT ISSUE SCHEDULE

No. Date Description

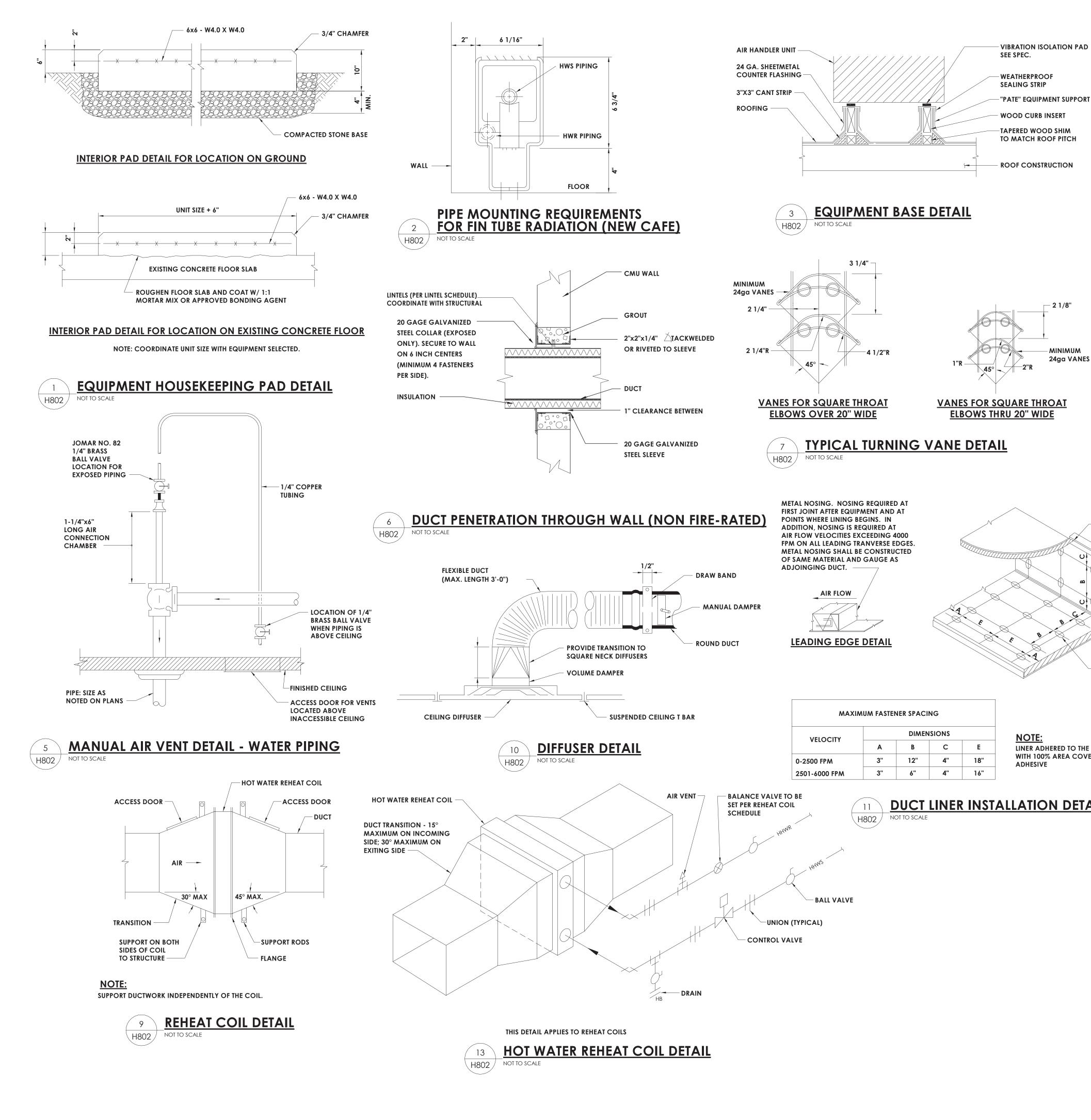
SHEET INFORMATION Issued Scale 09/09/2021 12" = 1'-0" Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By NRH JJM Drawing Title

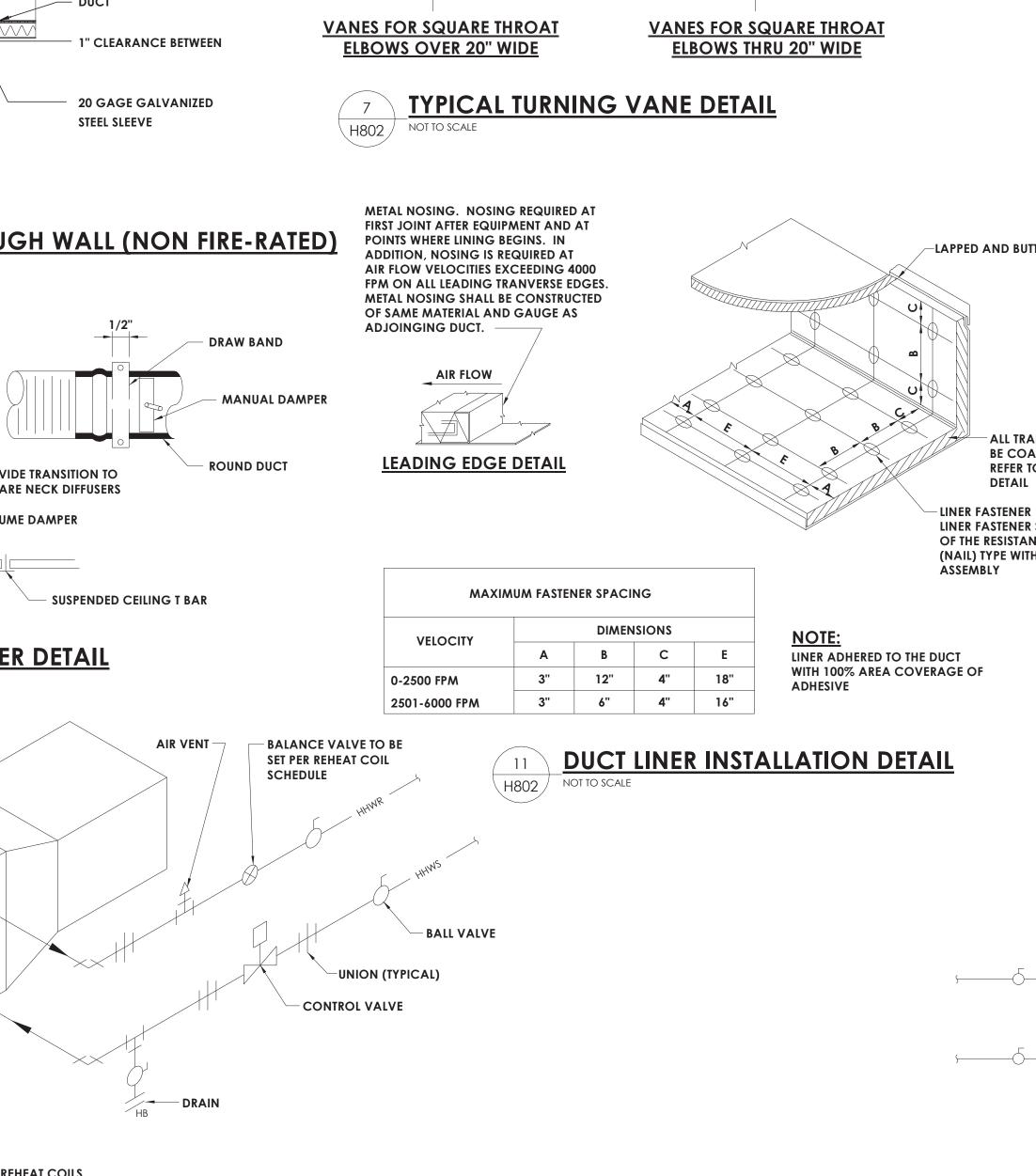
ALTERATION.

