FAN SCHEDULE

DESIGNATION	EX–1,2,3,4 SF–1,2,3,4	TX–1	PF–1,2
MANUFACTURER	GREENHECK	GREENHECK	BIG ASS SOLUTIONS
MODEL	SBE–3H30	SP–A90	BASIC 6
WEIGHT (LBS)	112	12	231
FAN TYPE	PROPELLER	CEILING MOUNTED	CEILING FAN
DRIVE TYPE	BELT	DIRECT	DIRECT
CFM	9,000	75	66
BHP	1.14	–	–
HP	1.5	16 WATTS	1.5
RPM	965	900	61
SP (IN H_2O)	0.25	.25	0.5
VOLTS/ø/Hz	480/3/60	120/1/60	480/3/60
STARTER TYPE	VFD	TIME DELAY SWITCH	VFD

NOTES:
1. ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY.
2. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS.
3. FURNISH RUBBER IN SHEAR OR SPRING VIBRATION ISOLATORS AS PER THE SPECIFICATION.
4. FURNISH WALL MOUNTED SPEED CONTROLLER OR THERMOSTAT AS INDICATED ON PLAN.
5. FURNISH MOTOR AND BELT GUARDS FOR ALL EXTERNAL MOTOR DRIVES.
6. MOTOR STARTER AND DISCONNECT SWITCH FOR EACH FAN SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
7. MANUAL MOTOR STARTERS FOR FANS SHALL BE SQUARE D, TYPE T OR M, WITH PUSH–BUTTON START/STOP, PILOT LIGHT, & AUXILIARY CONTACTS, SUITABLE FOR SURFACE MOUNTING.
8. TX–1: PROVIDE MODEL WC–4 HOODED WALL CAP WITH BUILT IN BIRDSCREEN & BAROMETRIC BACKDRAFT DAMPER WHERE INDICATED ON PLAN.
9. PROVIDE BAROMETRIC DAMPER WITH WIRE MESH SCREEN AT INLET FOR EXHAUST FANS AND OUTLET FOR SUPPLY FANS.
10. CONTROLS SHALL BE COMPATIBLE WITH THE BUILDING ANDOVER SYSTEM & NETWORKED INTO THE COUNTY WIDE ANDOVER SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.

HEATING & VENTILATION UNIT SCHEDULE

DESIGNATION	HV–1	HV–2,3,4
MANUFACTURER	REZNOR	REZNOR
MODEL	SDH–300	SDH–300
WEIGHT OF UNIT (LBS)	629	629
DESIGN DATA:		
SUPPLY AIR (CFM)	4,200	4,200
OUTDOOR AIR MINIMUM (CFM)	1,100	0
OUTDOOR AIR MAXIMUM (CFM)	4,200	4,200
RETURN AIR MINIMUM (CFM)	0	0
RETURN AIR MAXIMUM (CFM)	3,100	4,200
SUMMER OA TEMP (°F) DB/WB	86/72	86/72
SUMMER RA TEMP (°F) DB/WB	80	80
WINTER OA TEMP (°F)	10	10
WINTER RA TEMP (°F)	60	60
GAS–FIRED FURNACE:		
E.A.T./L.A.T. (°F)	10/63	10/63
GAS INPUT/OUTPUT (MBH)	300/243	300/243
CONTROL STAGES	8	8
FILTERS:		
MAIN FILTER	MERV 8	MERV 8
QUANTITY/SIZE	3 / 16x16 3 / 16x20	3 / 16x16 3 / 16x20
SUPPLY FAN:		
DESIGN AIRFLOW (CFM)	4,200	4,200
BHP/HP	2.0/3.0	2.0/3.0
RPM	991	991
ESP/TSP (IN H_2O)	–/0.75	–/0.75
VOLTS/ø/Hz	460/3/60	460/3/60
STARTER TYPE	HOA	HOA
ELECTRICAL DATA – SINGLE POINT POWER CONNECTION:		
VOLTS/ø/Hz	460/3/60	460/3/60
FLA/MCA (AMPS)	7.6/9.5	7.6/9.5

NOTES:

