l	MECHANICAL SYMBOLS - GENERAL	
	NEW PIPING, DUCTWORK, OR EQUIPMENT	
	EXISTING PIPING, DUCTWORK, OR EQUIPMENT TO REMAIN	
	EXISTING PIPING, DUCTWORK, OR EQUIPMENT TO BE REMOVED	
	NEW EQUIPMENT	
ER	EXISTING EQUIPMENT TO BE REMOVED	
[_] _E	EXISTING EQUIPMENT TO REMAIN	
 L_JERR	EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED	
RE	RELOCATED POSITION OF EXISTING EQUIPMENT	
A1111 4	TYPE OF EQUIPMENT (AIR HANDLING UNIT)	
AHU-1	UNIT NUMBER	
•	POINT OF CONNECTION (OF NEW WORK TO EXISTING WORK) OR POINT OF DISCONNECTION (TO REMOVE AND PATCH EXISTING WORK)	
# >	DRAWING NOTE TAG	
\triangle	REVISION SYMBOL	
	SECTION DESIGNATION ON DRAWING WHERE SECTION IS CUT	
A B	A — SECTION DESIGNATION B — DRAWING NO.	
T	THERMOSTAT (HAS DISPLAY, OCCUPANT ADJUSTMENT, OR BOTH) TO BE WALL MOUNTED. REFER TO PLANS FOR LOCATION.	
(ZT)	TEMPERATURE SENSOR (HAS NO DISPLAY OR OCCUPANT ADJUSTMENT) TO BE WALL OR DUCT MOUNTED. REFER TO PLANS FOR LOCATION.	
(SD)	DUCT MOUNTED SMOKE DETECTOR	

TS	TEMPERATURE BE WALL OR D	SENSOR (HAS NO DISPLAY OR OCCUPANT ADJUSTMENT) TO DUCT MOUNTED. REFER TO PLANS FOR LOCATION.		
SD SD	DUCT MOUNTED	SMOKE DETECTOR		
MECHANICAL SYMBOLS - DUCTWORK				
18X12,	18X12	DUCT SIZE (FIRST FIGURE INDICATES HORIZONTAL SIZE)		
, 18ø	180	ROUND DUCT DIAMETER		
$\boxtimes \mapsto$		SUPPLY OR OUTSIDE AIR INTAKE DUCT UP		
×	×	SUPPLY OUTSIDE AIR INTAKE DUCT DOWN		
		RETURN OR EXHAUST DUCT UP		
		RETURN OR EXHAUST DUCT DOWN		
<u> </u>	====	ACOUSTICAL LINING IN DUCT		
├		TRANSITION FROM RECTANGULAR TO ROUND OR OVAL DUC		
S AD S	E3	ACCESS DOOR IN DUCT		
<u> </u>	₹ R	SLOPING RISE IN DUCT IN DIRECTION OF ARROW		
▶ D		SLOPING DROP IN DUCT IN DIRECTION OF ARROW		
		MITERED ELBOW WITH TURNING VANES		
\int	A	RADIUS ELBOW (INNER RADIUS = WIDTH)		
		DUCT SPLIT		
		90° BRANCH TAP (USE 45° BOOT, OR CONICAL TAP FOR BRANCH SERVING A SINGLE DIFFUSER/REGISTER ONLY)		
5		45° BRANCH TAP		
├		SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) RADIUS ELBOW TYPE		
\leftarrow		SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) MITERED ELBOW TYPE WITH TURNING VANES		
\		SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) BULLHEAD TYPE		
5		OFFSET (WITH RADIUS ELBOWS)		
├		SUPPLY REGISTER		
├	1	RETURN OR EXHAUST REGISTER		
Ş-L _{VD}	VD	VOLUME DAMPER		
5 5 FD	FD	FIRE DAMPER W/DUCT ACCESS DOOR (FD/AD)		
5 ∐ M	M	MOTORIZED DAMPER W/DUCT ACCESS DOOR		
FXC ⊱-IIII⊢-{	FXC	FLEXIBLE CONNECTION		
^		FLEXIBLE DUCT		
	vo_T\T			

MODULAR LINEAR DIFFUSER WITH PLENUM

BRANCH TAKEOFF TO CEILING DIFFUSER/REGISTER

MECH	ANICAL SYMBOLS - DUCTWORK (CONT.)		
↑	SUPPLY CEILING DIFFUSER (4-WAY BLOW)		5— H/0
 		-	5— H/C

SUPPLY CEILING DIFFUSER (3-WAY BLOW)
SUPPLY CEILING DIFFUSER (2-WAY BLOW)
SUPPLY CEILING DIFFUSER (1-WAY BLOW)

CD-B(500)	DIFFUSER TYPE AND CFM (CUBIC FEET PER MINUTE). REFER TO SCHEDULE.
	RETURN CEILING GRILLE OR REGISTER
VAV-B(500)	TERMINAL BOX (CV, VAV, FP). DESIGNATION INDICATES TYPE, BOX SIZE, AND CFM. QUANTITY (REFER TO SCHEDULES).
VAV-B(500)	TERMINAL BOX WITH REHEAT COIL (CV, VAV, FP). DESIGNATION INDICATES TYPE, BOX SIZE AND CFM. QUANTITY (REFER TO SCHEDULES).

VAV-B(500)	SIZE, AND CFM. QUANTITY (REFER TO SCHEDULES).			
VAV-B(500)		WITH REHEAT COIL (CV, VAV, FP). DESIGNATION E AND CFM. QUANTITY (REFER TO SCHEDULES)		
\$ SA\$	SA	SUPPLY AIR DUCT		
S	RA	RETURN AIR DUCT		
5— OA —	OA	OUTSIDE AIR INTAKE DUCT		

	SUPPLI AIR DUCT
— RA — \$ RA	RETURN AIR DUCT
— OA — S OA	OUTSIDE AIR INTAKE DUC
—EXH——\$ EXH	EXHAUST DUCT

MECHANICAL SYMBOL LIST - PIPIN			
→ ~	>	DIRECTION OF FLOW IN PIPE	
→		PITCH PIPE DOWN IN DIRECTION OF ARROW	

		1	BII(2011011 01 12011 III 1 II 2
		—	PITCH PIPE DOWN IN DIRECTION OF ARRON
1			ELBOW TURNED UP
1			ELBOW TURNED DOWN
$\frac{1}{1}$		Ĵ	BOTTOM PIPE CONNECTION
			TOP PIPE CONNECTION
7) [XXXXI)	ELEVIRLE CONNECTION

	7	لما	
	├ ── ─	E[FLEXIBLE CONNECTION
	└──		BALL VALVE
<u>'</u>	\longrightarrow		GATE VALVE
	──		GLOBE VALVE
	<u></u>		CHECK VALVE (ARROW INDICATES FLOW DIRECTION)
			AUTOMATIC THREE-WAY CONTROL VALVE
			AUTOMATIC TWO-WAY CONTROL VALVE

	₹	AUTOMATIC THREE-WAY CONTROL VALVE
	₩	AUTOMATIC TWO-WAY CONTROL VALVE
UCT	₩	PRESSURE REDUCING VALVE
	≥ —,√	PLUG VALVE
	├	BUTTERFLY VALVE (MANUAL)
	├	CIRCUIT SETTER/BALANCING VALVE

	──	EXPANSION JOINT
	$\overset{\sim}{\longrightarrow}$	CONCENTRIC REDUCER (ARROW INDICATES FLOW DIRECTION)
Í	<u></u>	ECCENTRIC REDUCER (ARROW INDICATES FLOW DIRECTION)
	≀ —— ——-	UNION
- I		

├	UNION
	CAPPED PIPE
₹	"Y" TYPE STRAINER WITH BLOW DOWN VALVE

	T TIPE STRAINER WITH BLO
<u> </u>	PIPE SLEEVE
PIPE FLANGE	

→	PIPE FLANGE						
~	VALVE IN VERTICAL PIPE						
~	MANUAL AIR VENT						

, Å	AUTOMATIC AIR VENT
	THERMOMETER
<u></u>	PIPE SENSOR WELL

	PIPE SENSOR WELL
,	THE SENSON WELL
~	PRESSURE GAUGE WITH SHUT OFF VALVE
•	PUMP

Sheet Number | Sheet Title WA M001 FIRST FLOOR VESTIBULE PARTIAL PLANS WA M301 DETAILS

MECHANICAL SYMBOLS - PIPING (CONT.)

