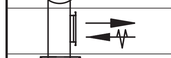
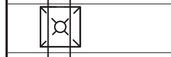
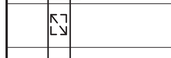
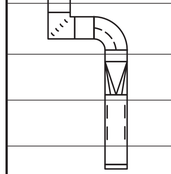
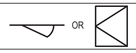
ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BCU	BUILDING CONTROL UNIT
BTU	BRITISH THERMAL UNIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COMM.	COMMUNICATION
CV	CONTROL VALVE
(D)	DEMOLISH
DB	DRY BULB
DCV	DEMAND CONTROLLED VENTILATION
DEG. F	DEGREES FAHRENHEIT
DIA	DIAMETER
DX	DIRECT EXPANSION
'E'	ELECTRICAL CONTRACTOR
(E)	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATING
ESP	EXTERNAL STATIC PRESSURE
FAI	FRESH AIR INTAKE
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FT. H20	FEET OF WATER
'G'	GENERAL CONSTRUCTION CONTRACTOR
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
H	HEIGHT
'H'	HVAC CONTRACTOR
HP	HORSEPOWER
IN.	INCHES
IN. W.C. (W.G.)	INCHES WATER COLUMN (WATER GAUGE)
KW	KILOWATTS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LCD	LIQUID CRYSTAL DISPLAY
LDB	LEAVING DRY BULB TEMPERATURE
LPR	STEAM CONDENSATE RETURN
LPS	LOW PRESSURE STEAM
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	METER
MAX	MAXIMUM
MBH	1,000 BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MNF	MANUFACTURER
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OAI	OUTDOOR AIR INTAKE
OD	OUTER DIAMETER
OED	OPEN ENDED DUCT
'P'	PLUMBING CONTRACTOR
(P)	PROPOSED
PD	PRESSURE DROP
PSIG	LBS / SQUARE INCH (GAUGE PRESSURE)
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SAT	SUPPLY AIR TEMPERATURE
SEER	SEASONAL ENERGY EFFICIENCY RATING
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH
WB	WET BULB
WMS	WIRE MESH SCREEN

DUCTWORK LEGEND

SYMBOL	ABBREV	DESCRIPTION
		DUCTWORK BRANCH CONNECTION
	VD	VOLUME DAMPER
	CD	ROUND FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	SIDEWALL SUPPLY, RETURN OR EXHAUST GRILLE/REGISTER
	SEE AIR DEVICE SCHEDULE	SQUARE FACE SUPPLY DIFFUSER
	SEE AIR DEVICE SCHEDULE	BOTTOM RETURN OR EXHAUST GRILLE/REGISTER
	FC	FLEXIBLE CONNECTION
		TURNING VANES
		RECTANGULAR TO ROUND TRANSITION
	AL	ACOUSTICAL LINING
		END CAP
	SEE AIR DEVICE SCHEDULE	SUPPLY DIFFUSER WITH DIRECTIONAL FLOW (SOLID HATCH INDICATES BLANK OFF PANEL)
		SUPPLY DUCT DROP (TURN DOWN)
		RETURN/EXHAUST DUCT DROP (TURN DOWN)
		SUPPLY DUCT RISE
		RETURN/EXHAUST DUCT RISE
	DSD	DUCT SMOKE DETECTOR
	MD	MOTORIZED DAMPER WITH ACTUATOR
	AD	ACCESS DOOR
	FD/AD	FIRE DAMPER WITH ACCESS DOOR
	FSD/AD	FIRE SMOKE DAMPER WITH ACCESS DOOR
		FAN
		WORK TO BE REMOVED
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING

CONTROLS LEGEND

SYMBOL	ABBREV	DESCRIPTION
C		CARBON MONOXIDE SENSOR
T		THERMOSTAT
S		DIGITAL TEMPERATURE SENSOR
H		HUMIDITY SENSOR
CO2		CARBON DIOXIDE SENSOR
P		PRESSURE SENSOR

PIPING LEGEND

SYMBOL	ABBREV	DESCRIPTION
		NEW WORK
		PIPING DOWN/ PIPING UP
		BALL VALVE WITH HOSE END CONNECTION
	TH	THERMOMETER
	U	UNION
	FPC	FLEXIBLE PIPE CONNECTION
		DIRECTION OF FLOW
	PSR	PRESSURE SAFETY AND RELIEF VALVE
	PRV	PRESSURE REDUCING VALVE
	BV	BALL VALVE
	BA	BALANCING VALVE
	BFV	BUTTERFLY VALVE
		TEMPERATURE SENSOR WITH THERMOWELL
	GA	GATE VALVE
	GB	GLOBE VALVE
	AV	AUTOMATIC AIR VENT
	CV	2-WAY ELECTRONIC CONTROL VALVE
	CV	3-WAY ELECTRONIC CONTROL VALVE
	CV	2-WAY PNEUMATIC CONTROL VALVE
	CV	3-WAY PNEUMATIC CONTROL VALVE
	STR	STRAINER WITH BLOW OFF VALVE WITH HOSE END CONNECTION
	FD	FLOOR DRAIN
		AIR SEPARATOR
		STEAM TRAPS (INDICATE TYPE)
	CH	CHECK VALVE
	PG	PRESSURE GAUGE WITH GAUGE COCK
	RED	REDUCER
	CO	CLEANOUT END CAP
		PIPE GUIDE
		PIPE ANCHOR
		CAPPED PIPE
		PUMP
		WORK TO BE REMOVED
		POINT OF DISCONNECTION FROM EXISTING
		POINT OF CONNECTION TO EXISTING
	TDV	TRIPLE DUTY VALVE