STANDARD COMPONENTS:
1. 81% EFFICIENCY SEPARATED COMBUSTION SYSTEM.
2. CIRCUIT BREAKER PROTECTED TRANSFORMER FOR 24V CONTROLS.
3. INTEGRATED CIRCUIT BOARD WITH DIAGNOSTIC INDICATOR LIGHTS
4. MULTI–TRY DIRECT SPARK IGNITION WITH 100% LOCKOUT
5. HIGH TEMP LIMIT CONTROL
6. RUBBER–IN–SHEER VIBRATION ISOLATION
7. REVERSE AIRFLOW LIMIT SWITCH
8. AIRFLOW PRESSURE SWITCH TO VERIFY CIRCULATING BLOWER OPERATION
9. SOCKETED, HIGH QUALITY SWITCHING RELAYS TO FACILITATE SERVICE
10. ALL SERVICE AND VENT CONNECTIONS FROM A SINGLE SIDE
11. ENGINEERED HEAT EXCHANGER CONDENSATE MANAGEMENT

REQUIRED OPTIONS:
1. HORIZONTAL CONCENTRIC ADAPTER BOX (CC6)
2. 409 STAINLESS STEEL HEAT EXCHANGERS WITH EXTENDED 10 YEAR WARRANTY
3. BURNER CONTROLS WITH 4:1 GAS MODULATION
4. UNIT MOUNTED LOCAL DISCONNECT SWITCH – FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. FIRESTAT
6. DISCHARGE AIR TEMPERATURE LOW LIMIT
7. OVER / UNDER VOLTAGE OR PHASE LOSS PROTECTION
8. HIGH AMBIENT LIMIT (BURNER CUTOFF)
9. GAS PRESSURE SWITCHES.
10. DOWNTURN NOZZLES STYLE CD 25–65° WITH DOUBLE DIRECTIONAL LOUVERS.
11. CONTROL OPTION AG58 – EXTERNAL CONTROLS WITH 8:1 GAS MODULATION. CONTROLS SHALL BE COMPATIBLE WITH THE BUILDING ANDOVER SYSTEM & NETWORKED INTO THE COUNTY WIDE ANDOVER SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.
12. BACNET DDC COMMUNICATION CARD.