⊱ H/CWS →	DUAL-TEMPERATURE HOT/CHILLED WATER SUPPLY
⊱ H/CWR →	DUAL-TEMPERATURE HOT/CHILLED WATER RETURN
⊱—CHWS—	CHILLED WATER SUPPLY
⊱—CHWR—	CHILLED WATER RETURN
├──HWS	HOT WATER SUPPLY
├──HWR──	HOT WATER RETURN
⊱—LPS—	LOW PRESSURE STEAM SUPPLY
├──LPR	LOW PRESSURE STEAM CONDENSATE RETURN
├ CD	CONDENSATE DRAIN LINE (GRAVITY)
├ ──PD──┤	PUMPED DRAIN LINE

MECHANICAL ABBREVIATIONS

AIR CONDITIONING UNIT

ACU

	AD	ACCESS DOOR
7	AHU	AIR HANDLING UNIT
	ATC	AUTOMATIC TEMPERATURE CONTROL
\neg	BMS	BUILDING MANAGEMENT SYSTEM
	BTU	BRITISH THERMAL UNIT
\dashv	CFM	CUBIC FEET PER MINUTE
4	CV	CONSTANT VOLUME
	DX	DIRECT EXPANSION
	EAT	ENTERING AIR TEMPERATURE
4	ER	EXISTING EQUIPMENT TO REMOVED
	ERR	EXISTING EQUIPMENT TO REMOVED AND RELOCATED
\dashv	EWT	ENTER WATER TEMPERATURE
	FLA	FULL LOAD AMPS
7	FPI	FIN PER INCH
_	FTR	FIN TUBE RADIATION
	GPM	GALLONS PER MINUTE
\dashv	НХ	HEAT EXCHANGER
	HZ	HERTZ
1	KW	KILOWATT
	LAT	LEAVING AIR TEMPERATURE
	МВН	THOUSAND BTU PER HOUR
_	MCA	MINIMUM CIRCUIT AMPS
	NC	NORMALLY CLOSED
\dashv	NIC	NOT IN CONTRACT
	NK	NECK SIZE
4	NO	NORMALLY OPEN
	NTS	NOT TO SCALE
4	OED	OPEN END DUCT
	PH	PHASE
\dashv	PSI	POUND PER SQUARE INCH
	PSIA	POUNDS PER SQUARE INCH ABSOLUTE
\dashv	PSIG	POUNDS PER SQUARE INCH GAUGE
	RE	RELOCATED POSITION OF EXISTING EQUIPMENT
\dashv	RE:	REFER TO
	TYP	TYPICAL
\dashv	VN	VENT
	V	VOLTS
\dashv	VFD	VARIABLE FREQUENCY DRIVE
	WMS	WIRE MESH SCREEN

NEW YORK STATE CODES & STANDARDS

- 2020 BUILDING CODE OF NEW YORK STATE
- 2020 FIRE CODE OF NEW YORK STATE
- 2020 PLUMBING CODE OF NEW YORK STATE 2020 MECHANICAL CODE OF NEW YORK STATE

2016 ASHRAE 90.1

 2020 FUEL GAS CODE OF NEW YORK STATE 2020 NYS UNIFORM CODE SUPPLEMENT NYS EDUCATION DEPARTMENT 1998 MANUAL OF PLANNING STANDARDS

NEW YORK STATE ENERGY CODES

2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

> 2016 NPFA 13 — STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2016 NFPA 14 — STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS 2016 NFPA 20 — STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION

2017 NFPA 70 — NATIONAL ELECTRICAL CODE 2016 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE

MECHANICAL DRAWING LIST

MECHANICAL GENERAL NOTES

- THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AS WELL AS INDICATE GENERAL ARRANGEMENT OF EQUIPMENT. DUCTWORK AND PIPING. THE CONTRACTOR SHALL ADHERE TO THESE DRAWINGS AS CLOSELY AS POSSIBLE. HOWEVER, THE RIGHT IS RESERVED TO VARY THE RUNS OF DUCTWORK AND PIPING AND TO MAKE OFFSETS, WHERE NECESSARY, TO ACCOMMODATE CONDITIONS ARISING AT THE JOB SITE. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO WORK SHALL BE PERFORMED PRIOR TO RECEIPT OF EQUIPMENT, DUCTWORK, AND PIPING FABRICATION SHOP DRAWING APPROVAL.
- THE DRAWINGS AND SPECIFICATIONS SHALL BE INTERPRETED SO AS TO REQUIRE THE MOST SUBSTANTIAL AND COMPREHENSIVE PERFORMANCE OF THE WORK, CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. AND SUCH WORK SHALL BE PERFORMED BY THE CONTRACTOR WITHOUT EXTRA COST TO THE OWNER. IN THE CASE OF A DISCREPANCY WITHIN THE CONTRACT DOCUMENTS, THE WORST CASE OR HIGHEST COST SHALL APPLY FOR BIDDING PURPOSES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY VIA RFI PRIOR TO PERFORMING THE ASSOCIATED WORK.
- ANY MATERIAL, WORK, OR INCIDENTAL ACCESSORIES OR MINOR DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SHOWN ON THE DRAWINGS, SHALL BE
- PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTICALLY LINED DUCT IS SPECIFIED, OUTER DUCT DIMENSIONS SHALL BE
- WHERE WORK IS INDICATED TO BE BY OTHER CONTRACTORS, FOR EXAMPLE: "BY GENERAL CONSTRUCTION CONTRACTOR", THIS WORK IS NOT IN THE HVAC/MECHANICAL CONTRACT. EACH CONTRACTOR WILL BE RESPONSIBLE FOR CLOSE COORDINATION WITH OTHER CONTRACTORS' WORK.
- REFER TO APPROPRIATE SPECIFICATION SECTION FOR EQUIPMENT SELECTION PARAMETERS WHERE DRAWINGS DO NOT CONTAIN EQUIPMENT SCHEDULES.

INCREASED TO ACCOMMODATE LINING.