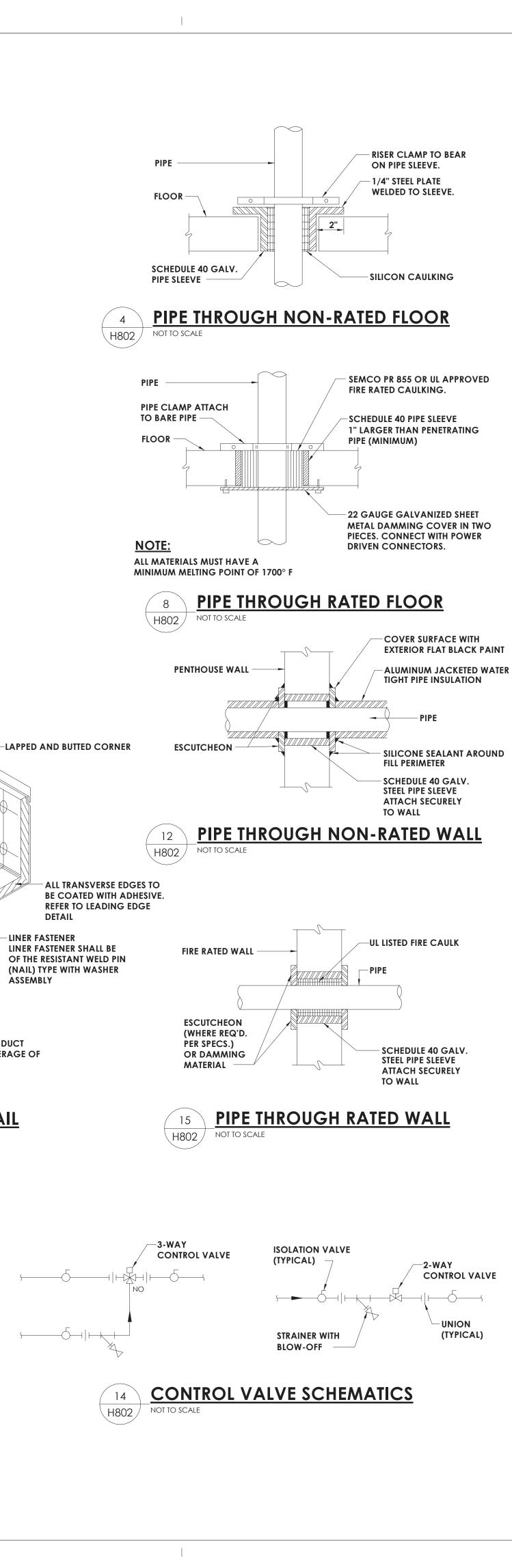
Drawing Number

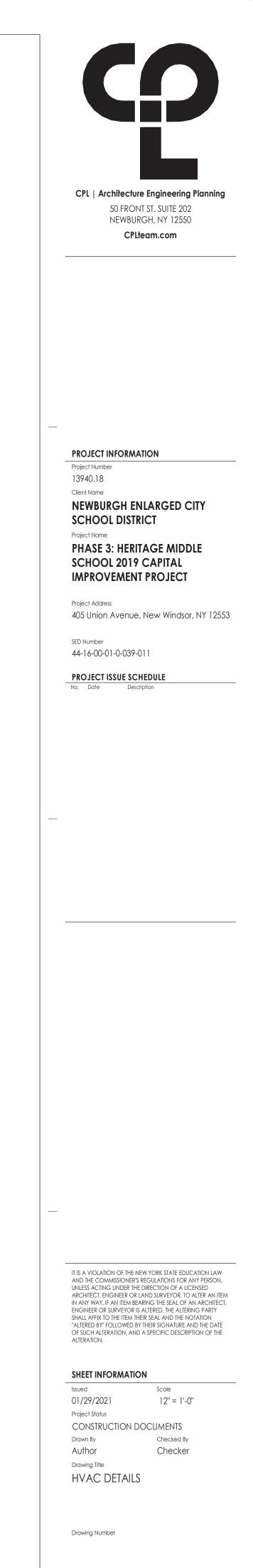
HVAC DETAILS

HMS H801

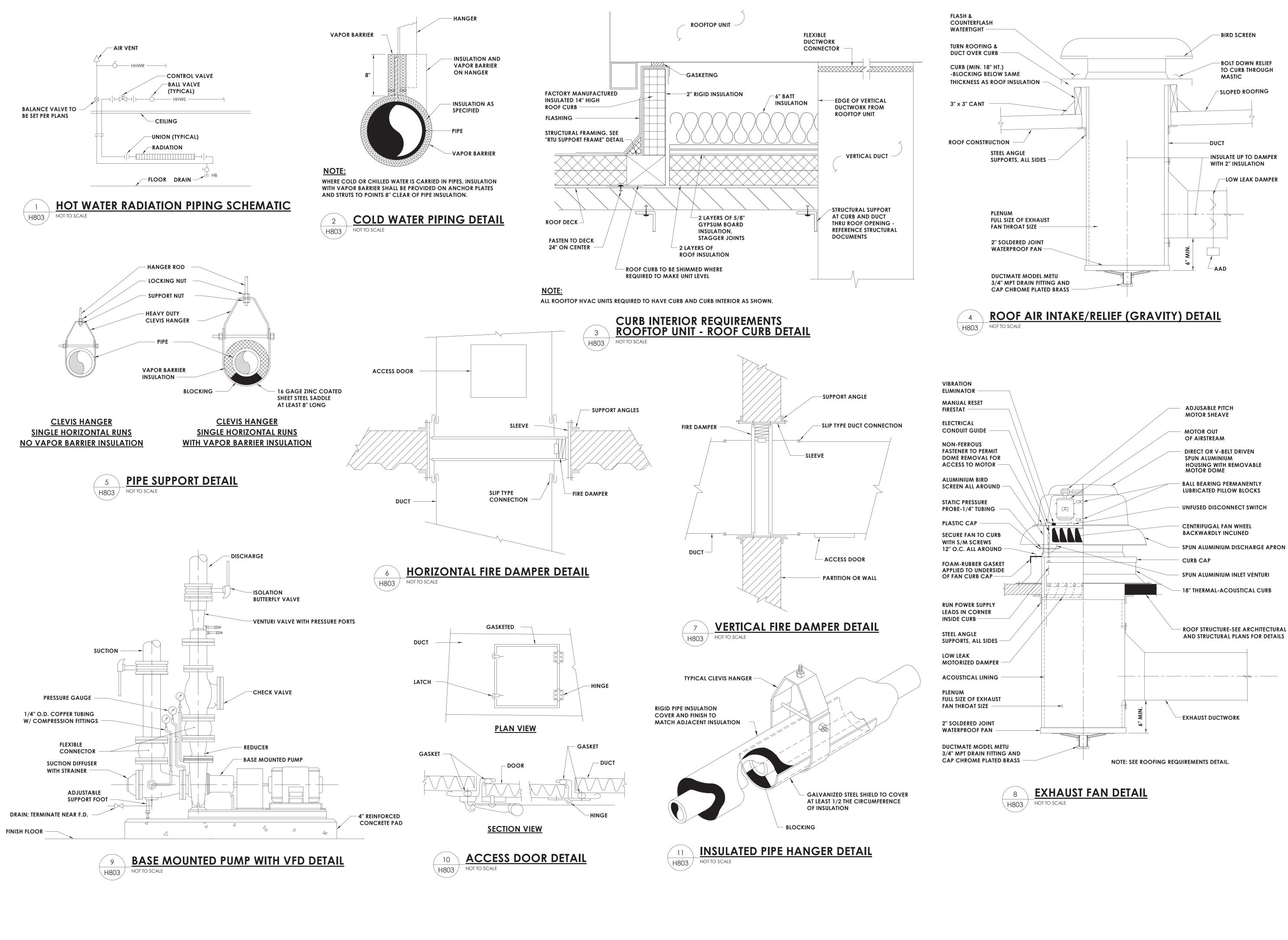








H802



IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT ENGINEER OR SURVEYOR IS ALTERED. THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE

