RE PUMP ROOM HVAC CALCULATIONS - NFPA 20	
RM CALCULATION #1 - VENTILATION AIR FOR ENGINE COMBUSTION	
BUSTION AIR REQUIRED PUMP MANUFACTURE'S REQUIREMENTS (REFEFENCE PUMP CALCULATION BELOW)	621 CFM
RM CALCULATION #2 - COOLING AND/OR VENTILATION REQUIRED TO ENSURE ROOM M	IAXIMUM TEMP 120F
ER FIRE ALARM	
IMUM INDOOR DESIGN CONDITION (UNDER FIRE ALARM)	120 F
GN AMBIENT TEMPERATURE	110 F
IMUM ALLOWABLE RISE IN INTERNAL ROOM TEMPERATURE (UNDER FIRE ALARM)	10 F
PUMP HEAT DISSAPATION	68,400 BTU/HR 6,233 CFM
CULATED AIRFLOW REQUIRED AT TEMPERATURE RISE (REFEFENCE PUMP CALCULATION BELOW) BUSTION AIRFLOW (FROM CALCULATION#1 ABOVE)	6,233 CFM 621
AL AIRFLOW REQUIRED	6,854 CFM
AL AIRFLOW PROVIDED (EF-FP)	7,000 CFM
Results	
nesuits	
Input Data	
Engine Model: JU6H-UFADT0	
Rated HP: 274	
Rated Speed (RPM): 2100	
Combustion air flow (CFM): 621 [2]	
ΔT - Maximum design temperature rise inside pump room (°F): 10 [3]	
Engine radiated heat (Btu/Sec): 19 ^[2]	
Pump Room Calculations [1]	
621 Combustion air flow (CFM)	
+ 6,233 Flow for engine radiated heat (CFM)	
6,854 Total (CFM)	
RM CALCULATION #3 - HEATING TO MAINTAIN MINIMUM OF 40F	
TING CALCULATIONS	
DOOR DESIGN TEMPERATURE	0 F
OR DESIGN TEMPERTURE	50 F
RIOR WALL/ROOF THERMAL HEATING LOSS	13,750 BTU/HR
AL HEATING LOSS LOAD	13,750 BTU/HR
TING EQUIPMENT PROVIDED (EUH-FP)	17,065 BTU/HR
TING EQUIPMENT PROVIDED (EUH-FP)	5.0 KW

	AIR CURTAIN EQUIPMENT SCHEDULE												
SYMBOL / TAG	/MBOL / TAG MANUFACTURER MODEL#		MOUNTING	APPLICATION LOCATION / SERVICE C		CAPACITY FAN MOTO		FAN MOTO	OR MAX SONES		COLOR/FINISH	WEIGHT	REMARKS
			APPLICATIONKIT			[KW]	HP	СЕМ	VOLT / PH	[NC]		[LBS]	
EUH-AC (AC1-AC4)	MARS	STD72-2E	WALL	HEATED AIR CURTAIN	MAIN ENTRY/SECURITY VESTIBULE	24.0	(2) @ 1/2	5100	460 / 3	-	PEARL WHITE [PW]	175	1,2,3
EUH-AC (AC5-A10)	MARS	STD36-2E	WALL	HEATED AIR CURTAIN	WAREHOUSE MAN DOORS (NON-ALARMED)	12.0	(1) @ 1/2	1380	208 / 3	-	PEARL WHITE [PW]	125	1,2,3
EUH-RAC (RAC-1,2,3,4)	MARS	PH1036-1EEH-PW	RECESSED	HEATED AIR CURTAIN	SMOKER'S EXIT /REMOTE BREAKROOM(S) / RECRUITING ENTRY	12.0	(1) @ 1/2	1217	208 / 3	-	PEARL WHITE [PW]	125	1,2,3

- 1. ELECTRICAL DISCONNECT SWITCH, AUTO-RESET THERMAL OVERLOAD, AND WALL-MOUNTED 24V THERMOSTAT
- 2. PROVIDE DOOR SWITCH WITH TIME DELAY. BUILDING AUTOMATION SYSTEM (BAS) CONTROLLER.
- 3. THERMOSTAT HEATING SETPOINT AT 60 DEG F