- FOR AIR SYSTEMS. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING BRANCH VOLUME DAMPERS FOR ALL SUPPLY. RETURN. AND EXHAUST BRANCH DUCTWORK, REGARDLESS IF VOLUME DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL VOLUME DAMPERS SHALL BE ADJUSTABLE HANDLE TYPE FOR LAY-IN ACCESSIBLE CEILING OR CABLE OPERATED FOR CONCEALED TYPE OF CEILING. ALL BRANCH DUCT VOLUME DAMPERS SERVING DIFFUSERS IN GYPSUM BOARD CEILINGS (OR OTHERWISE INACCESSIBLE) SHALL BE REMOTELY (CORD OR CABLE) OPERABLE THROUGH THE FACE OF THE DIFFUSER.
- . INSTALL THERMOSTATS, FAN SPEED CONTROLLERS, AND OTHER ROOM OCCUPANT ADJUSTABLE CONTROLS WITH TOP OF DEVICE 4'-0" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT. COORDINATE EXACT LOCATIONS WITH THE ARCHITECTURAL PLANS. DEVICE COLORS TO BE SELECTED BY THE ARCHITECT. MANUFACTURER'S LOGO SHALL NOT BE EXPOSED.
- WHERE PIPING CONNECTIONS FOR EQUIPMENT SUCH AS PUMPS, AC UNITS, COILS, ETC. DIFFER FROM THE LINE SIZE PIPING, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FURNISH AND INSTALL THE NECESSARY REDUCER/EXPANDER FITTINGS TO ENABLE CONNECTION BETWEEN THE PIPING SYSTEM AND THE EQUIPMENT.
- 10. PROVIDE UL LISTED AND LABELED FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS. REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. PROVIDE 1-1/2 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 2 HOUR OR LESS RATING. PROVIDE 3 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 3 HOUR OR MORE RATING. ALL FIRE DAMPERS SHALL BE TYPE "B" WITH SHUTTER OUT OF AIRSTREAM, AND SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
- . PROVIDE UL LISTED AND LABELED COMBINATION FIRE/SMOKE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE AND SMOKE RATED WALLS AND FLOORS, REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE PROVIDED WITH AN END SWITCH FOR STATUS SIGNAL TO THE BMS AND FIRE SMOKE CONTROL PANEL. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
- 12. PROVIDE FIRESTOPPING FOR ALL DUCT, PIPE, AND CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS.
- 13. WHERE DUCTS AND PIPES PENETRATE FIRE AND/OR SMOKE RATED WALLS, LEAVE A MINIMUM OF 2 INCHES CLEAR ABOVE THE DUCTS AND PIPES, SUCH THAT THE MECHANICAL CONTRACTOR CAN SEAL THE WALL ABOVE THE DUCTS. DO NOT INSTALL FLEXIBLE DUCTWORK THROUGH FIRE AND/OR SMOKE RATED WALLS.
- 14. PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS, WALLS, OR FLOORS WHERE EXPOSED TO VIEW IN FINISHED AREAS. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.
- 15. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING THERMOSTATS FOR ANY EQUIPMENT THAT REQUIRES CONTROL, SUCH AS VAV BOXES, FCU, FANS, HEATERS, FINNED TUBE RADIATION, RTU'S, ETC., REGARDLESS IF THERMOSTATS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL THERMOSTATS SHALL BE DIRECT DIGITAL PROGRAMMABLE TYPE, UNLESS OTHERWISE NOTED. PROVIDE ONE THERMOSTAT FOR EACH FAN COIL UNIT, FAN UNIT, VAV, FPB, ENTRANCE HEATER, BASEBOARD RADIATION, ETC. THERMOSTAT LOCATIONS SHALL BE AS SHOWN ON PLANS AND/OR WHERE DIRECTED AND APPROVED BY THE ARCHITECT AND
- 16. ALL DUCTWORK AND PIPING REQUIRING FIRE RATING AND WHERE SHOWN ON PLANS SHALL BE PROVIDED WITH UL LISTED FIRE—RATED DUCT WRAP WITH APPROPRIATE FIRE RATING (1-HOUR, 2-HOUR, ETC.), UNLESS A FIRE-RATED ARCHITECTURAL ENCLOSURE IN THAT LOCATION IS SPECIFIED WITHIN DRAWINGS AND SPECIFICATIONS FOR ANOTHER TRADE.
- 17. ALL LINEAR DIFFUSERS ARE TO BE COORDINATED WITH ARCHITECTURAL PLANS FOR EXACT LENGTHS AND LOCATIONS. ACTIVE PLENUM SECTIONS SHALL BE OF THE SIZES AS SHOWN ON PLANS. EACH BRANCH TAP SERVING THE LINEAR DIFFUSER SHALL BE PROVIDED WITH A VOLUME DAMPER WHICH SHALL BE OPERABLE THROUGH THE DIFFUSER FACE. ACTIVE SUPPLY SECTION OF LINEAR DIFFUSER SHALL BE PROVIDED WITH PATTERN CONTROL DEVICES AND EQUALIZING GRIDS. ACTIVE OR INACTIVE RETURN
- SECTIONS SHALL NOT BE FURNISHED WITH PATTERN CONTROL OR EQUALIZING GRIDS. 18. BORDER TYPES AND METHOD OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES, AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING DETAILS AND
- 19. REFER TO SPECIFICATIONS FOR ACOUSTIC LINING REQUIREMENTS NOT SHOWN ON THE
- 20. FOR WATER SYSTEMS: THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING BALL TYPE SHUT-OFF VALVES AND SEPARATE BALANCING VALVE FOR ALL BRANCH PIPING REGARDLESS IF VALVES ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL SHUT-OFF VALVES SHALL BE FULL PORT AND PRESSURE RATED FOR SYSTEM PRESSURE. THE BALANCING VALVE SHALL BE SIMILAR TO B&G CIRCUIT SETTER PLUS CALIBRATED BALANCE VALVE, UNLESS OTHERWISE
- 21. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING SECONDARY DRAIN PANS FOR ALL AIR CONDITIONING CEILING HUNG EQUIPMENT REGARDLESS IF DRAIN PANS ARE NOT SHOWN IN CONTRACT DOCUMENTS. REFER TO DETAIL FOR INSTALLATION OF DRAIN PANS. IF NO DETAIL IS SHOWN. CONTRACTOR MUST REQUEST DRAIN PAN DETAIL THRU RFI PROCESS DURING BIDDING.
- 22. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING CONDENSATE PIPING FOR ALL COOLING TYPE EQUIPMENT REGARDLESS IF CONDENSATE PIPING IS NOT SHOWN IN CONTRACT DOCUMENTS. ALL CONDENSATE PIPING SHALL BE INSULATED AND ROUTED TO NEAREST DRAIN OR JANITORS CLOSET. IF NO CONDENSATE PIPING IS SHOWN, CONTRACTOR MUST REQUEST CONDENSATE PIPING ROUTING THRU RFI PROCESS DURING BIDDING.
- 23. GENERAL NOTES, SYMBOLS, ABBREVIATIONS, AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
- RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
- 25. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
- 26. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL, EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
- 27. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
- 28. PROVIDE ACCESS PANELS IN DUCTS AND CEILINGS/SOFFITS/WALLS/FLOORS IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR ALL CONCEALED EQUIPMENT THAT REQUIRES PERIODIC SERVICE, INCLUDING AIR CONDITIONING UNITS, FANS, CONDENSATE PUMPS, FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND DUCT MOUNTED SMOKE DETECTORS. MATCH FIRE RATING OF CEILING/SOFFIT/WALL/FLOOR WHERE APPLICABLE.
- 29. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
- 30. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
- 31. COORDINATE ALL ROOF PENETRATIONS WITH THE WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. COORDINATE ALL ROOF PENETRATION LOCATIONS WITH

MECHANICAL GENERAL NOTES (CONT.)