GENERAL NOTES

1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. THE CONTRACTOR, BY PRESENTING THEIR BID FOR THE WORK, REPRESENTS THAT HE/SHE HAS INSPECTED THE SITE AND IS COMPLETELY FAMILIAR WITH THE SCOPE OF WORK AND ALL FIELD CONDITIONS RELATED TO, AND AFFECTING THE WORK AND ITS PERFORMANCE. EXCEPTIONS AFFECTING THE WORK AND ITS PERFORMANCE, OR CONFLICTS BETWEEN FIELD CONDITIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE SUBMISSION OF BIDS.
3. PERFORM ALL WORK IN ACCORDANCE WITH THE PLUMBING CODE, FIRE CODE, MECHANICAL CODE, ENERGY CONSERVATION CONSTRUCTION CODE, AND FUEL GAS CODE OF NEW YORK STATE AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
4. COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF DIVISION 26 FOR ALL ELECTRICAL INSTALLATIONS.
5. FIRE STOP ALL OPENINGS IN FIRE RATED CONSTRUCTION FOR PIPING, DUCTWORK, CONDUIT, ETC. PROVIDE FIRE DAMPERS AND ACCESS DOORS IN ALL OPENINGS IN FIRE RATED FLOORS, PARTITIONS, AND WALLS FOR DUCTWORK AS PER THE MECHANICAL CODE OF NEW YORK STATE. (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED CONSTRUCTION.)
6. DO NOT SCALE DRAWINGS. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE. COORDINATE CONTRACT DOCUMENTS, PROJECT REQUIREMENTS, WORK OF OTHERS, AND EQUIPMENT AND MATERIALS PURCHASED WITH FIELD DIMENSIONS. INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S REQUIREMENTS TO PROVIDE PROPER CLEARANCE FOR INSTALLATION, OPERATION, AND MAINTENANCE. CONTRACTOR'S INTENDED MEANS AND METHODS OF INSTALLATION AND CONTRACTOR'S FABRICATED ITEMS SHALL ENSURE A PROPER "FIT" AND INSTALLATION. BRING ANY CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER DURING THE SUBMITTAL PHASE FOR RESOLUTION PRIOR TO PURCHASING ANY EQUIPMENT.
7. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS. WHERE HEADROOM AND SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION. MAINTAIN A MINIMUM OF 6'-8" CLEARANCE FROM FINISHED FLOOR TO UNDERSIDE OF PIPES, DUCTS, CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL ROOMS.
8. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION. MAKE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK. OBTAIN THE APPROVAL OF THE ARCHITECT/ENGINEER FOR MODIFICATIONS.
9. PROVIDE PRODUCTS OF ONE MANUFACTURER WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF MATERIAL OR EQUIPMENT IS REQUIRED.
10. INSTALL ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS. REFER TO DETAILS FOR ADDITIONAL PIPING AND EQUIPMENT INSTALLATION REQUIREMENTS.
11. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER TO ENSURE MANUFACTURER CERTIFIED ACCURACY.
12. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL PIPING AND DUCT TRANSITIONS REQUIRED FOR FINAL CONNECTIONS TO EQUIPMENT.
13. COORDINATE LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS WITH ALL OTHER TRADES. COORDINATE ALL PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURE WITH GENERAL CONSTRUCTION WORK.
14. COMPLETE ALL PRESSURE TESTS BEFORE ANY MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING INSULATION IS APPLIED.
15. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). PERFORM ALL TESTING, ADJUSTING, AND BALANCING IN ACCORDANCE WITH THE SPECIFICATIONS.
16. MAKE ALL ATTACHMENTS TO JOISTS, TRUSSES, OR JOIST GIRDERS AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. THE USE OF C-CLAMPS IS NOT PERMITTED.
17. INTERNALLY LINE ALL SUPPLY AND RETURN DUCTWORK WITHIN 20 FEET UPSTREAM AND DOWNSTREAM OF FANS WITH 1" THICK INSULATION.
18. PROVIDE TRAPPED DRAIN PIPING FROM DRAIN PANS OF ALL COOLING COILS, FANS, AND OTHER ACTIVE DRAINS EXPOSED TO SYSTEM AIR STREAM. PROVIDE TRAP AT CONNECTION, WATER SEAL DEPTH 1 INCH GREATER THAN UNIT OPERATING PRESSURE. DIRECT DRAINS TO NEAREST FLOOR DRAIN, MOP SINK, OR OTHER LOCATION APPROVED BY THE ARCHITECT/ENGINEER.

WORK IN EXISTING AREAS

1. EXISTING CONDITIONS, INCLUDING EQUIPMENT, DUCT AND PIPE SIZES AND LOCATIONS, INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH THE WORK.
2. CUT AND ROUGH PATCH EXISTING CONSTRUCTION AS REQUIRED FOR THE PERFORMANCE OF THE WORK. FINISH PATCHING AND FLASHING REQUIREMENTS ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. PERFORM ALL CUTTING AND PATCHING WORK IN A MANNER SUCH THAT ANY EXISTING WARRANTEES/GUARANTEES ARE NOT VOIDED. USE QUALIFIED PERSONNEL IN PERFORMANCE OF THE WORK.