EQUIPMENT NOTES

1. MOTORIZED DAMPERS: SHALL BE RUSKIN MODEL CD40, 4" DEEP EXTRUDED ALUMINUM AIRFOIL DAMPER. DAMPER SHALL HAVE OPPOSED BLADES, MOTOR AND LINKAGE. DAMPERS SHALL BE 120V/1ϕ/60Hz, 3 AMPS MAX. FURNISH DISCONNECT SWITCH.
2. LISTED SPECIAL GAS VENTING: FOR ALL GAS FIRED DIRECT VENTING CONDENSING & NON–CONDENSING APPLIANCES SHALL BE HEATFAB "SAF–T VENT CI PLUS". DOUBLE WALL CONSTRUCTION, 1" FIBERGLASS INSULATION, AL–29–4C STAINLESS STEEL. SPECIAL VENT UL 1738 FOR POSITIVE, NEUTRAL, AND NEGATIVE DRAFT UP TO 15"WC. PRODUCT IS RATED FOR ZERO CLEARANCE TO COMBUSTIBLES. PROVIDE STRAIGHT SECTIONS, ELBOWS, OFFSETS, CONNECTION ADAPTERS, WALL SLEEVES, AND SCREENED TERMINATIONS.
3. OUTSIDE AIR INTAKE: FOR ALL GAS FIRED DIRECT VENTING CONDENSING & NON–CONDENSING APPLIANCES SHALL BE SINGLE–WALL SPIRAL GALVANIZED STEEL BY SHEET METAL CONNECTORS, INC. ALL DUCTWORK IS 4–PLY SPIRAL LOCKSEAM MEETING ASTM A–653. ALL DUCT CONNECTIONS SHALL BE MADE WITH A DOUBLE LEGGED EPDM GASKET CREATING AN AIR–TIGHT CONNECTION MEETING ASTM A–653. SINGLE–WALL DUCT GUAGE SHALL BE SELECTED FOR POSITIVE, NEUTRAL, AND NEGATIVE DRAFT UP TO 15"WC WITH A MINIMUM GAUGE OF 24. PRODUCT IS RATED FOR ZERO CLEARANCE TO COMBUSTIBLES. PROVIDE STRAIGHT SECTIONS, ELBOWS, OFFSETS, CONNECTION ADAPTERS, WALL SLEEVES, AND SCREENED TERMINATIONS.
4. GAS–FIRED UNIT HEATERS (UH–1,2,3,4,5,6): SHALL BE MODINE MODEL PTS250, 250 MBH INPUT, 205 MBH OUTPUT. UNITS SHALL BE DIRECT–VENT SEPARATED COMBUSTION TYPE WITH 6"ø FLUE OUTLET, 6"ø AIR INLET, AND 3/4"ø EXTERNAL GAS CONNECTION. FAN SHALL BE 1/3 HP, 1075 RPM. ELECTRICAL REQUIREMENTS: 120V/1ϕ/60HZ, 4.6 FAN AMPS (FAN ONLY), 8.1 TOTAL AMPS (UNIT TOTAL). PROVIDE STARTER/LOCAL DISCONNECT, AND 10 YEAR WARRANTY ON HEAT EXCHANGER. FURNISH WITH SINGLE–STAGE, DIRECT SPARK IGNITION CONTROLS, WITH 100% SHUT–OFF AND CONTINUOUS RETRY. PROVIDE HORIZONTAL CONCENTRIC VENT KIT WITH EACH UNIT.
5. ELECTRIC WALL HEATER (EH–1): SHALL BE MARKEL MODEL F 3453 T SURFACE MOUNTED, 3,000 WATTS INPUT, 208/1/60, 14.4 AMPS, 10,239 BTUS. ROUGH IN DIMENSIONS 23"Hx15"Wx4.125"D UNITS CORROSION RESISTANT STEEL ELEMENT, BRAZED STEEL FINS. COORDINATE COLOR WITH ARCHITECT. FURNISH AND INSTALL THE FOLLOWING FIELD–INSTALLED OPTIONS: THERMOSTAT & DISCONNECT SWITCH.
6. CO & NO_2 DETECTION SYSTEM: SHALL BE SIERRA MONITOR CORPORATION. PROVIDE SENTRY 5000–IT CONTROLLER (SEE PLANS FOR LOCATION). PROVIDE ALL COMPONENTS AND WIRING FOR A COMPLETE INSTALLATION AND OPERABLE SYSTEM. ALL SPACE TRANSMITTERS SHALL BE MOUNTED 5'–0" AFF IN A PROTECTED LOCATION. PROVIDE EXTERNAL BATTERY BACKUP. PROVIDE SIGNAGE "CO & NO_2 DETECTION" ON CONTROL PANEL.
   - CO TRANSMITTERS SHALL BE 5100–04–IT–S1–01–00–0–0–C
   - NO_2 TRANSMITTERS SHALL BE 5100–12–IT–S1–01–00–0–0–C
7. VEHICLE EXHAUST SYSTEM (VEF–1, VEF–2, VEF–3, VEF–4): SHALL BE BASED ON PLYMOVENT. EACH SYSTEM SHALL CONSIST OF (1) STATIONARY SPRING ACTUATED HOSE REELS #SER–1050 MOUNTED SUCH THAT BOTTOM OF HOSE REEL IS AT 13' AFF. EACH HOSE REEL SHALL HAVE 33'L 6"ø HOSE #SNF–2 CAPABLE OF 600°F CONTINUOUS & 1250°F INTERMITTENT VEHICLE EXHAUST. 400°F TEMPERATURE RESISTANCE ON ALL COMPONENTS. PROVIDE TAILPIPE ADAPTERS AS LISTED IN THE SPECIFICATIONS. EACH FAN SHALL BE FUA–3000 2HP RATED FOR 720 CFM AT 8"WC SP, 460/3/60, 80LBS. PROVIDE PLYMOVENT ES–90 CONTROL BOX EACH FAN. PROVIDE AN NTX NEMA 4X WALL MOUNT TRANSMITTER FOR EACH SYSTEM WITH 433 MHz RCR24SS RECEIVER MOUNTED TO EACH HOSE REEL. REFER TO VEHICLE EXHAUST SPECIFICATIONS SECTION 238416 FOR FULL EQUIPMENT REQUIREMENTS.
8. VEHICLE EXHAUST DUCTWORK: US DUCT CLAMPABLE DUCTING. GALVANIZED DUCT WITH WELDED ENDS, WELDED ANGLE RINGS, OR LOOSE ANGLE RINGS WITH LIPPED ENDS. REFER TO VEHICLE EXHAUST SPECIFICATIONS SECTION 238416 FOR FULL DUCTWORK REQUIREMENTS.