- THE OWNER. NOTIFY THE OWNER PRIOR TO STARTING WORK AND VERIFY COMPLIANCE WITH BOND AND WARRANTY OF THE ROOF.
- 32. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED, AND CLEAR OF CEILING INSERTS.
- 33. PROVIDE CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND
- EQUIPMENT MANUFACTURERS' REQUIREMENTS.
- 34. PRIOR TO SUBMISSION OF SHOP DRAWINGS, COORDINATE WITH ELECTRICAL CONTRACTOR TO VERIFY VOLTAGES AVAILABLE FOR MECHANICAL EQUIPMENT.
- 35. MOTOR STARTERS AND VARIABLE FREQUENCY DRIVES FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED/WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. COORDINATE AND VERIFY WITH ELECTRICAL CONTRACTOR PRIOR TO SHOP DRAWING SUBMISSION.
- 36. ALL DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED, INSTALLED, AND WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS INTEGRAL TO HVAC EQUIPMENT OR OTHERWISE NOTED. COORDINATE AND VERIFY WITH ELECTRICAL CONTRACTOR PRIOR TO SHOP DRAWING SUBMISSION.
- 37. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES. 38. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE THE SAME SIZE
- AS THE DIFFUSER OR REGISTER NECK. UNLESS OTHERWISE NOTED. 39. ALL DUCTWORK AND PIPING SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURAL MEMBERS UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD
- CONDITIONS. 40. DO NOT INSTALL DUCTWORK OR PIPING DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND
- PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS. 41. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE PROVIDED WITH
- VOLUME DAMPERS. WHETHER OR NOT THE VOLUME DAMPERS ARE SHOWN ON PLAN. 42. VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS SHALL BE CABLE OPERATED TYPE. WITH CABLE OPERATORS LOCATED IN ACCESSIBLE LOCATIONS AND
- CLEARLY LABELED FOR DIFFUSER OR REGISTER SERVED. 43. UNLESS OTHERWISE NOTED, ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE SPIRAL ROUND OR FLAT OVAL TYPE, WITH SOLID OUTER WALL, PERFORATED INNER
- WALL, AND 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING. 44. CONDENSATE DRAIN (CD) AND CONDENSATE PUMP DISCHARGE (PD) PIPING SHALL BE
- RIGID COPPER, TYPE L, MINIMUM 3/4" NOMINAL PIPE SIZE, BRAZED OR SOLDERED, WITH 1" INSULATION, UNLESS OTHERWISE NOTED ON DRAWINGS. 45. NEW AND EXISTING PERMANENT HVAC AIR EQUIPMENT MAY BE USED BY CONTRACTORS
- DURING CONSTRUCTION FOR TEMPORARY HEATING, COOLING, AND VENTILATION, ONLY UNDER THE FOLLOWING CONDITIONS: 45.1. CONTRACTOR TO PROVIDE TEMPORARY FILTERS IN EACH UNIT DURING CONSTRUCTION, WHICH SHALL BE REPLACED WITH NEW CLEAN FILTERS AFTER
- GENERAL CONSTRUCTION IS COMPLETED. 45.2. CONTRACTOR TO PROVIDE FILTER FABRIC AT ALL RETURN AND EXHAUST REGISTERS, GRILLES, AND OPENINGS DURING CONSTRUCTION.
- 45.3. THE WARRANTY PERIOD FOR ALL EQUIPMENT SHALL NOT BEGIN UNTIL CONSTRUCTION IS COMPLETED. IF THE EQUIPMENT MANUFACTURER'S WARRANTY PERIOD BEGINS WHILE THE UNIT USED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH EXTENDING THE WARRANTY TO PROVIDE THE FULL PERIOD OF COVERAGE TO
- THE OWNER. 45.4. IF NEW PERMANENT HVAC AIR EQUIPMENT INSTALLED UNDER THIS PROJECT WILL NOT BE OPERATED BY THE CONTRACTOR DURING CONSTRUCTION, ALL OPEN OR INCOMPLETE DUCTWORK SHALL BE CAPPED AIRTIGHT WITH WITH HEAVY POLYETHYLENE PLASTIC. AFTER THE INSTALLATION OF DUCTWORK, REGISTERS, GRILLES, AND DIFFUSERS, THE CONTRACTOR SHALL BLANK OFF ALL REGISTERS, GRILLES, AND DIFFUSERS WITH HEAVY POLYETHYLENE PLASTIC AND TAPE AIR TIGHT, IN AREAS THAT ARE UNDER CONSTRUCTION, UNTIL
- WORK IS COMPLETE IN THOSE AREAS. 45.5. IF THE ABOVE CONDITIONS ARE NOT MET, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY HEATING, COOLING, AND VENTILATION EQUIPMENT, DUCTWORK, CONTROLS, PIPING, AND POWER AT
- HIS OWN EXPENSE. 45.6. IF PERMANENT HVAC EQUIPMENT IS USED DURING CONSTRUCTION BUT NOT PROPERLY PROTECTED AS DESCRIBED ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OUT DUST AND DEBRIS FROM DUCTWORK AND EQUIPMENT, AS WELL AS ANY NECESSARY REPAIR OR REPLACEMENT OF DAMAGED EQUIPMENT AT HIS OWN EXPENSE.
- 45.7. WHEN GENERAL CONSTRUCTION IS COMPLETE, VACUUM CLEAN ALL DIFFUSERS, REGISTERS, GRILLES, AND HVAC EQUIPMENT IN THE PROJECT AREA OR SERVING THE PROJECT AREA. REMOVE ANY CONSTRUCTION DEBRIS.
- 46. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING DOWN, FLUSHING CLEAN, AND RE-FILLING THE HVAC HOT WATER AND CHILLED WATER SYSTEMS FOR THE BUILDING, TO FACILITATE MODIFICATIONS TO PIPING AND EQUIPMENT. COORDINATE AND SCHEDULE THIS WORK WITH THE OWNER. ASSUME THIS WORK WILL BE PERFORMED OUTSIDE OF BUSINESS HOURS.

MECHANICAL DEMOLITION GENERAL NOTES

- DEMOLITION NOTES, SYMBOL LIST, AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
- 2. ALL PIPING IN WALLS AND FLOORS NOT TO BE REUSED WILL BE PLUGGED OR CAPPED, AND CUTTING AND PATCHING WILL BE PERFORMED TO RESTORE SURFACE TO ORIGINAL CONDITION BY THIS CONTRACTOR.
- AFTER REMOVING PIPE THROUGH THE FLOOR SLABS, PACK OPENING WITH APPROVED FIRE-RATED PACKING.
- . THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF HVAC WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE OWNER/ENGINEER.
- THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING HVAC SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
- DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR, OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL
- THE CONTRACTOR SHALL REMOVE ALL DUCT AND PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.
- 3. ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REAVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
- 9. PORTIONS OF PIPING AND DUCTWORK TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED, AND RECONNECTED. 10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE
- PROJECTED DEMOLITION AND PHASING SCHEDULE, SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
- 11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR, AS DIRECTED BY THE
- 2. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- 13. THE SHUTDOWN OF EXISTING BUILDING HVAC SERVICES SHALL BE COORDINATED WITH WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO A SHUTDOWN.
- CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- 15. WHERE THE DEMOLITION OF EXISTING PNEUMATIC CONTROL EQUIPMENT. THERMOSTATS, OR TUBING IS INDICATED IN THE PLANS, THE CONTRACTOR SHALL CAP THE ENDS OF ALL EXISTING TO REMAIN PNEUMATIC LINES AIRTIGHT UNLESS OTHERWISE NOTED. IF ADDITIONAL PNEUMATIC LINES OR DEVICES ARE DISCOVERED BY THE CONTRACTOR INSIDE WALLS OR ABOVE CEILINGS DURING DEMOLITION, THE CONTRACTOR SHALL INFORM THE DESIGN TEAM PRIOR TO REMOVAL OF THESE LINES OR DEVICES.