LEGENDS/ABBREVIATIONS NOTES

1. ABBREVIATIONS AND SYMBOLS ON THIS SHEET DO NOT DEFINE THE SCOPE OF WORK.

H2M architects + engineers
1133 Westchester Ave., Suite N-210
Purchase, NY 10605
914.358.5623 • www.h2m.com
NY Architecture & Landscape Architecture: No Certificate Required
NY Engineering Certificate of Authorization No. 0018178

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-28-24	BID SET

04/30/2026 EXP. DATE

BRIAN M. CASTELLI, P.E.
NY PROFESSIONAL ENGINEER Lic No. 099167

"IN ACCORDANCE WITH ARTICLE 145, SECTION 7209 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
RVS	RVS	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD2302	OCTOBER 2024	AS SHOWN

CLIENT

WHITE PLAINS CITY SCHOOL DISTRICT

RENOVATIONS AND UPGRADES GEORGE WASHINGTON ELEMENTARY SCHOOL

100 Orchard Street
White Plains NY, 10604

66-22-00-01-0-009-018

CONTRACT

SINGLE CONTRACT

STATUS

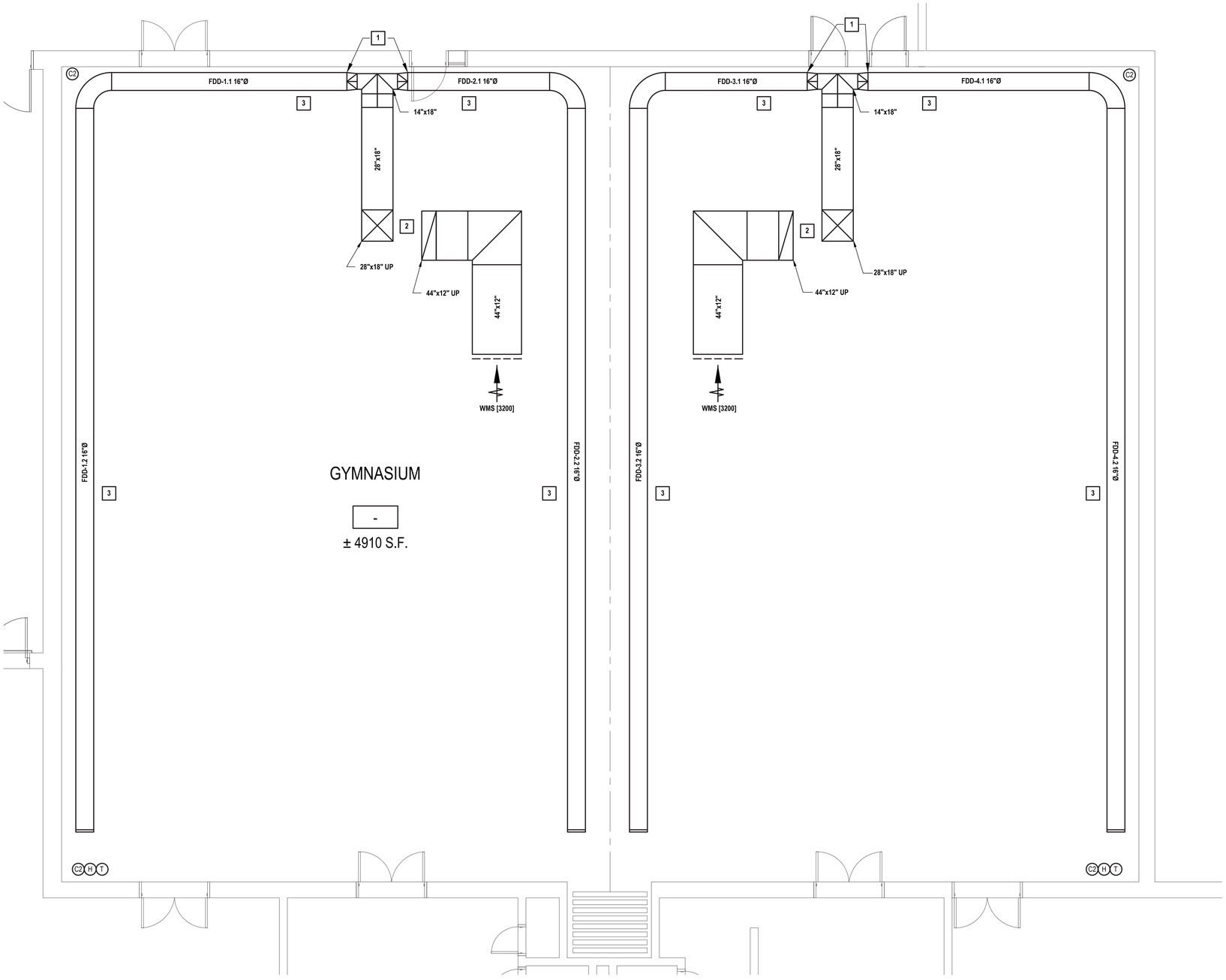
BID SUBMISSION

SHEET TITLE

MECHANICAL GENERAL NOTES AND LEGENDS

DRAWING No.

M001.00



First Floor Construction Plan

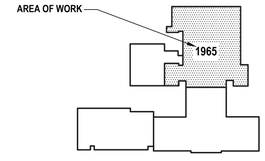
SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. COORDINATE ALL WORK WITH EXISTING CONDITIONS AND OTHER TRADES.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S REQUIRED MAINTENANCE CLEARANCES AND PREVAILING CODE.
3. DO NOT SCALE DRAWINGS. LINE WORK IS PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON DESIGN INTENT, SURVEY OF EXISTING CONDITIONS, AND COORDINATION WITH OTHER TRADES.
4. EXISTING CONDITIONS ARE BASED ON A LIMITED FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS FOR ALL CONFLICTS AND SHALL ALERT ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK AND PURCHASE OF EQUIPMENT.
5. CONTRACTOR TO COORDINATE THE PLACEMENT OF ALL TEMPERATURE / HUMIDITY / CO2 SENSORS WITH THE OWNER / DISTRICT.
6. ALL CONTROL WORK (DEMOLITION AND NEW WORK) SHALL BE PERFORMED BY TECHNICAL BUILDING SERVICES - FORMERLY EMT AT 12E COMMERCE DRIVE, BALLSTON SPA , NY 12020 - PHONE 914-747-1007 AS A SUB TO THE MECHANICAL CONTRACTOR.
7. ALL NEW CONTROLS SHALL BE DIRECT DIGITAL CONTROLS AND AN EXTENSION OF THE EXISTING BMS SYSTEM.