CPL | Architecture Engineering Planning

50 FRONT ST. SUITE 202

NEWBURGH, NY 12550

CPLteam.com

PROJECT INFORMATION

SCHOOL DISTRICT

NEWBURGH ENLARGED CITY

PHASE 3: HERITAGE MIDDLE

405 Union Avenue, New Windsor, NY 12553

SCHOOL 2019 CAPITAL

IMPROVEMENT PROJECT

Project Number 13940.18

Client Name

Project Name

Project Address

SED Number

No. Date

44-16-00-01-0-039-011

PROJECT ISSUE SCHEDULE

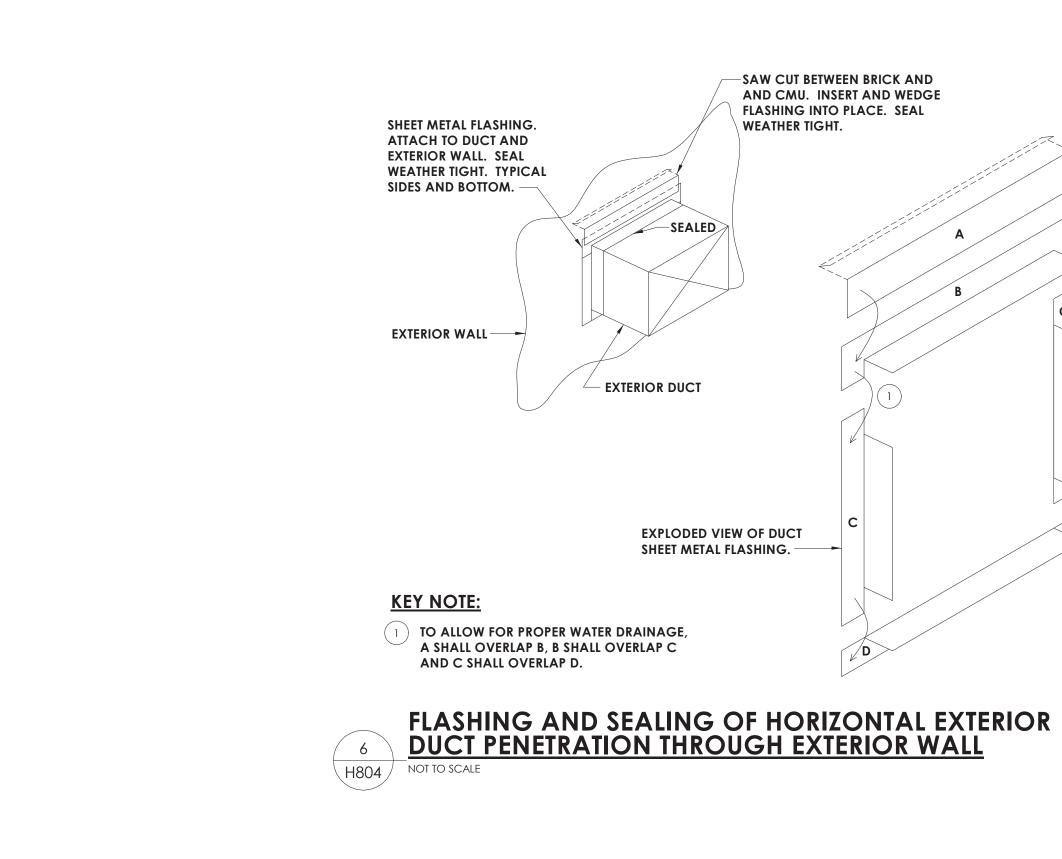
Description

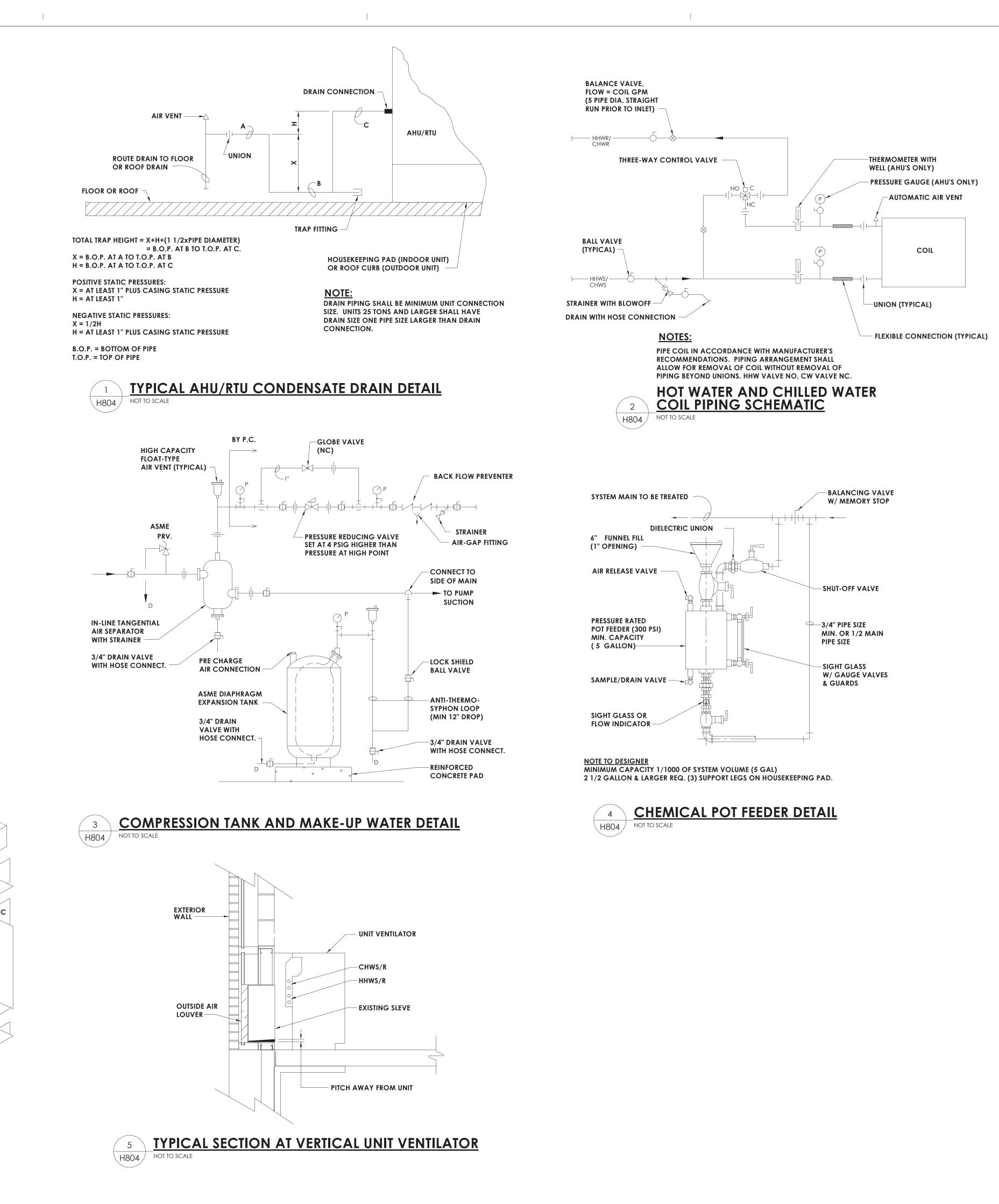
SHEET INFORMATION Issued Scale

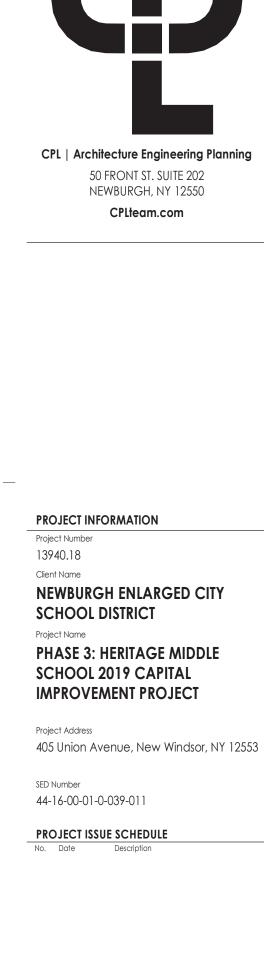
ALTERATION.

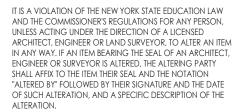
01/29/2021 12" = 1'-0" Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By Author Checker Drawing Title hvac details











SHEET INFORMATION

Issued	Scale
01/29/2021	12" = 1'-0'
Project Status	
CONSTRUCTION	DOCUMENTS
Drawn By	Checked By
Author	Checker
Drawing Title	
HVAC DETAIL	_S



													ROC	OF TOP	ENE	RGY RE	COVER	RY UNI	Г		
							С	OOLING CC	NL			SI	UPPLY FAN				Ε>	KHAUST FAN			
MARK	LOCATION	AREA SERVED	SA (CFM)	EA (CFM)	RA (CFM)	TOTAL MBH	SENS MBH	EAT	LAT	AMB	FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP	FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP	TOTAL MBH SAVED SUMMER
RTU-4	CAFÉ ROOF	CAFETERIA	9100	6000	6000	486	320	79.7	54.07	75	PLENUM	1	1760	11.89	15	PLENUM	0.5	1760	9.39	10	183
REMARKS:	1. FACTORY M	IOUNTED AND WIRE	D DISCONN	ECT. 115V C	ONVIENIENC	E OUTLET, F	ACOTRY WIR	RED. CLOG	GED FILTER	SWITCH,											
	2. ECM CONDE	ENSER FAN, HEAT PI	RESSURE CO	ONTROL WIT	H SIGHT GLA	ASS. REMOT	E SAFETY SH	IUTDOWN 1	ERMINAL.												
	3. TERMINAL S	STRIP FOR BMS CON	ITROL OF FA	AN AND DAM	PERS. COMI	PATIBLE WIT	H JOHNSON (CONTROLS	FACILITY EX	PLORER.											
	4. DOUBLE WA	ALL, R-13 FOAM INSU	JLATION. ST	TAINLESS ST	EEL DRAIN F	PAN.															