MINI SPLIT DX SYSTEMS

OUTDOOR AIR COOLED CONDENSING UNITS													INDOOR CEILING HIGH WALL								
ID	MODEL #	NOMINAL	COOLING	HEATING		ELECTRICAL	MCA	MOCP	WxHxD	WEIGHT	EFFICIENCY		ID	MODEL #	NOMINAL	AIRFLOW	ELECTRICAL	MCA	WxHxD	WEIGHT	NOTES
		(Tons)	Capacity (BTUH)	Outside (F°)	Capacity (BTUH)	(V/Ph/Hz)	(A)	(A)	(in)	(lbs)	EER	SEER			(Tons)	(CFM)	(V/Ph/Hz)	(A)	(in)	(lbs)	
ACC-1	38MPRAQ12AA3	1	5800-19000	5°	13,800	208/1/60	15	20	33X14X27	108	13.5	32	AC-1	40MPHAQ12XA3	1	168/252/306/357	208/1/60	0.3	35.2x11.7x9.8	38	1,2,3,4,5,6

NOTES:
1. EQUIPMENT SELECTION BASED ON CARRIER.
2. PROVIDE THE FOLLOWING OPTIONS FOR EACH UNIT:
   WIRED 7-DAY PROGRAMMABLE THERMOSTAT
   CONDENSATE PUMP
   24V INTERFACE KIT
3. FIELD SUPPLIED LOCAL DISCONNECT SWITCH AT EACH INDOOR UNIT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR.
4. FIELD SUPPLIED WEATHER PROOF LOCAL DISCONNECT SWITCH AT EACH OUTDOOR UNIT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. SINGLE POINT EXTERNAL POWER CONNECTION FOR EACH INDOOR / OUTDOOR SET OF UNITS SHALL BE AT THE OUTDOOR UNIT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING FROM THE OUTDOOR UNIT TO THE INDOOR UNIT.
6. THE AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE CONTROL WIRING BETWEEN THE OUTDOOR UNIT AND THE INDOOR UNIT.

DCAK · MSA
ARCHITECTURE AND ENGINEERING
53 HUDSON AVENUE
NYACK, NEW YORK 10960
www.DCAK-MSA.com
Email: info@DCAK-MSA.com
Tel 845-353-1300 Fax 845-353-1614

RCM Technologies USA, Inc.
Consulting Engineers
99 Bauer Drive
Suite 101
Oakland, NJ 07436
TEL:(201) 249-8700
EMAIL:bruce.goldman@rcmt.com

STATE OF NEW YORK · PATRICK F. LYNCH · 069467 · LICENSED PROFESSIONAL ENGINEER

OLA CONSULTING ENGINEERS
OLA Consulting Engineers
50 Broadway, Hawthorne,
New York 10532
914.747.2800
8 West 38th Street, New
York, NY 10018
646.849.4110
olace.com
OLA P/N: NDCA0012

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION
☐ AS BUILT – CHANGES AS NOTED
☐ AS BUILT – NO CHANGES

CONTRACTOR
NAME
SIGNATURE
TITLE DATE

PROJECT COORDINATOR
NAME
SIGNATURE
TITLE DATE

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER
VALHALLA CAMPUS, VALHALLA, NEW YORK
MECHANICAL SCHEDULES

CONTRACT NUMBER 17–521
SHEET NUMBER M–601
SHEET NO. 39 OF 53
SCALE: AS SHOWN
DATE: 11/16/2021
DPW FILE NO. 38–47–M–721–0
REV. NO. 0