KEYED NOTES:

1. SINGLE TRACK SUSPENDED ROUND FABRIC DUCT WITH ALUMINUM INTERNAL REINFORCEMENT RINGS. FOLLOW MANUFACTURER'S RECOMMENDED SPACING INTERVALS FOR ALL SUSPENSION AND MOUNTING MATERIALS. CONTRACTOR TO COORDINATE FABRIC COLOR WITH ARCHITECT PRIOR TO RELEASE
2. PROVIDE AND INSTALL NEW SUPPLY / RETURN AIR DUCT AND WIRE-MESH SCREEN DOWN FROM NEW ROOFTOP UNIT(S).
3. FABRIC DUCT BRANCHES TO DISPERSE 1600 CFM EACH FOR A TOTAL OF 3200 CFM PER RTU. REFER TO FABRIC DUCT DIFFUSER SCHEDULE ON DRAWING M600.00 FOR SECTION LENGTH, PERFORATION LOCATIONS, AND PERFORMANCE.



H 2 M architects + engineers

1133 Westchester Ave., Suite N-210
Purchase, NY 10605
914.358.5623 • www.h2m.com
NY Architecture & Landscape Architecture: No Certificate Required
NY Engineering Certificate of Authorization No. 0018178

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-28-24	BID SET

STATE OF NEW YORK · BRIAN CASTELLI · LICENSED PROFESSIONAL ENGINEER · 099167

04/30/2026
EXP. DATE

BRIAN M. CASTELLI, P.E.
NY PROFESSIONAL ENGINEER Lic No. 099167

"IN ACCORDANCE WITH ARTICLE 145, SECTION 7209 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
RVS	RVS	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD2302	OCTOBER 2024	AS SHOWN

CLIENT

WHITE PLAINS CITY SCHOOL DISTRICT

RENOVATIONS AND UPGRADES GEORGE WASHINGTON ELEMENTARY SCHOOL

100 Orchard Street
White Plains NY, 10604

66-22-00-01-0-009-018

CONTRACT

SINGLE CONTRACT

STATUS

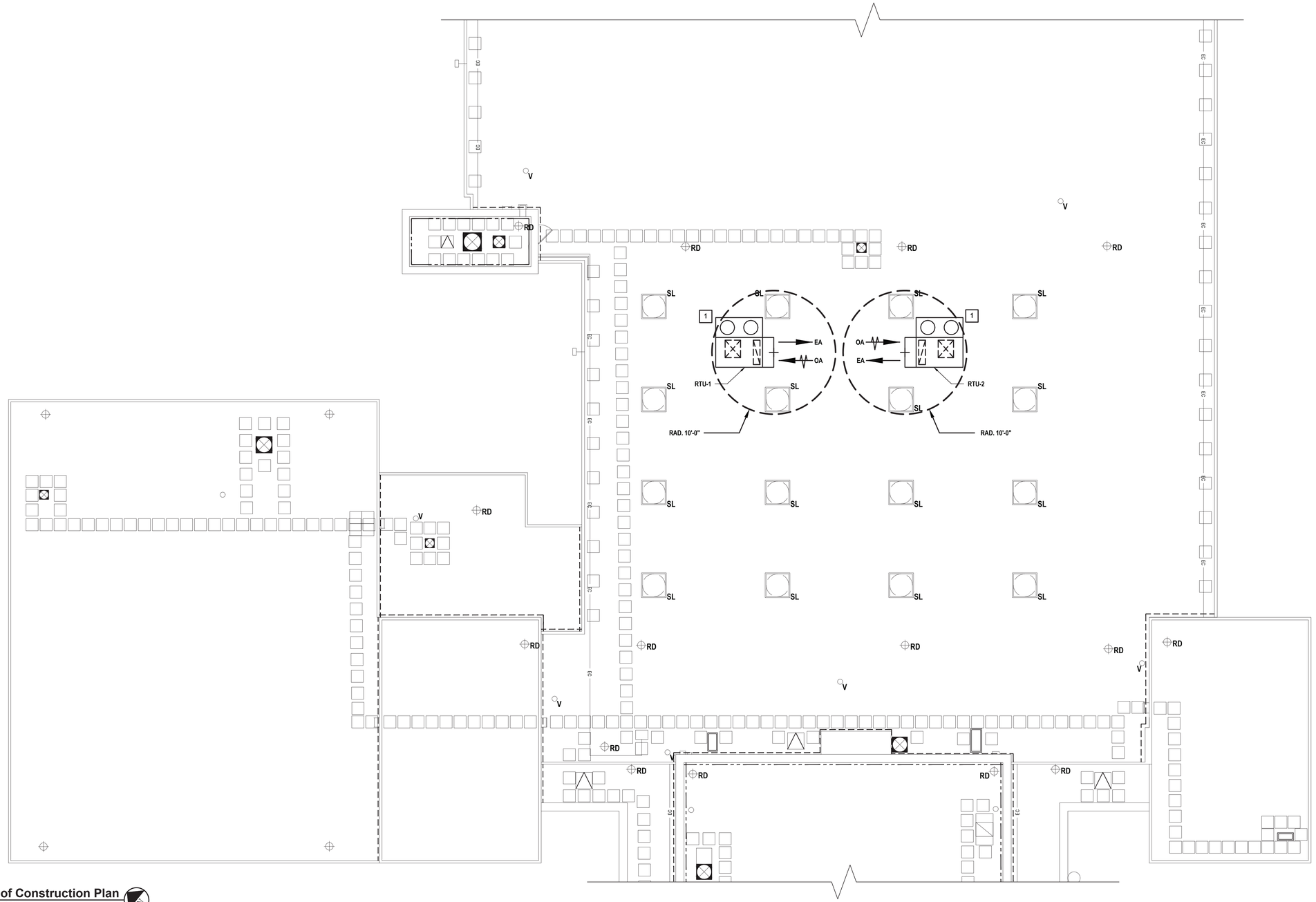
BID SUBMISSION

SHEET TITLE

MECHANICAL CONSTRUCTION PLAN - FIRST FLOOR

DRAWING No.