4. VIBRATION ISOLATION.

	AIR SEPARATOR SCHEDULE											
MARK	LOCATION	SERVED	GPM	WEIGHT (LBS)	DIA. (IN)	LNG. (IN)	STRAINER SQ. IN. FA	TYPICAL UNIT MFG & MODEL NO.				
AS-1	CHILLER PUMP ROOM	CHILLED WATER	300	579	18	44	6	B&G R-6FB				
REMARKS:	1. 30% PROPYLENE GI	LYCOL.										

	PUMP SCHEDULE											
MARK	LOCATION	SERVICE	CDM	HD	EL	ECTRICAL DA	TA	TYPICAL UNIT MFG	REMARKS:			
MARK	LUCATION	SERVICE	GPM	(FT.)	HP	VOLTS	PH	& MODEL NO.	REMARKS:			
P-1	STORAGE 423	CHILLED WATER	300	80	10	208	3	B&G E-1510 3EB	1,2,3			
P-2	STORAGE 423	CHILLED WATER	300	80	10	208	3	B&G E-1510 23EB	1,2,3			
REMARKS:	1. 30% PROP	YLENE GLYC	OL.									
	2. SUCTION D	IFFUSER.										
	3. WALL MOU	INTED VFD UI	NIT DISCONN	IECT.								

			VRF FA	N COIL U	NITS			
MARK	TOTAL AIRFLOW CFM	NOM.HEATING CAPACITY BTU/HR	NOM.COOLING CAPACITY BTU/HR	WEIGHT (LBS)	POWER (Ø/V/HZ)	AMPS	TYPICAL UNIT MFG & MODEL NO.	REMARKS
SSI-1	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-2	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-3	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-4	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-5	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-6	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-7	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-8	1500	27000	24000	47	1 / 208 / 60	12.06	SAMSUNG - AM024KN4DCH/AA	1,2,3,4,5,6
SSI-9	350	13500	12000	20.9	1 / 208 / 60	0.31	SAMSUNG - AM012TNVDCH/AA	1,2,3,4,5,6

2. BAC NET INTERGRATION TO BMS, JOHNSON CONTROLS FACILITY EXPLORER. 3. COLOR WHITE.

4. DRAIN PAN LEVEL SESORS.

5. CONDENSATE PUMP. 6. OUTDOOR UNIT POWERS INDOOR UNITS.

	EXPANSION TANK SCHEDULE											
MARK	LOCATION	SERVED	ACCEPT. GAL.	DIA (IN.)	HEIGHT (IN.)	WEIGHT FULL (LBS.)	TYPICAL UNIT MFG & MODEL NO.	REMARKS:				
ET-1	CHILLER PUMP ROOM	CHILLED WATER	79	20	58	992	TACO CA-300	1,2				
REMARKS:	1. REMOVABLE BLADDE	ER TYPE										
	2. CHARGE TO 12PSI.											
	3. 30% PROPYLENE GLY	COL.										

				F	IN TUE	BE SCI	HEDUL	E			
MARK	BTU/FT.	GPM	TUBE	FINS /	EWT	EAT		ENCLOSUR	E	TYPICAL UNIT MFG	REMARKS:
MARK	BIU/FI.	GPIVI	SIZE (IN.)	FT.	(°F)	(°F)	H (IN.)	D (IN.)	STYLE	& MODEL NO.	REIVIARNO.
FT-1	720	5	3/4	40	180	65	10-3/4	6-1/16	PEDESTAL	STERLING JVB	1,2,3,4
REMARKS:	1. CONTROL	VALVES AB	OVE THE CEI	LING.							
	2. COLOR B	Y ARCHITEC	Т.								
	3. ELEMENT	LENGTH LIS	TED ON PLAN	IS. CAT - 662	89C RETURN						
	4. COORDIN	IATE HEIGHT	WITH ELECT	RICAL DEVIC	ES.						

						C	HILLE	ER SCHI	EDULE						
	NOMINAL % PROP CHILLED WATER REFRIGERANT ELECTRICAL DATA WEIGHT														
MARK	CAPACITY (TONS)	% PROP GLYCOL	FLOW (GPM)	DELTA P (FT)	IPLV	EWT (°F)	LWT (°F)	REF. TYPE.	CHARGE (LB)	VOLTS/Ø	MCA	MOP	(LBS)	TYPICAL UNIT MFG & MODEL NO.	REMARKS
CH-1	180	30	270	17.42	20.516	56.97	42.00	134A	420.00	230/3	654	800	15700	TRANE-ACRB1805B	1,2,3,4
REMARKS:	1. FACTOR	Y MOUNTED	AND WIRED	DISCONNE	CT.		1			1					
	2. THE SCH	EDULED RE	FRIGERANT	CHARGE IS	A MANUFAC	TURERS ES	TIMATE, CC	ORDINATE TH	E CORREC	T CHARGE B	ASED ON FIE	ELD CONDIT	IONS.		
	3. FIVE YEA	R COMPRES	SOR WARF	RANTY.											
	4. HEAT TR	ACED EVAPO	ORATOR BA	RREL AND E	XTERIOR PIF	PING. HEAT	TRACE SHA	ALL BE ON SEI	PARATE 120	V/20AMP CIF	CUIT.				

MARK	TYPE	LOCATION	MAX CFM		COOLING				HEATING			EL	ECTRICAL DA	ATA	TYPICAL UNIT MFG	REMARK
IVIARK	TTPE	LUCATION		MBH	GPM	WPD	MBH	EWT (°F)	WATER AT	GPM	WPD FT WC	WATTS	VOLTS	PHASE	& MODEL NO.	REIVIARM
FC-1	DUCTED	159 CUSTODIAN	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-2	CEILING RECESSED	GROUND FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-3	CEILING RECESSED	GROUND FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-4	CEILING RECESSED	1ST FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-5	CEILING RECESSED	1ST FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-6	CEILING RECESSED	2ND FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-7	CEILING RECESSED	2ND FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-8	CEILING RECESSED	1ST FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-9	CEILING RECESSED	3RD FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
FC-10	DUCTED	105B SCHOOL PYCHOLOGIST	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3
FC-11	CEILING RECESSED	3RD FLOOR HALL	1020	20	5	3.1	42	180	160	4.5	5.6	150	115	60	AIRTHERM 101-1	1,2,3,4
EMARKS:	1. FACTORY MO	UNTED AND WIRED DISCO	ONNECT.													
		I 1" MERV 7 FILTERS NE GLYCOL COOLING CO														

AIR HANDLING UNIT SCHEDUL HOT WATER H COOLING MBH MIN. OA EXT. SP CFM W.C. TOTAL EAT °F DB/WB LAT °F DB/WB MARK ROOM SERVED CFM SENS ROWS MBH EWT LWT EA AHU-1 GYM 3500 750 1.5 145 102 4 83.2/68.8 57.9/56 204 180 138 58.7 AHU-2 GYM 3500 750 1.5 145 102 4 83.2/68.8 57.9/56 204 180 138 58.7 AHU-3 GYM 3500 750 1.5 145 102 4 83.2/68.8 57.9/56 204 180 138 58.7 AHU-4 GYM 3500 750 145 138 58.7 1.5 102 4 83.2/68.8 57.9/56 204 180 6 80/67 56.1/44.7 128.7 180 127 60.4 98.3 70.57 AHU-5 KITCHEN 2600 500 1 AHU-6 MUSIC 4200 1500 1.2 185.6 129.7 6 85.4/70.2 57.8/56.3 266.4 180 122.3 47.9 REMARKS: 1. FACTORY MOUNTED AND WIRED DISCONNECT. ALL UNITS SHALL BE SINGLE POINT CONNECTION. 2. DAMPER ACTUATORS BY MANUFACTURER. FULLY MODULATING ACCUATORS. MERV 13 FILTERS. MAGNEHELIC HAUGE CLOG FILTER SWITCH. THERMAL EXPANSION VALVES. 3. CONNECT TO EXISTING JOHNSON CONTROLS, FACILITY EXPLORER.