	WALL LOUVER SCHEDULE													
SYMBOL / TAG	MANUFACTURER	MODEL #	QNTY.	AIRFLOW SERVICE	LOUVER SIZE (WIDTH X HEIGHT)	BLADE TYPE	MINIMUM FREE AREA EACH [FT2]	MINIMUM FREE AREA EACH [%]	MINIMUM FREE AREA TOTAL [FT2]	MAXIMUM PRESSURE DROP @ 700 FPM	OPERATOR	EQUIPMENT INTERLOCK	FRAME	REMARKS
WL - FP1	GREENHECK	ESD - 435	1	INTAKE	76" X 36"	FIXED BLADE	-	-	-	0.07"	ACTUATOR	EF - FP	EXTRUDED ALUMINUM	1,2,3,4,5,6

- 1. COORDINATE EXACT LOCATION/ELEVATION OF WALL OPENING WITH ARCHITECTURAL DRAWINGS
- 2. LOUVER SHALL BE AMCA LISCENSED AND PROVIDED WITH AN INTEGRAL BIRDSCREEN.
- 3. VERIFY SIZE OF LOUVER WITH BUILDING WALL OPENING. LOUVER MAY HAVE TO BE FABRICATED TO FIT IN A SMALLER WALL OPENING. FIELD-MEASURE OPENING BEFORE ORDERING.
- 4. LOUVER SHALL HAVE KYNAR FINISH FINAL COLOR SELECTION BY ARCHITECT AT THE TIME OF SUBMITTALS
- 5. WALL LOUVERS SHALL BE CAPABLE OF WITHSTANDING A WIND LOAD OF 20 LBS/SF
- 6. PROVIDE LOW LEAKAGE 3V BLADE VOLUME CONTROL DAMPER MODEL#VCD. PROVIDE ALTERNATE THERMALLY BROKEN BLADE INSULATED CONTROL DAMPER MODEL# ICD-44

INDUSTRIAL HVLS CIRCULATION FAN EQUIPMENT SCHEDULE											
SYMBOLS / TAG	AIRFLOW [CFM]	MINIMUM DOE COMPLIANCE DRIVE/MOTOR EFFICIENCY [CFM/W]	FAN MOTOR POWER [W] TORQUE [FT*LB] FLA MOCP VOLT / PH		FAN BLADE RADIAL DIMENSION	MAX SOUND DATA [Dba]	WEIGHT [LBS]	ACCESSORIES/OPTIONS:			
CF - A	243,000	2.32	1525	125.0	3.5	5	460 / 3	24'-0"	56	250	1,2,3
					***************************************		WINDOWS AND				

GENERAL NOTES:

- A. UNIT SHALL BE ETL/UL LISTED; UNIT NAMEPLATE SHALL BEAR THE AGENCY LABEL.
- B. PERFORMANCE SHALL BE RATED AND CERTIFIED PER AMCA. UNIT NAMEPLATE SHALL BEAR THE LABEL.
- C. FAN SHALL BE INTERLOCKED WITH THE FIRE ALARM SYSTEM TO SHUT DOWN UPON A FIRE ALARM SIGNAL (NFPA COMPLIANT)
- D. ALLOWED MANUFACTURES: 1) BIG ASS FANS (BAF) MODEL PFD "POWERFOIL D" 2) RITE-HITE MODEL "REVOLUTION 150 SERIES". NO ALTERNATE MANUFACTURE'S NO EXCEPTIONS.

ACCESSORIES/OPTIONS:

- 1. SAFETY CABLE, GUY WIRE, RAPID INDUSTRIAL MOUNT, BLADE RETAINER LINKS
- 2. PERMANENT MAGNET BRUSHLESS ECM VARIABLE SPEED DC MOTOR
- 3. FACTORY CONTROLLER WITH BACnet/MODBUS CONNECTIVITY. MANUFACTURE SHALL PROVIDE QUANTITY OF REQUIRED CONTROLLERS BASED ON TOTAL FAN QUANTITY. INSTALL PER MANUFACUTURE'S RECOMMENDATIONS