M100.00



Roof Construction Plan

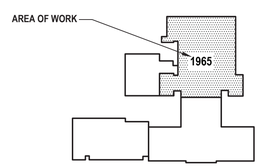
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. EXISTING CONDITIONS ARE BASED ON A LIMITED FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING CONDITIONS AND COORDINATING WITH OTHER TRADES FOR ALL CONFLICTS AND SHALL ALERT ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK AND PURCHASE OF EQUIPMENT.
2. DO NOT SCALE DRAWINGS. LINE WORK SHOWN IS SCHEMATIC. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS BASED ON DESIGN INTENT, SURVEY OF EXISTING CONDITIONS, AND COORDINATION WITH OTHER TRADES. SUBMIT EQUIPMENT FOR APPROVAL PRIOR TO PURCHASE.
3. CONTRACTOR SHALL PROVIDE AND INSTALL NEW ROOFTOP EQUIPMENT IN COMPLIANCE WITH MANUFACTURER'S AIRFLOW REQUIREMENTS, MAINTENANCE CLEARANCES, AND APPLICABLE MECHANICAL CODE CLEARANCE REQUIREMENTS.
4. INSTALL NEW ROOFTOP EQUIPMENT CLEAR OF ANY EXISTING ROOFTOP WALKWAY PADS.
5. INSTALL NEW ROOFTOP EQUIPMENT A MINIMUM OF 10'-0" FROM LEADING EDGE.
6. TERMINATE ROOFTOP UNIT CONDENSATE LINES AT THE NEAREST ROOF DRAIN (IF FEASIBLE).
7. ALL CONTROL WORK (DEMOLITION AND NEW WORK) SHALL BE PERFORMED BY ENERGY MANAGEMENT OF FACILITIES (EMF) AT 581 N STATE ROAD, BRIARCLIFF MANOR, NY 10510 - PHONE 914-747-1007 AS A SUB TO THE MECHANICAL CONTRACTOR. EMF IS A PARTNER OF SCHNEIDER ELECTRIC.
8. ALL NEW CONTROLS SHALL BE DIRECT DIGITAL CONTROLS AND AN EXTENSION OF EMF'S EXISTING BMS SYSTEM.

KEYED NOTES:

1 FURNISH AND INSTALL SUPPLEMENTAL STEEL REINFORCEMENTS BENEATH EXISTING DECK TO SUPPORT NEW UNIT WEIGHTS. REFER TO STRUCTURAL DETAILS ON PAGE M500.00



Key Plan

H2M architects + engineers
1133 Westchester Ave., Suite N-210
Purchase, NY 10605
914.358.5623 • www.h2m.com
NY Architecture & Landscape Architecture: No Certificate Required
NY Engineering Certificate of Authorization No. 001817 8

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-28-24	BID SET

STATE OF NEW YORK · BRIAN CASTELLI · LICENSED PROFESSIONAL ENGINEER · 099167

04/30/2026
EXP. DATE

BRIAN M. CASTELLI, P.E.
NY PROFESSIONAL ENGINEER Lic No. 099167

"IN ACCORDANCE WITH ARTICLE 145, SECTION 7209 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
RVS	RVS	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD2302	OCTOBER 2024	AS SHOWN

CLIENT

WHITE PLAINS CITY SCHOOL DISTRICT

RENOVATIONS AND UPGRADES GEORGE WASHINGTON ELEMENTARY SCHOOL

White Plains Public Schools · WP · REAL LIFE LEARNING

100 Orchard Street
White Plains NY, 10604

66-22-00-01-0-009-018

CONTRACT

SINGLE CONTRACT

STATUS

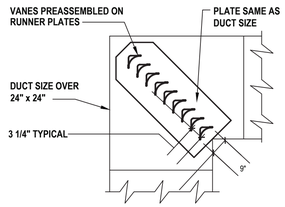
BID SUBMISSION

SHEET TITLE

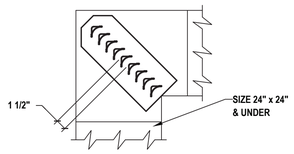
MECHANICAL CONSTRUCTION PLAN - ROOF

DRAWING No.

M140.00

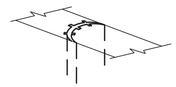


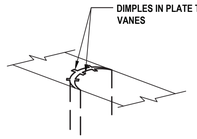
SQUARE ELBOW WITH TYPE "A" DOUBLE THICKNESS VANES



SQUARE ELBOW WITH TYPE "B" DOUBLE THICKNESS VANES.

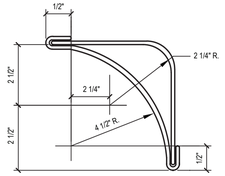
PREFERENCE FOR SECURING EDGE 1ST WELD OR 2ND RIVET





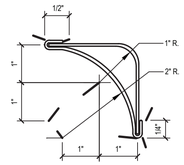
NOTE:

USE GALVANIZED STEEL FOR VANES IN EITHER STEEL OR ALUMINUM DUCTWORK.