						HOT	WATE	R COIL	SCHE	DULE				
				AIR DATA				WATE	R DATA					
MARK	SERVICE	CFM	TEMP (°F)	MAX APD	MIN.	GPM	TEMP (°F)		MAX APD	MFG SIZE HXL (IN.)	ROWS	TYPICAL UNIT MFG & MODEL NO.	REMARKS:	
		CFIM	ENT	LVG	(IN. WC)	MBH	GPM	ENT	LVG	(IN. WC)			& MODEL NO.	
HC-1	SF-9	2250	-2	70	0.76	174,960	18.8	180	160	3.8	15X22	2	CAPITAL COIL W8-2215-12B-HCA-R	1
HC-2	RTU-4	9100	-2	70	0.56	707,616	70.8	180	160	4.5	46X30	4	CAPITAL COIL	1

REGI	STERS,	GRILLES	, AND	DIFFUSERS	
APPLICATION	MATERIAL	TYPE	FINISH	DESIGN EQUIP.	REMARKS
SUPPLY	STEEL	LAY-IN	WHITE	PRICE SPD	4
SUPPLY	STEEL	DUCT GRILLE	WHITE	PRICE SDG	1,3
SUPPLY	STEEL	DUCT GRILLE	WHITE	PRICE HCD	1
RETURN/EA	STEEL	LAY-IN	WHITE	PRICE PDR	4
RETURN/EA	STEEL	WALL GRILLE	WHITE	PRICE 90	2,3
1. OPPOSED BLAD	E DAMPER.	· · · · · · · · · · · · · · · · · · ·			
2. CONCEALED MC	DUNTING.				
3. SINGLE DEFLEC	TION, BLADES P	PARALLEL TO LEN	NGTH.		
4. INSULATED BAC	ok pan.				
	APPLICATION SUPPLY SUPPLY SUPPLY RETURN/EA RETURN/EA 1. OPPOSED BLAD 2. CONCEALED MO 3. SINGLE DEFLEC	APPLICATIONMATERIALSUPPLYSTEELSUPPLYSTEELSUPPLYSTEELRETURN/EASTEELRETURN/EASTEEL1. OPPOSED BLADE DAMPER.2. CONCEALED MOUNTING.	APPLICATION MATERIAL TYPE SUPPLY STEEL LAY-IN SUPPLY STEEL DUCT GRILLE SUPPLY STEEL DUCT GRILLE SUPPLY STEEL DUCT GRILLE RETURN/EA STEEL LAY-IN RETURN/EA STEEL WALL GRILLE 1. OPPOSED BLADE DAMPER. 2. CONCEALED MOUNTING. 3. SINGLE DEFLECTION, BLADES PARALLEL TO LED	APPLICATIONMATERIALTYPEFINISHSUPPLYSTEELLAY-INWHITESUPPLYSTEELDUCT GRILLEWHITESUPPLYSTEELDUCT GRILLEWHITERETURN/EASTEELLAY-INWHITERETURN/EASTEELWALL GRILLEWHITE1. OPPOSED BLADE DAMPER.2. CONCEALED MOUNTING.3. SINGLE DEFLECTION, BLADES PARALLEL TO LENGTH.	SUPPLYSTEELLAY-INWHITEPRICE SPDSUPPLYSTEELDUCT GRILLEWHITEPRICE SDGSUPPLYSTEELDUCT GRILLEWHITEPRICE HCDRETURN/EASTEELLAY-INWHITEPRICE PDRRETURN/EASTEELWALL GRILLEWHITEPRICE 901. OPPOSED BLADE DAMPER.2. CONCEALED MOUNTING.SINGLE DEFLECTION, BLADES PARALLEL TO LENGTH.

					FAN	SCHE	DULE					
MARK	LOCATION	SERVICE	TYPE	CFM	SP	RPM		ELECTRIC/	AL DATA		TYPICAL UNIT MFG	REMARK
MAINN	LOCATION			CIW	IN W.G.		HP	VOLTS	PHASE	AMPS	& MODEL NO.	
EF-1	GYM	LOCKER ROOM EXHAUST	CENTRIFUGAL	1500	0.75	1457	.25	115	1	3.8	GREENHECK G-100-VG	1,2,4
EF-2	GYM	LOCKER ROOM EXHAUST	CENTRIFUGAL	1500	0.75	1457	.25	115	1	3.8	GREENHECK G-100-VG	1,2,4
EF-3	ROOF	CLASSROOM EXHAUST	CENTRIFUGAL	2000	0.5	948	1/2	208	1	5.4	GREENHECK GB-161	1,2
EF-4	ROOF	MUSIC ROOM	CENTRIFUGAL	1400	1	1725	1/2	208	1	5.4	GREENHECK G-123-A	1,2
EF-5	ROOF	CLASSROOM EXHAUST	CENTRIFUGAL	1250	1	1725	1/2	208	1	4.9	GREENHECK G-123-1	1,2
EF-6	ROOF	CLASSROOM EXHAUST	CENTRIFUGAL	4500	1	1102	2	208	1	12	GREENHECK G-200	1,2
SF-1	ATTIC	CLASSROOM OA	INLINE	10000	1.5	824	5	208	3	16.7	GREENHECK BSQ-300	1
SF-2	ATTIC	CLASSROOM OA	INLINE	3750	0.4	539	1/2	208	3	2.4	GREENHECK BSQ-240	1
SF-3	ATTIC	CLASSROOM OA	INLINE	8750	1.5	1147	5	208	3	16.7	GREENHECK BSQ-240	1
SF-4	-	-	-	-	-	-	-	-	-	-	NOT USED	-
SF-5	-	-	-	-	-	-	-	-	-	-	NOT USED	-
SF-6	ATTIC	CLASSROOM OA	INLINE	7000	0.75	875	2	208	3	7.5	GREENHECK BSQ-240	1
SF-7	ATTIC	CLASSROOM OA	INLINE	7500	1	964	3	208	3	10.6	GREENHECK BSQ-240	1
SF-8	ATTIC	CLASSROOM OA	INLINE	6750	1.5	1012	5	208	3	16.7	GREENHECK BSQ-240	1
SF-9	TECH	CLASSROOM OA	INLINE	2250	0.5	992	1/2	208	1	5.4	GREENHECK BSQ-160	1,3
RF-1	ATTIC	CLASSROOM EA	INLINE	13750	1.25	675	7-1/2	208	3	24.2	GREENHECK BSQ-360	1
RF-2	ATTIC	CLASSROOM EA	INLINE	3750	0.8	949	1-1/2	208	3	6.6	GREENHECK BSQ-200	1
RF-3	ATTIC	CLASSROOM EA	INLINE	3750	0.4	539	1/2	208	3	2.4	GREENHECK BSQ-240	1
RF-4	ATTIC	CLASSROOM EA	INLINE	2500	0.25	585	1/3	208	3	2.4	GREENHECK BSQ-200	1
RF-5	ATTIC	CLASSROOM EA	INLINE	1250	0.25	623	1/4	208	3	2.4	GREENHECK BSQ-160	1
RF-6	ATTIC	CLASSROOM EA	INLINE	6250	0.75	816	2	208	3	7.5	GREENHECK BSQ-240	1
RF-7	ATTIC	CLASSROOM EA	INLINE	4000	1	1038	1-1/2	208	3	6.6	GREENHECK BSQ-200	1
RF-8	ATTIC	CLASSROOM EA	INLINE	7250	1	945	3	208	3	10.6	GREENHECK BSQ-240	1
REMARKS:	 2. HINGED BASE 3. ALTERNATE M 	UNTED AND WIRED D AND BIRD SCREEN. MC-5. H SLOPPED CURBS.	ISCONNECT.		1				1			

						ELECT	RICAL DATA	λ		OPERATING			
MARK	LOCATION	SERVES	NOMINAL TONS	F	۹N	COMF	RESSOR			WEIGHT	TYPICAL UNIT MFG & MODEL NO.	REMARKS	
			10110	NO.	HP	QTY	RLA	VOLT/Ø	MCA	(LBS.)	a WODEL NO.		
ACC-1	GYM	AHU-1	13	2	.75	2	20.4	208/3	59	1141	AAON CFA-013-B-A-8-DC00K	1,3	
ACC-2	GYM	AHU-2	13	2	.75	2	20.4	208/3	59	1141	AAON CFA-013-B-A-8-DC00K	1,3	
ACC-3	GYM	AHU-3	13	2	.75	2	20.4	208/3	59	1141	AAON CFA-013-B-A-8-DC00K	1,3	
ACC-4	GYM	AHU-4	13	2	.75	2	20.4	208/3	59	1141	AAON CFA-013-B-A-8-DC00K	1,3	
ACC-5	KITCHEN ROOF	AHU-5	8	2	1/3	2	16.1	208/3	39	1078	AAON CFA-009-B-A-8-DC00K	1,3,4	
ACC-6	KITCHEN ROOF	AHU-6	15	2	.75	2	25	208/3	66	1143	AAON CFA-015-B-A-8-DC00K	1,3,4	
ACC-7	KITCHEN ROOF	SSI-1 THRU 9	16	2	620W	2	28	208/3	73	763	SAMSUNG AM192HXVAFH2AA	1,2,3,4	