EASTCHESTER **UNION FREE** SCHOOL DISTRICT

2022 CAPITAL BOND PROJECT PHASE 2

WAVERLY ELEMENTARY SCHOOL

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MEP CONSULTANT STANTEC 30 OAK STREET, SUITE 400 STAMFORD, CT 06905

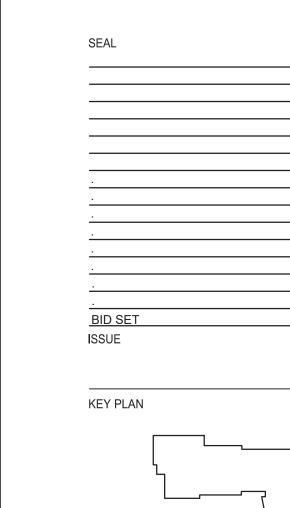
SECURITY CONSULTANT BUILDING TECHNOLOGY CONSULTING 992 BEDFORD STREET

BRIDGEWATER, MA 02324 HAZARDOUS MATERIALS CONSULTANT WSP ONE PENN PLAZA

LIGHTING CONSULTANT GOLDSTICK LIGHTING DESIGN 629 FIFTH AVE, #204 PELHAM, NY 10803 914.693.0221

250 W 34TH ST., 4TH FLOOR

NEW YORK, NY 10119

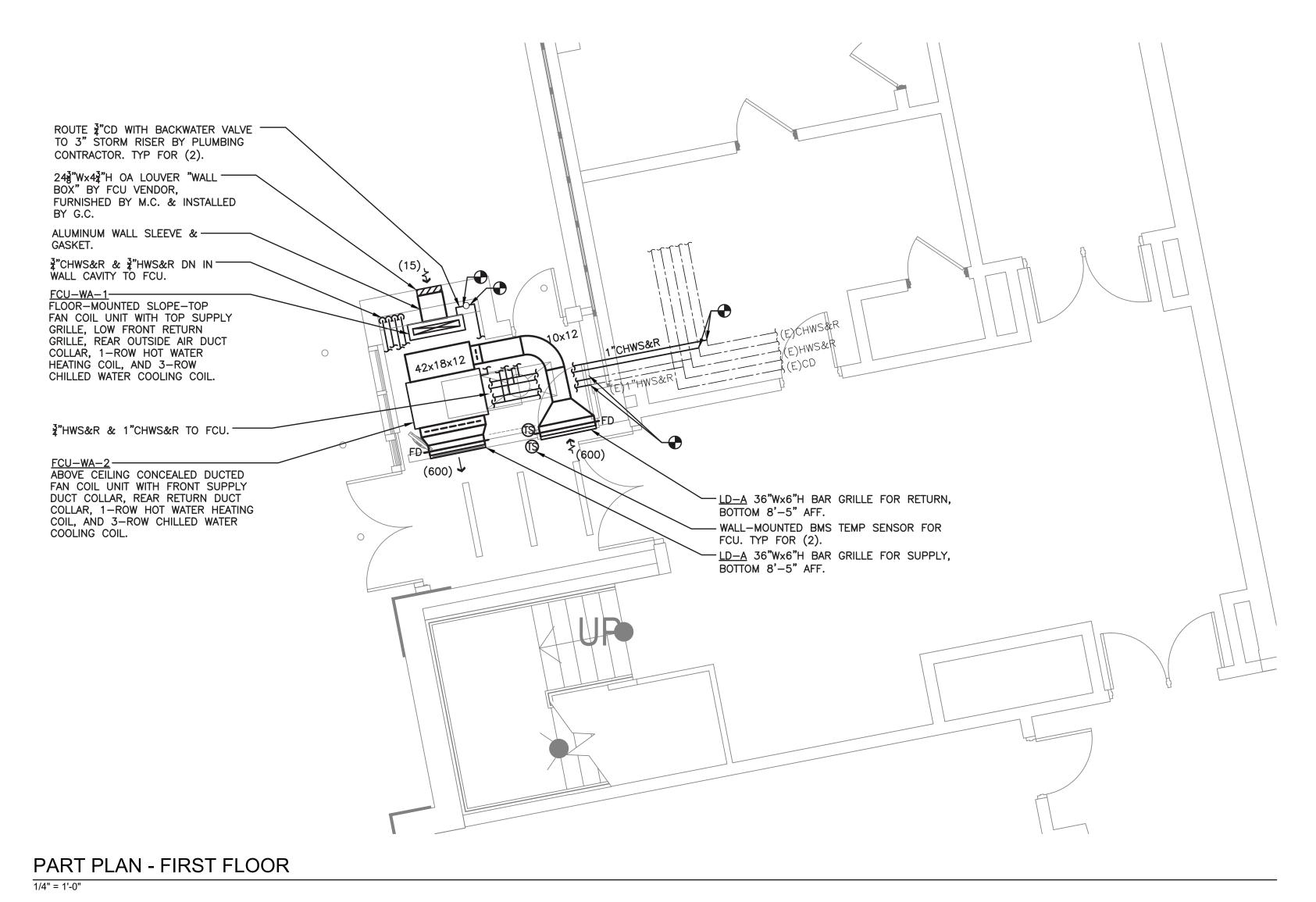


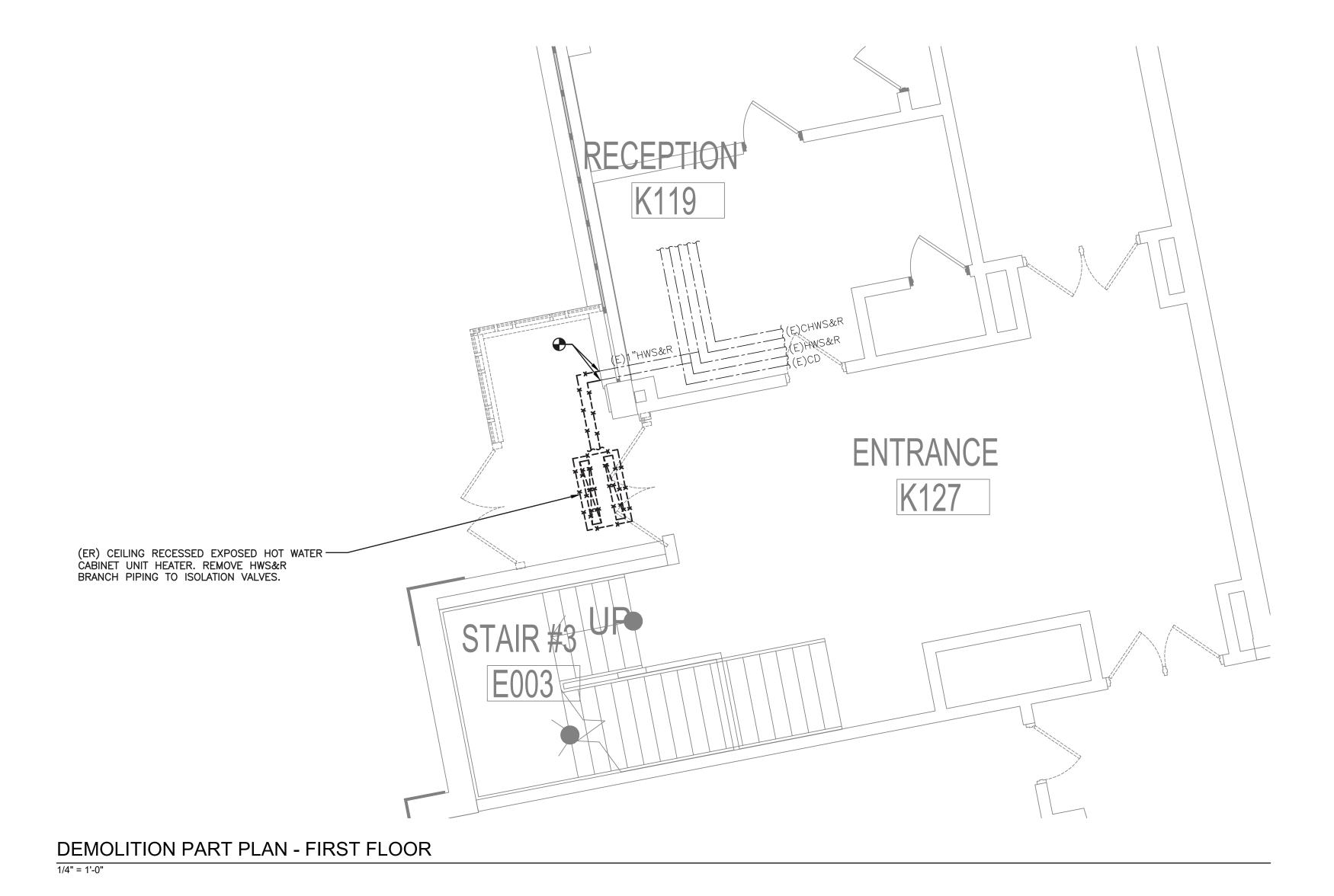
SED PROJECT NO. 66-03-01-03-0-002-011 MEMASI PROJECT NO.

01/03/2023

COVER SHEET

WA M001





NEW CONSTRUCTION NOTES - DUCTWORK:

- 1. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE THE SAME SIZE AS THE DIFFUSER OR REGISTER NECK, UNLESS OTHERWISE NOTED.
- 2. ALL DUCTWORK SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURAL MEMBERS UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD CONDITIONS.
- 3. DO NOT INSTALL DUCTWORK DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS.
- 4. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE PROVIDED WITH VOLUME DAMPERS, WHETHER OR NOT THE VOLUME DAMPERS ARE SHOWN ON PLAN.
- 5. VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS SHALL BE CABLE OPERATED TYPE, WITH CABLE OPERATORS LOCATED IN ACCESSIBLE LOCATIONS AND CLEARLY LABELED FOR DIFFUSER OR REGISTER SERVED.
- 6. UNLESS OTHERWISE NOTED, ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE SPIRAL ROUND OR FLAT OVAL TYPE, WITH SOLID OUTER WALL, PERFORATED INNER WALL, AND 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING.

NEW CONSTRUCTION NOTES - PIPING:

- 1. ALL PIPING SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURAL MEMBERS UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD CONDITIONS.
- 2. DO NOT INSTALL PIPING DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS.
- 3. CONDENSATE DRAIN (CD) AND CONDENSATE PUMP DISCHARGE (PD) PIPING SHALL BE RIGID COPPER, TYPE L, MINIMUM 3/4" NOMINAL PIPE SIZE, BRAZED OR SOLDERED, WITH 1" INSULATION, UNLESS OTHERWISE NOTED ON DRAWINGS.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2022 CAPITAL BOND PROJECT PHASE 2

WAVERLY ELEMENTARY SCHOOL

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ITHACA, NY 14850 STRUCTURAL CONSULTANT

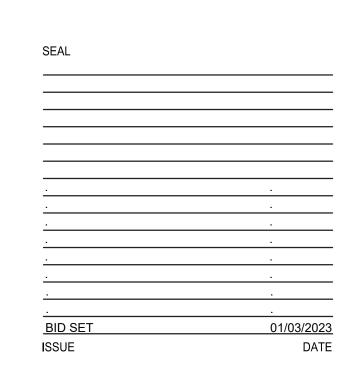
REILLY TARANTINO ENGINEERING 1000 PARK BLVD., SUITE 209 MASSAPEQUA PARK, NY 11762

MEP CONSULTANT STANTEC 30 OAK STREET, SUITE 400 STAMFORD, CT 06905

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LIGHTING CONSULTANT GOLDSTICK LIGHTING DESIGN 629 FIFTH AVE, #204 PELHAM, NY 10803 914.693.0221



SED PROJECT NO.