TYPE "A"

TYPE "A" DOUBLE THICKNESS VANES FOR USE IN DUCTS GREATER THAN 24" x 24" IN SIZE. USE SAME GAUGE GALVANIZED IRON AS DUCT NOT TO EXCEED 20 GAUGE.

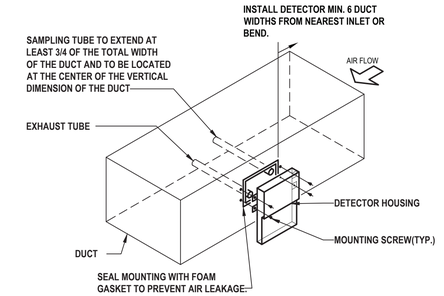


TYPE "B"

DOUBLE THICKNESS VANES FOR USE IN DUCTS 24" x 24" AND UNDER

1 Turning Vanes Detail

SCALE:NTS (DETAIL #)

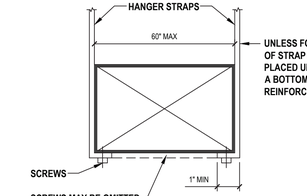


NOTES:

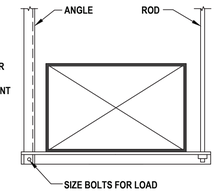
1. INTERFACE OF NEW DUCT SMOKE DETECTORS W/ EXISTING BUILDING FIRE ALARM SYSTEM BY CONTRACT 'E'.

2 Duct Mounting Smoke Detector Detail

SCALE:NTS (DETAIL #)



STRAP HANGER



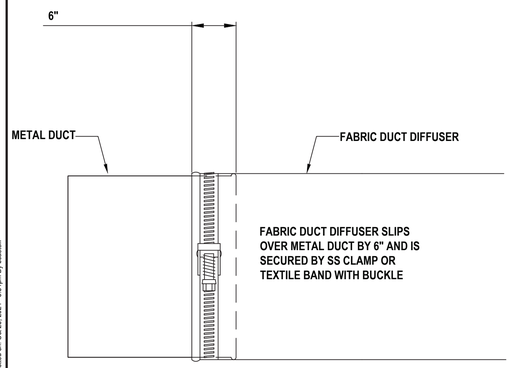
TRAPEZE HANGER

NOTES:

1. SIZE ALL SUPPORTS IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS, LATEST EDITION.

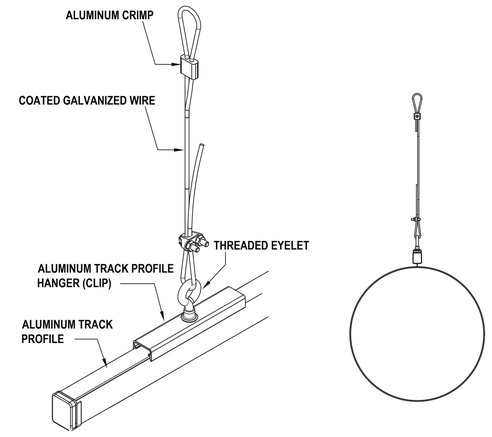
3 Hanger Detail

SCALE:NTS



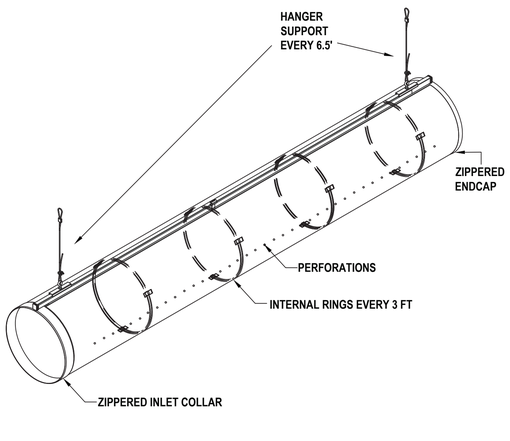
4 Fabric Duct Inlet Connection Detail

SCALE:NTS (DETAIL #)



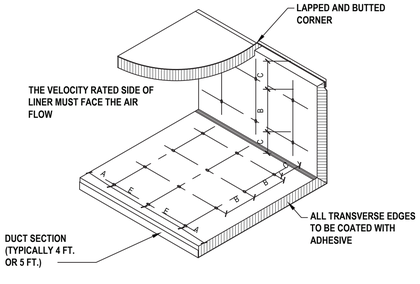
5 Fabric Duct Hanger Detail

SCALE:NTS (DETAIL #)



6 Fabric Duct Installation Detail

SCALE:NTS (DETAIL #)



MAXIMUM SPACING FOR FASTENERS. ACTUAL INTERVALS ARE APPROXIMATE.

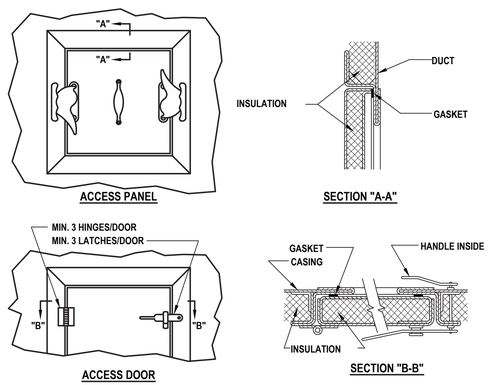
LINER ADHERED TO THE DUCT WITH 90% MIN. AREA COVERAGE OF ADHESIVE

VELOCITY*	DIMENSIONS			
	A	B	C	E
0-1500 FPM	3"	12"	4"	18"
1501-3500 FPM	3"	6"	4"	16"

* UNLESS A LOWER LEVEL IS SET BY MANUFACTURER OR LISTING AGENCY

7 Acoustical Liner Fastening Detail

SCALE:NTS (DETAIL #)