TOTAL MBH SAVED WINTER	OPERATING WEIGHT (LBS)	FILTERS		ELECTRICAL QUIREMEN FLA		TYPICAL UNIT MFG & MODEL NO.	REMARKS:
511	3780	MERV 13	208/360	195	207	AAON RN-025-8-0- EB09-EJK	1,2,3,4

LE								
HEATING	G COIL DATA			SUPPLY F	AN MOT	OR DATA		
EAT °F	LAT °F	GPM	WPD FT-W.C.	BHP/HP	RPM	VOLTS/Ø	TYPICAL UNIT MFG & MODEL NO.	REMARKS:
8.7/55.6	111.5/72.7	10	0.7	3.3/4	1935	208/3/60	AAON: H3-DRB-8-0-162D-12F	1,2,3,4
8.7/55.6	111.5/72.7	10	0.7	3.3/4	1935	208/3/60	AAON: H3-DRB-8-0-162D-12F	1,2,3,4
8.7/55.6	111.5/72.7	10	0.7	3.3/4	1935	208/3/60	AAON: H3-DRB-8-0-162D-12F	1,2,3,4
8.7/55.6	111.5/72.7	10	0.7	3.3/4	1935	208/3/60	AAON: H3-DRB-8-0-162D-12F	1,2,3,4
0.4/56.6	105.4/71.3	5	0.3	1.68/4	1552	208/3/60	AAON:H3-CRB-8-0-162C-12F	1,2,3,4
7.9/47.9	104.2/68.5	9.5	0.7	3.12/4	1901	208/3/60	AAON: H3-DRB-8-0-162C-12F	1,2,3,4

CPL | Architecture Engineering Planning

50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION Issued

Issued	Scale
09/09/2021	12" = 1'-0'
Project Status	
CONSTRUCTION	DOCUMENTS
Drawn By	Checked By
NRH	JJW
Drawing Title	
HVAC SCHEE	DULES

MARK
UV-1
UV-2
UV-3 UV-4
UV-5
UV-6
UV-7
UV-8 UV-9
UV-10
UV-11
UV-12
UV-13
UV-14
UV-15 UV-16
UV-17
UV-18 (NOT USEE
UV-19
UV-20
UV-21
UV-22 UV-23
UV-24
UV-25
UV-26
UV-27
UV-28
UV-29
UV-30 UV-31
UV-32
UV-33
UV-34
UV-35
UV-36
UV-37
UV-38 UV-39
UV-40
UV-41
UV-42
UV-43
UV-44
UV-45 UV-46
UV-47
UV-48
REMARKS:

DUST COLLECTOR SCHEDULE - ALTERNATE NO MC-5

				DO21 COLI	LECTOR 50	CHEDUL	- ALIER	NAIENO	. IVIC-5					
MARK	MANUFACTURER	MODEL	SERVICE	DESIGN AIRFLOW			FAN BLOWER				SHAKE	RMOTOR		REMARKS:
WANN	WANUFACTURER	MODEL	JERVICE	DESIGN AIRFLOW	ESP. (IN.WG)	RPM	HP	ENCL.	V/PH/HZ	RPM	HP	ENCL.	V/PH/HZ	REIVIARRS.
DC-1	STERNVENT	DKPD 36007-2	TECH 08	2250 CFM	8	3450	7.5	TEFC	208/3/60	1150	1/3	TEFC	208/3/60	1,2,3,4,5,6
REMARKS:	1. BLOWER MOTOR S	SHALL BE AMCA "C" S	PARK RESISTANT CC	NSTRUCTION.										
			A MACHETIC STADT											

2. FACTORY MOUNTED AND WIRED NEMA 4 MAGNETIC STARTERS FOR BLOWER AND SHAKER.

3. TWO 55-GALLON DRUMS FOR DUST COLLECTION.

4. EXPLOSION RELIEF DOOR. 5. DUST SWITCH SYSTEM FOR INTERLOCKING DUST COLLECTOR OPERATION WITH SHOP EQUIPMENT.

6. FLAMEX SPARK SUPPRESION SYSTEM.

LOUVER SCHEDULE

MARK	LOCATION	SERVICE	FREE AREA (SQ. FT.)	CFM	SP (IN. WG)	SIZE W&H (IN.)	TYPICAL UNIT MFG. & MODEL NO.	REMARKS:
L-1	GYM	AHU-3	4.2	1400	0.15	36x36	RUSKIN ELF375D	1,2,3,
L-2	GYM	AHU-4	4.2	1400	0.15	36x36	RUSKIN ELF375D	1,2,3
REMARKS:	1. 54% FREE AREAS,	HIGH PERFORMA	NCE FRAME SYSTEM V	VITH DRAINABLE HE	AD.			-
	2. DRAIN GUTTERS IN	N BLADES.						

3. 4" DEEP, 37-1/2 DEGREE BLADES.