MEMASI PROJECT NO. FIRST FLOOR

VESTIBULE PARTIAL PLANS

WA M101

									VENTILA	ATION SC	HEDULE						
AIR HAND	LING SYST	EM DATA			ROOM D	ATA				OUTSIDE VEN	TILATION AIRFLO	W REQUIRED P	ER THE	OUTSIDE VEN	ITILATION AIRFL	OW REQUIRED	PER THE NYSED 1998
AIR	DESIGN	DESIGN	ROOM	ROOM	FLOOR	NUMBER	DESIGN	DESIGN]	2020 NEW YORK	STATE MECHANIC	AL CODE - SEC	TION 403	MANUA	L OF PLANNING	STANDARDS - S	SECTION S606-3-A
HANDLING	SUPPLY	OUTSIDE	NUMBER	NAME	AREA	OF	SUPPLY	MINIMUM	OUTSIDE	OUTSIDE	ZONE AIR	ROOM	ROOM DESIGN OUTSIDE	OUTSIDE	OUTSIDE	ROOM	ROOM DESIGN OUTSIDE
SYSTEM	AIRFLOW	VENTILATION				PEOPLE	AIRFLOW	OUTSIDE	VENTILATION	VENTILATION	DISTRIBUTION	OUTSIDE	VENTILATION AIRFLOW	VENTILATION	VENTILATION	OUTSIDE	VENTILATION AIRFLOW
ESIGNATION	(CFM)	AIRFLOW					(CFM)	VENTILATION	AIRFLOW	AIRFLOW PER	EFFECTIVENESS	VENTILATION	MEETS OR EXCEEDS	AIRFLOW	AIRFLOW PER	VENTILATION	MEETS OR EXCEEDS
		(CFM)						AIRFLOW	PER PERSON	SQUARE FOOT		AIRFLOW	CODE REQUIREMENT	PER PERSON	SQUARE FOOT	AIRFLOW	NYSED REQUIREMENT
								(CFM)	(CFM / PERSON)	(CFM / SF)		(CFM)	(YES / NO)	(CFM / PERSON)	(CFM / SF)	(CFM)	(YES/NO)
FCU-WA-1	200	15	K125	SECURITY OFFICE	67	1	200	15	5	0.06	0.8	11	YES	15	0.00	15	YES

												FAN C	OIL UNI	T SCHED	ULE															
DESIGNATION	CONFIGUR-	AIR CONNECTIONS	S		SUPPLY FAN DA	ATA		COIL	S	CHILLEI	D WATER (OR DUAL	TEMP) COI	L COOLING DAT	ΓA F	IOT WATER (OR DUAL	TEMP) COIL H	EATING DATA	STE	AM COIL I	HEATING DATA		ELI	ECTRICAL DATA			FILTER	UNIT OVER	RALL WEIG	HT MANUFA	AC- MODEL REMARKS
	ATION	SUPPLY RETURN	OUTSIDE SUPPLY MIN.	ESP NO.	HP BHF	P FAN DRIVE	STARTER STARTER	STEAM CHILLED	HOT DUAL	FLUID TOT. SEN	IS. GPM E.W.T. L.V	N.T. E.A.T. E	E.A.T. L.A.T. L.A	A.T. W.P.D. FL	UID MBH GPM E.W.	Г. L.W.T. E.A.T	. L.A.T. W.P.[D. HEATING	STEAM	STEAM E.A.1	L.A.T. VOLTS	PH Hz MCA MOP	DISCON	NECT	EMER	.,	DIMENSIC	, ,	SS) TURER	₹
			AIR AIRFLOW OUTSIDE	E (IN WC) OF	(PER (PEI	R TYPE TYPE	TYPE LOCATION	WATER V	ATER TEMP	MBH MB	BH (°F) (°	∘F) DB	WB DB W	VB (FT-WC)	(°F)	(°F) (FT-W	(C) MBH F	PRESURE	FLOW (°F)	(°F)		Y E.C LOCATION	TYPE E	ENCL. PWR	FILTER	WIDTH HEIGHT	LENGTH		
			(CFM) AIRFLOV	N MOTORS	S MOTOR) MOTO)R)			НОТ &			(°F)	(°F) (°F) (°	·F)					(PSIG)	(LBS/HR)			OR		TYPE (Y/N)		(IN) (IN)	OR		
			(CFM)						CHILLE	o													ANUF.					DEPTH		
																												(IN)		
FCU-WA-1	VERTICAL	TOP LOW FRONT F	REAR DUCT	0.30 1	0.13 0.04	CENTRI- DIREC	ECM AT MOTOR	- 3-ROW	DOW.	WATER 5.5 4.0	6 0.9 44 5	S 00	67 50 5	.7 1.8 WΔ	TER 11 0 11 180	160 55	106 27				- 120	1 60 2.8 15 MA	ANUE HAUT MTD	NON-	IEMA 1 N	1" MERV-13	22 20	10 0	7 TDANE	SEE NOTES
FCO-WA-1	SLOPE TOP	GRILLE GRILLE	COLLAR 200 13	0.50	0.13 0.02	FUGAL	I ECW ATWOTOR	- 3-KOW	-ROW -		0 0.9 44 3	00 00	01 39 3	77 1.6 WA	1EK 11.0 1.1 100	100 33	100 2.7	-	-	. .	- 120	1 00 2.6 13 141	ANOF. ONLY WITE.	FUSED		I MEKA-13	33 29	10 9	IRANE	BELOW
FCU-WA-2	HORIZONTAL	FRONT DUCT REAR DUCT	- 600 -	0.30 1	0.22 0.21	CENTRI- DIREC	ECM AT MOTOR	- 3-ROW	POW	WATER 16.4 14	.0 2.7 44 5	56 90	67 59 5	S6 2.0 1A/A	TER 27.9 2.8 180	160 55	00 60		_	_	- 120	1 60 3.9 15 MA	ANUE HINIT MTD	NON-	IEMA 1 N	1" MERV-13	47 25	10 12	O TDANE	E FC-C-B-060 SEE NOTES
FCU-VVA-2	CONCEALED	COLLAR COLLAR	- 000 -	0.50	0.22 0.21	FUGAL DIREC	I ECW ATWOTOR	- 3-ROW	-1/044 -		.0 2.1 44 5	00 00	01 30 3	3.6 WA	1EK 21.5 2.0 100	100 33	90 0.0	•	•		- 120	1 00 3.9 13 10	ANOF. ONLY WITE.	FUSED	IEIVIA I N	I MEKA-12	41 23	10 13	IKANE	BELOW

1. PROVIDE THE FOLLOWING FACTORY SUPPLIED FEATURES AND OPTIONS FOR ALL UNITS WITH OUTSIDE AIR INTAKE CONNECTIONS:

1.1. 2-POSITION OUTSIDE AIR MOTORIZED DAMPER AND ACTUATOR, "OPEN" POSITION FIELD ADJUSTIBLE FROM 0-50%.

2. PROVIDE THE FOLLOWING FACTORY SUPPLIED FEATURES AND OPTIONS FOR ALL FLOOR-MOUNTED UNITS:

2.2. SUB-BASE, 4" HIGH.

3. PROVIDE THE FOLLOWING FIELD SUPPLIED OPTIONS FOR ALL UNITS:

3.1. AUTOMATIC TEMPERATURE CONTROLS SUB-CONTRACTOR TO FURNISH AND FIELD-INSTALL BMS CONTROLS, CONTROL VALVES, AND CONTROL WIRING.