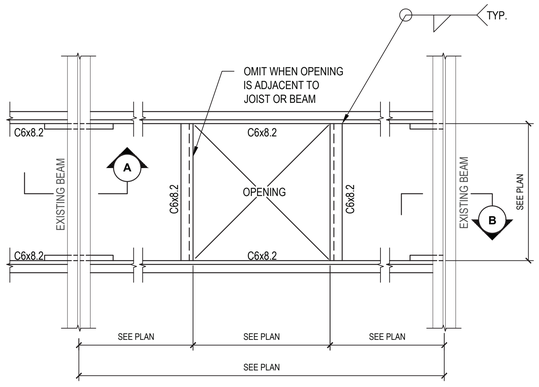


NOTES:

1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.
3. PROVIDE ACCESS DOORS ON AIR HANDLING UNITS AND DUCTWORK INSTALLED IN EQUIPMENT ROOMS. PROVIDE ACCESS PANELS ON ALL EQUIPMENT AND DUCTWORK INSTALLED ABOVE FINISHED CEILINGS WHERE SPACE LIMITATIONS DO NOT ALLOW HINGED DOORS TO OPEN.

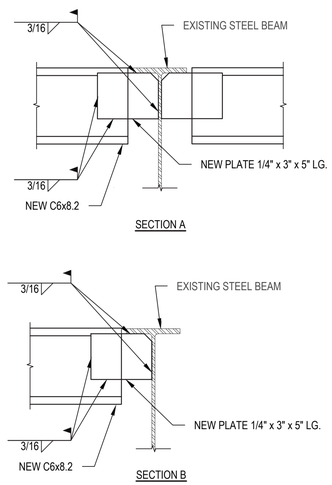
8 Access Door & Panel Details

SCALE: NTS (DETAIL #)



9 Structural Roof Reinforcement Detail

SCALE:NTS (DETAIL #)



H 2 M architects + engineers

1133 Westchester Ave., Suite N-210
Purchase, NY 10605
914.358.5623 • www.h2m.com
NY Architecture & Landscape Architecture: No Certificate Required
NY Engineering Certificate of Authorization No. 0018178

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-28-24	BID SET

STATE OF NEW YORK · BRIAN CASTELLI · 099167 · LICENSED PROFESSIONAL ENGINEER

04/30/2026 EXP. DATE

BRIAN M. CASTELLI, P.E.
NY PROFESSIONAL ENGINEER Lic No. 099167

"IN ACCORDANCE WITH ARTICLE 145, SECTION 7209 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
RVS	RVS	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD2302	OCTOBER 2024	AS SHOWN

CLIENT

WHITE PLAINS CITY SCHOOL DISTRICT

RENOVATIONS AND UPGRADES GEORGE WASHINGTON ELEMENTARY SCHOOL

White Plains Public Schools · WP · REAL LIFE LEARNING

100 Orchard Street
White Plains NY, 10604

66-22-00-01-0-009-018

CONTRACT
SINGLE CONTRACT

STATUS
BID SUBMISSION

SHEET TITLE
MECHANICAL DETAILS

DRAWING No.
M500.00

PACKAGED ROOFTOP HEAT PUMP UNITS

EQUIPMENT NO.	LOCATION	AREA SERVED	PERFORMANCE/CONSTRUCTION REQUIREMENTS												
			REQUIRED ENERGY EFFICIENCY RATING (EER/IEER)	SUPPLY FAN(S)			OUTSIDE AIR FLOW (CFM)	COOLING COIL				HEATING COIL				FILTERS
				MAXIMUM FLOW (CFM)	EXT. S.P. (IN W.G)	BHP		TOTAL CAPACITY (MBH)	REFRIGERANT TYPE	AIR DATA		HEATING TYPE	SIZE (KW)	AIR DATA		TYPE
										ENT. DB/WB (DEG. F)	MAX LVG DB/WB (DEG F)			ENT. DB (DEG. F)	MAX LVG DB (DEG F)	
RTU-1	ROOF	GYMNASIUM	11.0 / 12.0	3200	2	1.63	865	128	R410A	80 / 67	54 / 54	ELECTRIC	36	60.0	95.4	MERV13
RTU-2	ROOF	GYMNASIUM	11.0 / 12.0	3200	2	1.63	865	128	R410A	80 / 67	54 / 54	ELECTRIC	36	60.0	95.4	MERV13

PACKAGED ROOFTOP HEAT PUMP UNITS (CONTINUED)

EQUIPMENT NO.	BASIS OF DESIGN INFORMATION							REMARKS
	MNF	MODEL NO.	NOMINAL DIMENSIONS LxWxH	NOMINAL OPERATION WEIGHT (LBS)	ELECTRICAL DATA			
					VOLTS/PHASE	SUPPLY FAN(S) HP	MCA/MOCP	
RTU-1	DAIKIN	DPS010A	91x97x57	2346	208 / 3	4	170 / 175	1-18
RTU-2	DAIKIN	DPS010A	91x97x57	2346	208 / 3	4	170 / 175	1-18

NOTES:

1. ROOFTOP UNIT TO BE INSTALLED ON MFG. 14" ROOF CURB
2. DDC SPACE SENSOR
3. POWERED CONVENIENCE OUTLET
4. SINGLE POINT POWER CONNECTION
5. CO2 DUCT SENSOR
6. ECM MOTOR
7. VERTICAL SUPPLY/RETURN
8. DIRTY FILTER SENSOR
9. NON-FUSED DISCONNECT
10. LOW VOLTAGE CONTROLLER
11. VARIABLE SPEED COMPRESSOR
12. OUTDOOR AIR MONITOR
13. LOW SOUND BLANKET
14. BACNET COMPATIBLE
15. ECONOMIZER WITH BAROMETRIC RELIEF
16. SCR CONTROL
17. AIR SOURCE HEAT PUMP