						;	-	-	-	UN	NIT VEN	TILATOR	SCHEDU	JLE									
MARK	ROOM	OA FAN	EA FAN	UNIT TYPE	CFM	EXT.	ELECT	RICAL	MIN. OA	MIM	NTER		HW	COIL CAPACI	TY	-		CV	V COIL CAPA	CITY		TYPICAL UNIT MFG	REMARKS:
	SERVES	OATAN	LATAN		CIM	SP.	MCA	VOLT/Ø	CFM	OA °F	RA °F	EWT °F	EAT °F	LAT °F	MBH	GPM	EWT °F	EAT °F	LAT °F	MBH	GPM	& MODEL NO.	KLIVIAKKJ.
UV-1	438	-	-	HORIZONTAL	1500	0.625	5.9	120/1	600	5	72	180	45.2	95	81049.5	4.2	45	79.8	56	38734.5	6.7	MAGICAIRE MAUH	1,2,4,5,6
UV-2	105	SF-8	RF-8	HORIZONTAL	1000	0.625	5	120/1	550	5	72	180	35.2	95	64937.3	3.3	45	81.6	56	27776.0	4.8	MAGICAIRE MAUH	1,2,4,5,6
UV-3	105A	SF-8	RF-8	HORIZONTAL	1000	0.625	5	120/1	450	5	72	180	41.9	95	57667.8	3.0	45	80.4	56	26474.0	4.5	MAGICAIRE MAUH	1,2,4,5,6
UV-4	106	SF-8	RF-8	HORIZONTAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	4.6	MAGICAIRE MAUH	1,2,4,5,6
UV-5	104	(E)GRV-2	EF-6	HORIZONTAL	1500	0.625	5.9	120/1	675	5	72	180	41.9	95	86501.6	4.5	45	80.4	56	39711.0	6.8	MAGICAIRE MAUH	1,2,4,5,6,8
UV-6	101	(E)GRV-2	EF-5	HORIZONTAL	1000	0.625	5	120/1	525	5	72	180	36.8	95	63119.9	3.3	45	81.3	56	27450.5	4.7	MAGICAIRE MAUH	1,2,4,5,6,8
UV-7	114	SF-3	EF-6	HORIZONTAL	1500	0.625	5.9	120/1	675	5	72	180	41.9	95	86501.6	4.5	45	80.4	56	39711.0	6.8	MAGICAIRE MAUH	1,2,4,5,6,8
UV-8	113A	SF-3	RF-1	HORIZONTAL	1000	0.625	5	120/1	550	5	72	180	35.2	95	64937.3	3.3	45	81.6	56	27776.0	4.8	MAGICAIRE MAUH	1,2,4,5,6
UV-9	113B	SF-3	RF-1	HORIZONTAL	1000	0.625	5	120/1	550	5	72	180	35.2	95	64937.3	3.3	45	81.6	56	27776.0	5.7	MAGICAIRE MAUH	1,2,4,5,6
UV-10	112	SF-3	RF-1	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-11	109	SF-3	RF-1	HORIZONTAL	1000	0.625	5	120/1	470	5	72	180	40.5	95	59121.7	3.0	45	80.6	56	26734.4	5.5	MAGICAIRE MAUH	1,2,4,5,6
UV-12	110	SF-3	RF-2	HORIZONTAL	1250	0.625	5.9	120/1	525	5	72	180	43.9	95	69358.6	3.6	45	80.0	56	32604.2	6.7	MAGICAIRE MAUH	1,2,4,5,6
UV-13	111	SF-3	RF-2	HORIZONTAL	1250	0.625	5.9	120/1	525	5	72	180	43.9	95	69358.6	3.6	45	80.0	56	32604.2	6.7	MAGICAIRE MAUH	1,2,4,5,6
UV-14	206	SF-7	RF-8	HORIZONTAL	1000	0.625	5	120/1	650	5	72	180	28.5	95	72206.8	3.7	45	82.8	56	29078.0	6.0	MAGICAIRE MAUH	1,2,4,5,6
UV-15	204	SF-8	RF-8	HORIZONTAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	5.5	MAGICAIRE MAUH	1,2,4,5,6
UV-16	203	SF-8	RF-8	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-17	202	SF-7	RF-8	HORIZONTAL	1250	0.625	5.9	120/1	575	5	72	180	41.2	95	72993.4	3.8	45	80.5	56	33255.3	6.9	MAGICAIRE MAUH	1,2,4,5,6
18 (NOT USED)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UV-19	209	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	5.5	MAGICAIRE MAUH	1,2,4,5,6
UV-20	215	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-21	214	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-22	216	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-23	212	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	5.5	MAGICAIRE MAUH	1,2,4,5,6
UV-24	213	SF-1	RF-1	HORIZONTAL	1250	0.625	5.9	120/1	575	5	72	180	41.2	95	72993.4	3.8	45	80.5	56	33255.3	6.9	MAGICAIRE MAUH	1,2,4,5,6
UV-25	210	SF-1	RF-1	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-26	306	SF-7	RF-7	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-27	305	SF-7	RF-7	HORIZONTAL	750	0.625	4.6	120/1	325	5	72	180	43.0	95	42342.1	2.2	45	80.2	56	19692.8	4.1	MAGICAIRE MAUH	1,2,4,5,6
UV-28	304	SF-6	RF-7	HORIZONTAL	1250	0.625	5.9	120/1	525	5	72	180	43.9	95	69358.6	3.6	45	80.0	56	32604.2	6.7	MAGICAIRE MAUH	1,2,4,5,6
UV-29	309	SF-7	EF-6	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-30	310	-	EF-6	VERTICAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUV	1,2,3,4,5,7
UV-31	303	SF-6	RF-6	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-32	302	SF-6	RF-6	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-33	311	-	EF-7	VERTICAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,3,4,5,7
UV-34	312	SF-2	EF-7	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-35	301	SF-6	RF-6	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-36	321	SF-6	RF-6	HORIZONTAL	750	0.625	4.6	120/1	300	5	72	180	45.2	95	40524.8	2.1	45	79.8	56	19367.3	4.0		1,2,4,5,6
UV-37	320	SF-6	RF-6	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-38	318	SF-1	RF-3	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-39	317	SF-2	RF-3	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-40	316	SF-2	RF-3	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6		1,2,4,5,6
UV-41	313	-	RF-4	VERTICAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	5.5		1,4,5,6
UV-42	314	-	RF-4	VERTICAL	1000	0.625	5	120/1	475	5	72	180	40.2	95	59485.1	3.1	45	80.7	56	26799.5	5.5		1,4,5,6
UV-43	315	-	RF-5	VERTICAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUV	1,4,5,6
UV-44	307	SF-7	RF-7	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-45	402	SF-6	RF-9	HORIZONTAL	1500	0.625	5.9	120/1	625	5	72	180	44.1	95	82866.9	4.3	45	80.0	56	39060.0	8.1	MAGICAIRE MAUH	1,2,4,5,6
UV-46	404	SF-1	RF-10	HORIZONTAL	1500	0.625	5.9	120/1	575	5	72	180	46.3	95	79232.1	4.1	45	79.6	56	38409.0	7.9	MAGICAIRE MAUH	1,2,4,5,6
UV-47	403	SF-1	RF-11	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
UV-48	401	SF-6	RF-12	HORIZONTAL	1000	0.625	5	120/1	500	5	72	180	38.5	95	61302.5	3.2	45	81.0	56	27125.0	5.6	MAGICAIRE MAUH	1,2,4,5,6
<u>REMARKS:</u>		MOUNTED AN		SCONNECT.																			

2. CONDENSATE PUMP LITTLE GIANT VCC-20S, DRAIN PAN ALARM.

3. FULL ADAPTER WITH ENCLOSED PIPE TUNNEL, FINISHED ENDS.

4. ECM MOTORS. 5. MERV 14 FILTERS.

6. MOUNTED ABOVE THE CEILING.

7. FLOOR MOUNTED, PROVIDE WITH NEW LOUVER AND LINTLE. 8. ALTERNATE NO. MC-3

					ROO	FTOP A	AIR CO	NDITIO	NING U	JNIT S	CHEDU	ILE				
				SUPPI	LY FAN				DX CO	OLING			ELECT	RICAL		
MARK	ARK LOCATION TONS CEM OA CEM ESP PHD/HD TOTAL SENS EAT'F HAT'E AMP'E VOLT/O MCA & MODELN														TYPICAL UNIT MFG	REMARKS:
		TONO	CFIVI		(IN. W.C.)		MBH	MBH	DB	WB	LAIF		VOLINO	IVICA	a model no.	
RTU-1	3RD FLOOR ROOF	12	4400	1100	1.2	3.8/5	127	109	79.25	65.3	58.04	75	208/3	61	AAON RN010-8-0-EB09	1,2,3,4
RTU-2	3RD FLOOR ROOF	12	4400	1100	1.2	3.8/5	127	109	79.25	65.3	58.04	75	208/3	61	AAON RN010-8-0-EB09	1,2,3,4
RTU-3	3RD FLOOR ROOF	10	3600	960	1.2	2.6/5	124	98	79.5	65.5	55.6	75	208/3	61	AAON RN010-8-0-EB09	1,2,3
REMARKS: 1	1. 14" INSULATEI	D CURB. EX	TEND EXISTI	NG CONTROI	LS TO NEW U	NITS. JOHNS	ON CONTRO	LS FACILITY I	EXPLORER.							

3. DOUBLE WAS, R-13 FOAM INSULATION.

4. ALTERNATE MC-1.

											[DYNAMI	C INSER	RTION LO	DSS (DE	3)		
MARK	SERVES	CFM	WIDTH (IN)	HEIGHT (IN)	LENGTH (IN)	AIR DIRECTION	VELOCITY (FPM)	PD (IN. H2O)	TYPICAL UNIT MFG & MODEL NO.	63	125	250	500	1K	2K	4K	8K	REMARKS
DS-1	RTU-1	9100	40	24	80	SUPPLY	1365	0.12	ERM80/4A	9	13	20	32	35	34	29	25	1,2,3
DS-2	RTU-1	9100	40	24	80	RETURN	1365	0.12	RM80/XB	9	12	17	25	17	13	11	10	1,2,3
DS-3	AHU-6	4200	30	14	45	SUPPLY	1440	0.13	ERM45/2A	7	10	16	21	26	26	23	20	1,2,3
DS-4	AHU-6	4200	30	14	45	RETURN	1440	0.13	ERM45/2A	7	11	19	23	27	26	22	20	1,2,3
DS-5	AHU-1	3500	26	20	48	SUPPLY	969	0.09	ERM48/1B	7	12	21	27	36	35	30	26	1,2,3
DS-6	AHU-1	2250	24	16	48	RETURN	844	0.05	ERM48/1A	7	11	19	25	31	31	26	23	1,2,3
DS-7	AHU-2	3500	26	20	48	SUPPLY	969	0.09	ERM48/1B	7	12	21	27	36	35	30	26	1,2,3
DS-8	AHU-2	2250	24	16	48	RETURN	844	0.05	ERM48/1A	7	11	19	25	31	31	26	23	1,2,3
DS-9	AHU-3	3500	26	20	48	SUPPLY	969	0.09	ERM48/1B	7	12	21	27	36	35	30	26	1,2,3
DS-10	AHU-3	2250	24	16	48	RETURN	844	0.05	ERM48/1A	7	11	19	25	31	31	26	23	1,2,3
DS-11	AHU-4	3500	26	20	48	SUPPLY	969	0.09	ERM48/1B	7	12	21	27	36	35	30	26	1,2,3
DS-12	AHU-4	2250	24	16	48	RETURN	844	0.05	ERM48/1A	7	11	19	25	31	31	26	23	1,2,3

2. INLET: 2" SLIP, OUTLET 2" SLIP 3. VERIFY SIZES IN FIELD.

		G	RAVITY VEN	IILAIUR S	CHEDULE			
MARK	LOCATION	SERVICE	THROAT AREA (SQ. FT.)	ROOF OPENING (IN)	AIR FLOW (CFM)	SP (IN. W.G.)	TYPICAL UNIT MFG & MODEL NO.	REMARKS
GRV-1	ROOF	CAFETERIA	4	26.5X26.5	1900	0.06	GREENHECK GRSI-24	1,2

2. 18" INSULATED SLOPED CURB.