						REGISTI	ER, GRILLE, AND DIFF	USER SC	HEDULE					
DESIGNATION	SERVICE	TYPE	NOMINAL	NECK	CFM	CONFIGURATION	BORDER	MATERIAL OF	EQUALIZING	OPPOSED	FILTER	FINISH	MANUFACTURER MODE	. REMARKS
			OVERALL	SIZE	RANGE		TYPE	CONSTRUCTION	GRID IN NECK	BLADE	RACK	COLOR		
			DIMENSION	(IN)						DAMPER				
			(IN)							IN NECK				
						EXTRUDED ALUMINUM BAR GRILLE	SURFACE MOUNTED WITH CONCEALED					WHITE FLANGES, BLACK		
LD-A	SUPPLY	LINEAR DIFFUSER	RE: PLAN	RE: PLAN	RE: PLAN	WITH 1/8" BARS, 1/2" SPACING,		ALUMINUM	NO	NO	NO	PATTERN CONTROLLER	TITUS CT-580	SEE NOTES BELOV
						0° DEFLECTION	SCREW FASTENING					& VISIBLE INTERNAL SURFACES		

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.

2. ALL FINISH COLORS ARE SUBJECT TO APPROVAL BY THE ARCHITECT. SUBMIT COLOR CHART FOR REVIEW.

3. COORDINATE BORDER TYPES WITH ARCHITECTURAL CEILING SPECIFICATIONS.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2022 CAPITAL BOND PROJECT PHASE 2

WAVERLY ELEMENTARY SCHOOL

ARCHITECT

ARCHITECT

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GOLDSTICK LIGHTING DESIGN
629 FIFTH AVE, #204
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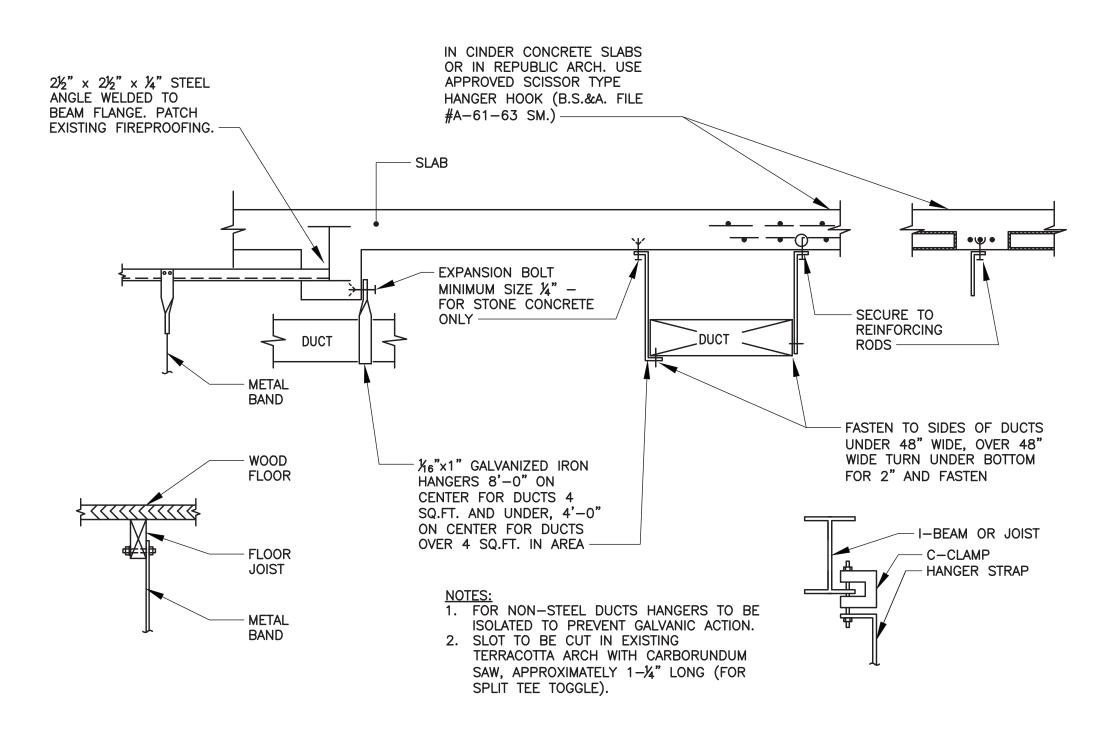
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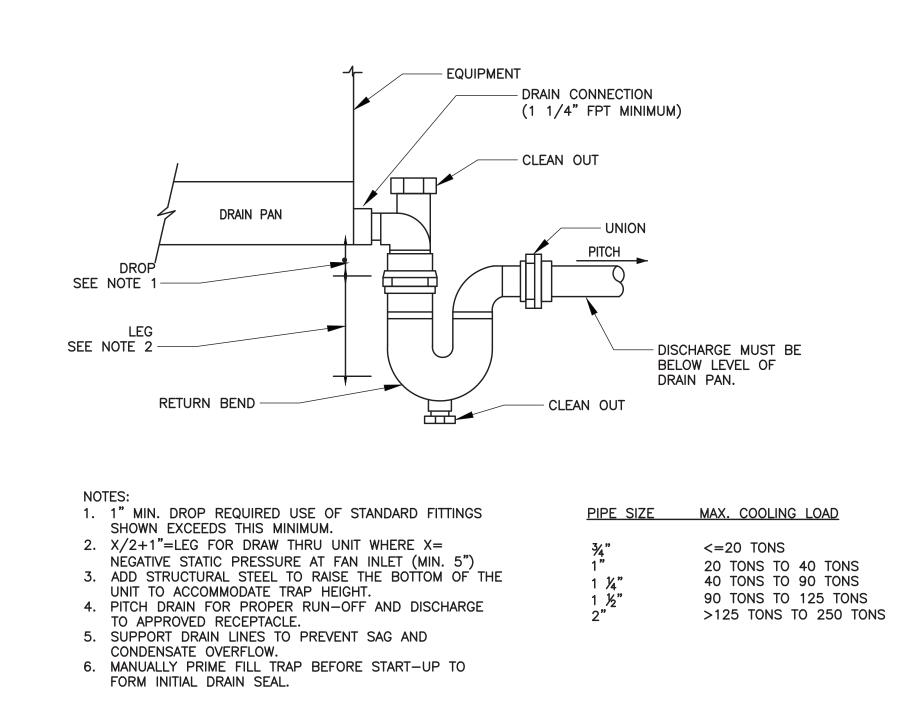
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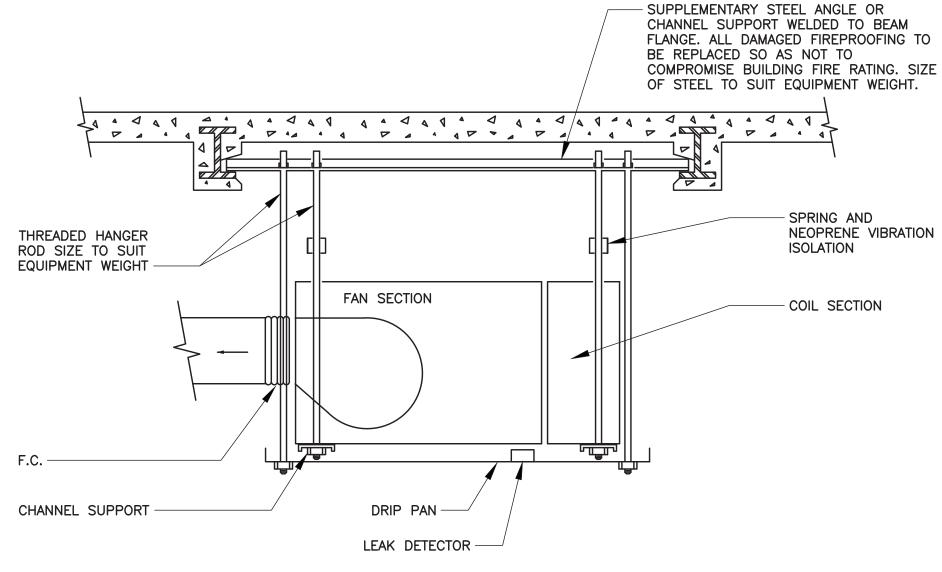
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TYPICAL DUCT HANGING DETAIL N.T.S.