VENTILATION INDEX BASED ON 2020 MECHANICAL CODE OF NEW YORK STATE SECTION 403

EQUIPMENT NO.	ROOM NAME	OCCUPANCY CLASSIFICATION	FLOOR AREA (SF)	OCCUPANCY LOAD (PERSONS/1000 SF)	NUMBER OF OCCUPANTS	OCCUPANT BASED OA RATE (CFM/OCCUPANT)	AREA BASED OUTSIDE AIR RATE (CFM/SF)	TOTAL OA REQUIRED (CFM)	SPACE VENTILATION EFFICIENCY Ev	ACTUAL OA PROVIDED (CFM)
RTU - 1 / 2	GYMNASIUM	AMUSEMENT: GYM	4910	7	35	20	0.18	1584	0.8	1980

NOTES:

1. VENTILATION RATE CALCULATED IN ACCORDANCE WITH THE 2020 MECHANICAL CODE OF NYS.
2. EACH RTU TO PROVIDE HALF THE REQUIRED OUTDOOR AIR FLOW.
3. ENERGY RECOVERY VENTILATION SYSTEM NOT REQUIRED UNDER EXCEPTION 9, "SYSTEMS EXPECTED TO OPERATE LESS THAN 20 HOURS PER WEEK AT THE OUTDOOR AIR PERCENTAGE COVERED BY TABLE C403.7.4(1)."

FABRIC DUCT DIFFUSER

MANUFACTURER	FLOW MODEL	PLAN MARK	LENGTH (FT.)	SIZE (IN. DIA.)	INLET ESP (IN. W.G.)	CFM	INSTALLATION TYPE	DISPERSION TYPE / LOCATION	NOTES
PRIHODA	LASER CUT PERFORATIONS	FDD-1.1	17' 7"	16"	.5"	1600	SINGLE TRACK WITH INTERNAL RINGS	N/A	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-1.2	54'	16"	-	1551	SINGLE TRACK WITH INTERNAL RINGS	PERFORATIONS - 1" @ 240°, 210°	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-2.1	10' 7"	16"	.5"	1600	SINGLE TRACK WITH INTERNAL RINGS	N/A	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-2.2	54'	16"	-	1571	SINGLE TRACK WITH INTERNAL RINGS	PERFORATIONS - 1" @ 240°, 210°	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-3.1	10' 7"	16"	.5"	1600	SINGLE TRACK WITH INTERNAL RINGS	N/A	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-3.2	54'	16"	-	1571	SINGLE TRACK WITH INTERNAL RINGS	PERFORATIONS - 1" @ 240°, 210°	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-4.1	17'	16"	.5"	1600	SINGLE TRACK WITH INTERNAL RINGS	N/A	1,2,3,4
PRIHODA	LASER CUT PERFORATIONS	FDD-4.2	54'	16"	-	1552	SINGLE TRACK WITH INTERNAL RINGS	PERFORATIONS - 1" @ 240°, 210°	1,2,3,4

NOTES:

1. ALL SUSPENSION AND MOUNTING MATERIALS ARE TO BE IN GALVANIZED STEEL.
2. ALL LENGTHS ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO RELEASE.
3. PERFORATION LOCATIONS TO BE REVIEWED AND VERIFIED DURING SUBMITTAL.
4. FABRIC TO BE EQUAL TO PRIHODA CLASSIC (PERMEABLE) UL CLASSIFIED (723 / 2518)

DUCT ACCESS DOORS

DUCT SIZE PERPENDICULAR TO AIR FLOW (IN)	ACCESS DOOR HEIGHT (IN)	ACCESS DOOR WIDTH (IN)
6" - 24"	2" SMALLER THAN DUCT SIZE	8" MINIMUM OR EQUAL TO ACCESS DOOR HEIGHT
25" - 48"	2" SMALLER THAN DUCT SIZE	2'-0"
OVER 48"	3'-10"	2'-0"
PLENUMS AND WALK IN ACCESS	5'-6"	2'-0"

H2M architects + engineers
1133 Westchester Ave., Suite N-210
Purchase, NY 10605
914.358.5623 • www.h2m.com
NY Architecture & Landscape Architecture: No Certificate Required
NY Engineering Certificate of Authorization No. 0018178

CONSULTANTS:

MARK	DATE	DESCRIPTION
	10-28-24	BID SET

STATE OF NEW YORK · BRIAN CASTELLI · 099167 · LICENSED PROFESSIONAL ENGINEER

04/30/2026
EXP. DATE

BRIAN M. CASTELLI, P.E.
NY PROFESSIONAL ENGINEER Lic No. 099167

"IN ACCORDANCE WITH ARTICLE 145, SECTION 7209 OF THE NYS EDUCATION LAW, ALTERATION OF THIS DOCUMENT EXCEPT BY LICENSE PROFESSIONAL IS ILLEGAL"

DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
RVS	RVS	BMC	AEH

PROJECT No.:	DATE:	SCALE:
WPSD2302	OCTOBER 2024	AS SHOWN

CLIENT

WHITE PLAINS CITY SCHOOL DISTRICT

RENOVATIONS AND UPGRADES GEORGE WASHINGTON ELEMENTARY SCHOOL

White Plains Public Schools · WP · REAL LIFE LEARNING

100 Orchard Street
White Plains NY, 10604

66-22-00-01-0-009-018

CONTRACT

SINGLE CONTRACT

STATUS

BID SUBMISSION

SHEET TITLE

MECHANICAL SCHEDULES

DRAWING No.

M600.00