GLYCOL FEED SYSTEM									
MARK	PRESSURE RANGE (PSI)	CAPACITY GAL	V/PH/HZ	DIMENSIONS (WXDXH) IN	WEIGHT	TYPICAL UNIT MFG & MODEL NO.	REMARKS:		
GMP-1	10-70	50	110/1/60	34X34X45	134	WESSELS COMPANY GMP-13050	1,2,3,4		
REMARKS:	1. ALARM KIT WITH PANE	AND FLOAT				1			
	2. FILL THE SYSTEM FULL	TO 30% PROP	PYLENE GLYCO	L.					
	3. INTERNAL PRV.								
	4. FACTORY MOUNTED AN	ND WIRED DIS	CONNECT.						

CPL Architecture Engineering Planning
50 FRONT ST. SUITE 202

NEWBURGH, NY 12550 CPLteam.com

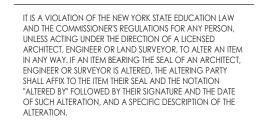
PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT Project Address

405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

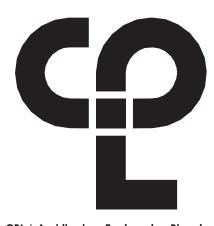
 No.
 Date
 Description



SHEET INFORMATION

ssued	Scale
09/09/2021	12" = 1'-0"
Project Status	
CONSTRUCTION DOC	UMENTS
Drawn By	Checked By
NRH	JJM
Drawing Title	
hvac schedule	S

			OA VENTILAT				o . /o o ==		
ROOM NUMBER		SQFT	CLASSIFICATION	PEOPLE/1000		,		OA TOTAL	OA W/ E
101	7TH GRADE GEN SCIENCE	1000	CLASSROOM	35	35	10	0.12	470	588
104	7TH GRADE GEN SCIENCE	1146	CLASSROOM	35	40.11 31.5	10	0.12	539	673
105	8TH GRADE ELA CLASSROOM	900	CLASSROOM	35		10	0.12	423	529
105A	SCIENCE 12:1:1	500	CLASSROOM	35	17.5	10	0.12	235	294 27
105B	SCHOOL PSYCHOLOGIST	250	OFFICE	5	1.25	5	0.06	21	
105C	CONFERENCE ROOM	250	CONFERENCE	50	12.5	5	0.06	78	97
106	8TH GRADE MATH CLASSROOM	716	CLASSROOM	35	25.06	10	0.12	337	421
107	ISS	364	CLASSROOM	35	12.74	10	0.12	171	214
108		363	CLASSROOM	35	12.705	10	0.12	171	213
109	8TH GRADE S.S. CLASSROOM	716	CLASSROOM	35	25.06	10	0.12	337	421
110	GENERAL SCIENCE	944	CLASSROOM	35	33.04	10	0.12	444	555
111	GENERAL SCIENCE	941	CLASSROOM	35	32.935	10	0.12	442	553
112	8TH GRADE MATH CLASSROOM	807	CLASSROOM	35	28.245	10	0.12	379	474
113A	TECHNOLOGY	900	CLASSROOM	35	31.5	10	0.12	423	529
113B	TECHNOLOGY	900	CLASSROOM	35	31.5	10	0.12	423	529
114	8TH GRADE GEN SCIENCE	1144	CLASSROOM	35	40.04	10	0.12	538	672
201	ISS 12:1:1	495	CLASSROOM	35	17.325	10	0.12	233	291
202	HOME & CAREERS	979	CLASSROOM	35	34.265	10	0.12	460	575
203	MATH	835	CLASSROOM	35	29.225	10	0.12	392	491
204	S.S.	798	CLASSROOM	35	27.93	10	0.12	375	469
206	ELA	1000	CLASSROOM	35	35	10	0.12	470	588
208	SPEC ED CLASSROOM	363	CLASSROOM	35	12.705	10	0.12	171	213
209	S.S.	716	CLASSROOM	35	25.06	10	0.12	337	421
210	8:1:1	419	CLASSROOM	35	14.665	10	0.12	197	246
212	SPEC ED CLASSROOM	721	CLASSROOM	35	25.235	10	0.12	339	424
213	HOME & CAREERS	943	CLASSROOM	35	33.005	10	0.12	443	554
214	ELA	808	CLASSROOM	35	28.28	10	0.12	380	475
215	ELA	769	CLASSROOM	35	26.915	10	0.12	361	452
216	S.S.	840	CLASSROOM	35	29.4	10	0.12	395	494
301	MATH 12:1:1	766	CLASSROOM	35	26.81	10	0.12	360	450
302	MATH	772	CLASSROOM	35	27.02	10	0.12	363	454
303	ELA	816	CLASSROOM	35	28.56	10	0.12	384	479
304	MATH	900	CLASSROOM	35	31.5	10	0.12	423	529
305	ELA	485	CLASSROOM	35	16.975	10	0.12	228	285
306	SCIENCE CLASSROOM	826	CLASSROOM	35	28.91	10	0.12	388	485
307	SCIENCE CLASSROOM	798	CLASSROOM	35	27.93	10	0.12	375	469
309	CLASSROOM	744	CLASSROOM	35	26.04	10	0.12	350	437
310	MATH	712	CLASSROOM	35	24.92	10	0.12	335	418
311	CLASSROOM	734	CLASSROOM	35	25.69	10	0.12	345	431
312	CLASSROOM	744	CLASSROOM	35	26.04	10	0.12	350	437
313	S.S.	651	CLASSROOM	35	22.785	10	0.12	306	382
314	MATH	669	CLASSROOM	35	23.415	10	0.12	314	393
315	ELA	784	CLASSROOM	35	27.44	10	0.12	368	461
316	CLASSROOM	808	CLASSROOM	35	28.28	10	0.12	380	475
317	S.S.	770	CLASSROOM	35	26.95	10	0.12	362	452
318	ELA	840	CLASSROOM	35	29.4	10	0.12	395	494
320	SCIENCE CLASSROOM	829	CLASSROOM	35	29.015	10	0.12	390	487
321	ART CLASSROOM	483	ART CLASSROOM	20	9.66	10	0.18	184	229
401	MATH	687	CLASSROOM	35	24.045	10	0.12	323	404
402	S.S./ICT	1065	CLASSROOM	35	37.275	10	0.12	501	626
404	ART CLASSROOM	1161	ART CLASSROOM	20	23.22	10	0.18	441	551
405	ELA	687	CLASSROOM	35	24.045	10	0.12	323	404
421	GYMNASIUM	7640	GYM PLAY AREA	7	53.48	10	0.12	1452	1815
434	MUSIC CLASSROOM	1650	MUSIC CLASSROOM	35	57.75	10	0.12	776	969
435	MUSIC ROOM	206	MUSIC CLASSROOM	35	7.21	10	0.12	97	121
436	PRACTICE	85	MUSIC CLASSROOM	35	2.975	10	0.12	40	50
438	PRACTICE	83	MUSIC CLASSROOM	35	2.905	10	0.06	34	43
442	OFFICE	76	OFFICE	5	0.38	5	0.06	6.46	8.075
444	KITCHEN	1046	KITCHEN	20	20.92	7.5	0.12	282	353
445	SERVERY	690	KITCHEN	20	13.8	7.5	0.12	186	233
446	DISHWASHER	310	KITCHEN	20	6.2	7.5	0.12	84	105
448	CAFETERIA/STUDY HALL	4687	CAFETERIA	70	328.09	7.5	0.18	3304	4130
448A	CAFETERIA/STUDY HALL	2028	CAFETERIA	70	141.96	7.5	0.18	1430	1787
	•	-	L	1	-		1		-



CPL | Architecture Engineering Planning 50 FRONT ST. SUITE 202 NEWBURGH, NY 12550 CPLteam.com

PROJECT INFORMATION Project Number 13940.18 Client Name NEWBURGH ENLARGED CITY SCHOOL DISTRICT Project Name PHASE 3: HERITAGE MIDDLE SCHOOL 2019 CAPITAL IMPROVEMENT PROJECT

Project Address 405 Union Avenue, New Windsor, NY 12553

SED Number 44-16-00-01-0-039-011

 PROJECT ISSUE SCHEDULE

 No.
 Date
 Description

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued Scale 09/09/2021 12" = 1'-0" Project Status CONSTRUCTION DOCUMENTS Drawn By Checked By NRH JJJM Drawing Title HVAC SCHEDULES