DIFFUSER, GRILLE & REGISTER SCHEDULE											
SYMBOL / TAG SERVICE / LOCATION		MANUFACTURER	MODEL	FRAME	STYLE	MATERIAL	FINISH	O.B.D.	REMARKS		
Α	SUPPLY / CEILING	PRICE	SCDA	24"X24" LAY-IN	SQUARE CONE DIFFUSER	STEEL	OFF WHITE	NO	1		
В	SUPPLY / CEILING	PRICE	SMD	SURFACE MOUNTED	SQUARE MODULAR DIFFUSER	STEEL	OFF WHITE	YES	1		
С	EXHAUST / CEILING	PRICE	80	24"X24" LAY-IN	EGGCRATE W/ 1/2" X 1/2" X 1/2" SPACING	STEEL	OFF WHITE	NO	1		
D	SUPPLY / DUCT	PRICE	HCD1	SURFACE MOUNTED	DOUBLE-DEFLECTION	STEEL	ALUMINUM POWDERCOAT	YES	1		
E	EXHAUST / CEILING	PRICE	530D	SURFACE MOUNTED	45° FIXED BAR DOUBLE DEFLECTION W/ 3/4" SPACING	STEEL	OFF WHITE	YES	-		
F	MDF SUPPLY / CEILING	PRICE	80	24"X24" LAY-IN	EGGCRATE W/ 1/2" X 1/2" X 1/2" SPACING	STEEL	OFF WHITE	NO	1,2		
G	RETURN/ CEILING	PRICE	80	24"X24" LAY-IN	EGGCRATE W/ 1/2" X 1/2" X 1/2" SPACING	STEEL	OFF WHITE	NO	1		
Н	EXHAUST / CEILING	PRICE	630	SURFACE MOUNTED	45° FIXED BAR DOUBLE DEFLECTION W/ 3/4" SPACING	ALUMINIUM	OFF WHITE	YES	-		
I	RETURN/ CEILING	PRICE	630	SURFACE MOUNTED	45° FIXED BAR DOUBLE DEFLECTION W/ 3/4" SPACING	ALUMINIUM	OFF WHITE	YES	1		
J	EXHAUST / CEILING	PRICE	80	12"X12" LAY-IN	EGGCRATE W/ 1/2" X 1/2" X 1/2" SPACING	ALUMINIUM	OFF WHITE	NO	1		
X											

1. SEE DIFFUSER TAG ON MECHANICAL FLOOR PLANS FOR ROUND/RECTANGULAR NECK SIZE CONNECTION.

2. SUPPLY GRILLE SHALL BE MOUNTED IN THE CEILING SO THAT AIRFLOW IS "DUMPED" DIRECTLY DOWN IN THE COLD AISLE (FRONT SIDE OF THE EQUIPMENT RACKS).

APPROVAL STAMP:

ONE MUSIC SQUARE SOUTH, SUITE 110 NASHVILLE, TN 37203



Glen Ridge, NJ 07028 Telephone 973-259-9500 www.smdcpc.com

CONSULTANT

SHIRK & O'DONOVAN
CONSULTING ENGINEERS

STRUCTURAL CONSULTANTS SHIRK & O'DONOVAN CONSULTING ENGINEERS, INC

PH: 614.436.6465

370 EAST WILSON BRIDGE ROAD WORTHINGTON, OH 43085

MEP CONSULTANTS KRAEMER CONSULTING ENG PLLC 2050 W. WHISPERING WIND DR, STE 158 PHOENIX, AZ 85085 PH: 602.285.1669

harrington

Atlanta, GA • Charlotte, NC

FIRE PROTECTION CONSULTANTS HARRINGTON GROUP, INC 3237 SATELLITE BOULEVARD, SUITE 525 DULUTH, GA 30096

PH: 770.564.3505 HARGIS

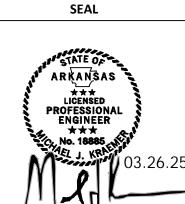
TELECOMMUNICATIONS CONSULTANTS HARGIS ENGINEERS, INC 1201 THIRD AVENUE, SUITE 600 SEATTLE, WA 98101

PH: 206.448.3376 IN COORDINATION WITH DEVELOPER'S CONSULTANT WORKING IN PARALLEL:



SITE CIVIL PICKERING FIRM, INC. 1700 KIRK RD, SUITE 120 LITTLE ROCK, AR 72223

PH: 501.246.3578



KCE JOB #24-240

END USER

PROJECT DESCRIPTION **AMAZON LIT3 2026 IXD GEN5M** CROSS-DOCK WAREHOUSE FACILITY

(RECEIPT & REDISTRIBUTION)

PROJECT LOCATION Port of

PORT OF LITTLE ROCK (INDUSTRIAL PARK) LITTLE ROCK, ARKANSAS 72206 (UNINCORPORATED PARCELS) PULASKI COUNTY

SHEET TITLE

HVAC SCHEDULES

SHEET MANAGEMENT PROJECT NO.: DATE ISSUED: VARIOUS DRAWN BY: REVIEWED BY:

ISSUANCE / REVISION SCHEDULE # DATE DESCRIPTION

SHEET NUMBER