TYPICAL CONDENSATE DRAIN PIPING DETAIL (DRAW THROUGH)

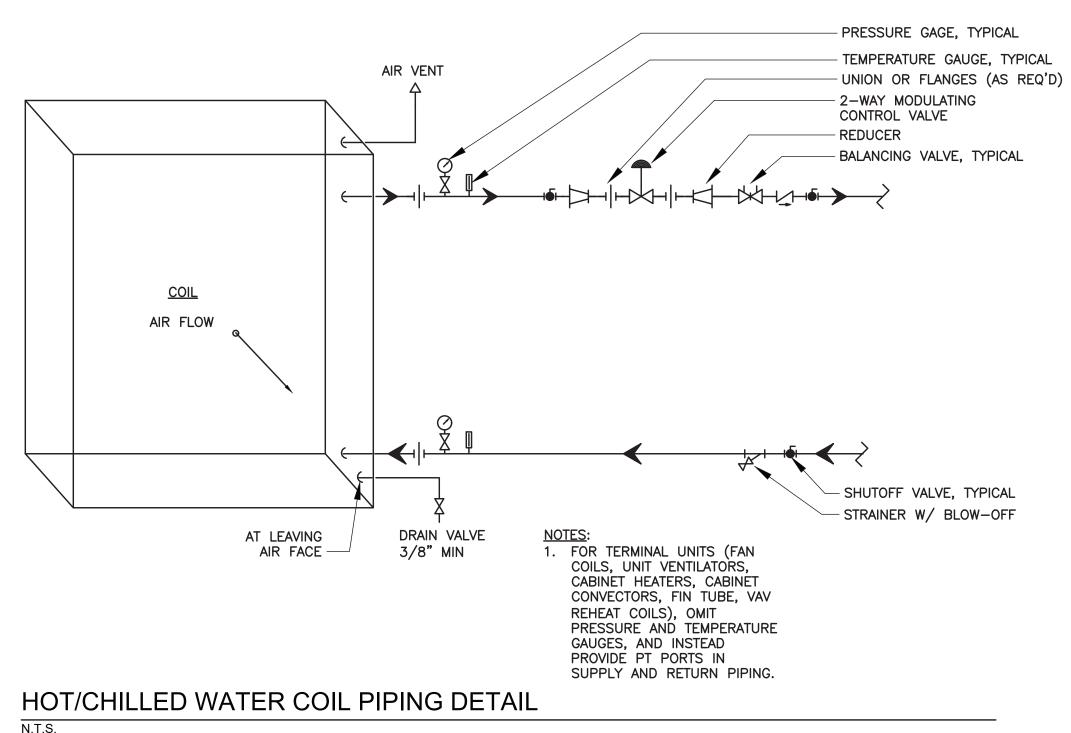


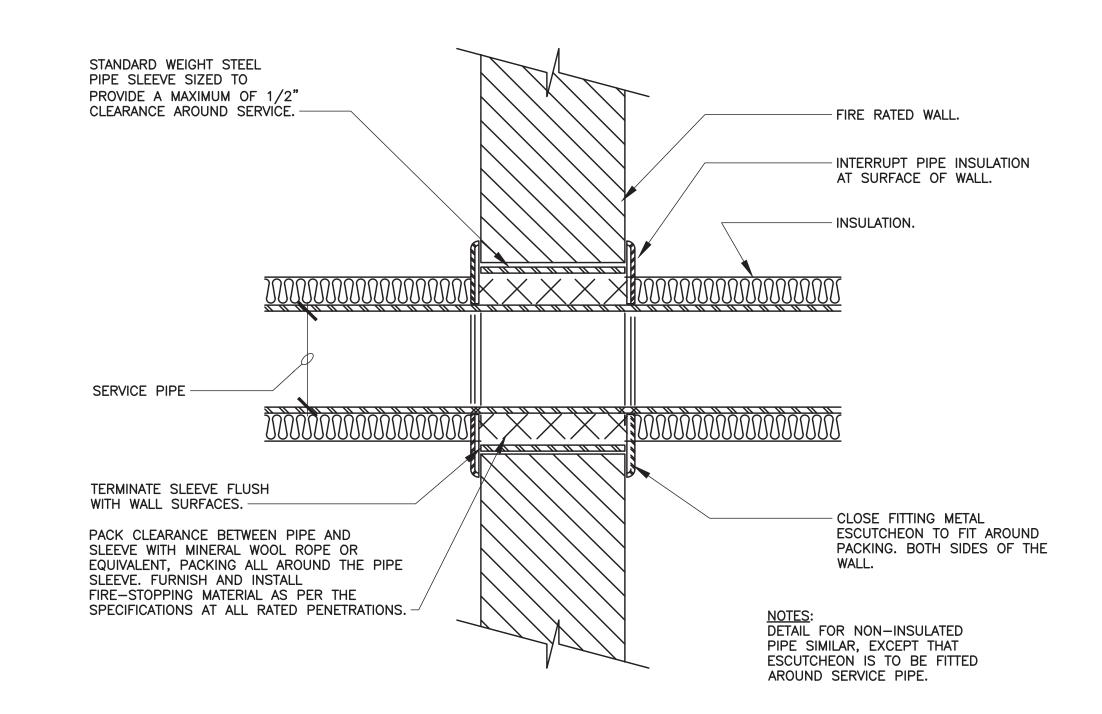
NOTES:

1. INCLUDE DRIP PAN AND LEAK DETECTOR FOR ALL CONCEALED HVAC UNITS WITH COOLING COILS (4-PIPE FAN COIL UNIT WITH HOT AND CHILLED WATER COILS, 2-PIPE FAN COIL UNIT WITH A DUAL-TEMPERATURE HOT/CHILLED WATER COIL, ETC.).

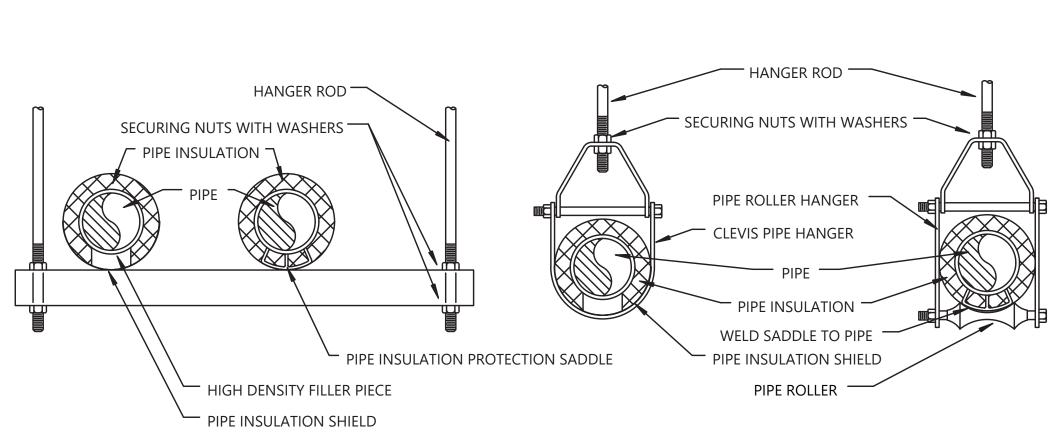
2. INCLUDE DRIP PAN AND LEAK DETECTOR FOR ALL CONCEALED HVAC UNITS WHICH ARE INTENDED FOR HEATING ONLY SERVICE, BUT WILL BE CONNECTED TO DUAL-TEMPERATURE HOT/CHILLED WATER PIPING (2-PIPE CABINET UNIT HEATERS WITH HOT WATER COIL, ETC.). THE DRIP PAN AND LEAK DETECTOR WILL BE UTILIZED AS A BACKUP TO BMS CONTROLS PROGRAMMED TO CLOSE THE CONTROL VALVE WHENEVER CHILLED WATER IS BEING CIRCULATED.

HVAC EQUIPMENT HANGING DETAIL





DETAIL OF PIPE THROUGH RATED PARTITION OR FLOOR



PIPE HANGING DETAIL

EASTCHESTER UNION FREE SCHOOL DISTRICT

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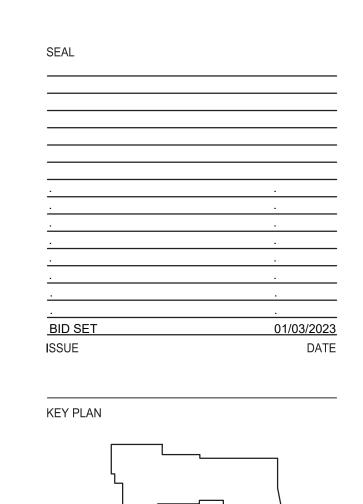
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DETAILS

SED PROJECT NO.

MEMASI PROJECT NO.

WA M301