

VENTILATION SCHEDULE								
SPACE	ROOM TYPE	PEOPLE OUTDOOR AIR		AREA OUTDOOR AIR		BREATHING ZONE OUTDOOR AIRFLOW (CFM) $Vbz=Rp*Pz+Az*Ra$	(CFM) VoZ	DESIGN OA (CFM)
		PEOPLE Pz	RATE (CFM/PERSON) Rp	AREA (SQFT) Az	RATE (CFM/SQFT) Ra			
MEN'S LOCKER ROOM 115	LOCKER/DRESSING ROOM	0	0	—	0	—	—	—
WOMEN'S LOCKER ROOM 116	LOCKER/DRESSING ROOM	0	0	—	0	—	—	—
R&D LABORATORY 113	SCIENCE LABORATORY	83	10	3267	0.18	1422	1777	1800
IT OFFICE 111	OFFICE	2	5	320	0.06	30	37.5	45

VENTILATION SCHEDULE NOTES:

1. OUTDOOR AIR IS BEING PROVIDED PER SECTION 403 OF THE 2020 MECHANICAL CODE OF NEW YORK STATE.

EXHAUST VENTILATION SCHEDULE					
SPACE	ROOM TYPE	AREA OUTDOOR AIR		REQUIRED EXHAUST (CFM)	DESIGN EA (CFM)
		AREA (SQFT) Az	RATE (CFM/SQFT) Ra		
MEN'S LOCKER ROOM 115	LOCKER/DRESSING ROOM	714	0.25	179	250
WOMEN'S LOCKER ROOM 116	LOCKER/DRESSING ROOM	412	0.25	103	200
R&D LABORATORY 113	SCIENCE LABORATORY	3267	1.00	3267	3400
MENS TOILET 115A	PUBLIC TOILET	232	70/FIXTURE	350	350
WOMENS TOILET 116A	PUBLIC TOILET	238	70/FIXTURE	210	350

NOTES:

1. MECHANICAL EXHUAST FOR ALL OTHER SPACES IS PROVIDED IN ACCORDANCE WITH 403 OF THE 2020 MECHANICAL CODE OF NEW YORK STATE.
2. MECHANICAL CONTRACTOR TO REBALANCE EXISTING SYSTEMS TO PROVIDE DESIGN FLOW RATES. PROVIDE BALANCING DAMPERS ON ALL NEW BRANCH DUCTWORK.

FAN SCHEDULE																		
(FURNISHED AND INSTALLED BY CONTRACTOR)																		
TAG	SERVICE	MFR.	MODEL	QTY.	LOCATION	(CFM)	FAN (RPM)	DRIVE	FAN TYPE	CLASS (I, II, III, IV)	ESP (INWG)	MOTOR (HP)	VOLTS/PH/HZ	OP. WT. (LBS)	INLET (dBA)	OUTLET (dBA)	REMARKS	
EF-1&2	R&D 113	GREENHECK	FJI-12-BI-X	2	ROOF	1700	2,074	DIRECT	UTILITY SET	I	1.20	1.0	208/3/60	219	68	74	1-3	
EF-3	FUME HOOD	GREENHECK	FJI-10-BI-X	1	ROOF	1200	2,454	DIRECT	UTILITY SET	I	1.10	1.0	208/3/60	244	91	96	1-3	

REMARKS:

1. PROVIDE VFD CONTROL.
2. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
3. PROVIDE ROOF MOUNTED FLAT BLADE CENTRIFUGAL BLOWER COMPLETE WITH EQUIPMENT SUPPORTS ROOF RAILS, SPRING ISOLATORS, NEMA 3R PREWIRED DISCONNECT SWITCH, PHENOLIC EPOXY POWDER (LIGHT GRAY), ALUMINUM ACCESS DOOR-BOLT. EF-1 AND 2 SHALL BE OPERATED ON A TIME CLOCK CONTROLLER WITH A MANUAL SWITCH OVERRIDE.

VARIABLE FREQUENCY CONTROLLER SCHEDULE																					
(FURNISHED AND INSTALLED BY CONTRACTOR)																					
TAG	UNIT	SERVICE	MOTOR DATA		VFD DATA				COMPONENTS												
			HP	V/PH	EFF.	MIN. OUTPUT AMPS	V/PH	MODEL	ENCLOSURE	HARMONIC PERFORMANCE	VOLTAGE RANGE	REACTOR IMPEDANCE (MIN)	VFD SHORT CIRCUIT RATING	DRIVE ISOLATION FUSES	BYPASS	EMI / RMI FILTERS	BMS INTERFACE	EQUIPMENT	BASIS OF DESIGN	REMARKS	
VFD-1,2,3	—	EF-1,2,3	2	208/3	98%	4.1	208/3	DANFOSS FC102	3R	6 PULSE W/ DC SWINGING CHOKES	+30% TO -35%	5%	65,000 AMPS	Y	2 CONTRATOR W/ SERVICE SWITCH	IEC 61800-3	BACNET VFD AND BYPASS	—	DANFOSS	1-9	

REMARKS:

1. VFD SHALL SEISMICALLY CERTIFIED (IVC 2006 ASC-7-05 / ICC AC-156).
2. PROVIDE MOTOR CURRENT SENSING FOR BYPASS CIRCUIT (INDICATE ON BMS NETWORK).
3. PROVIDE INTEGRAL TIME CLOCK.
4. PROVIDE SENSING FOR "WELDED CONTACTOR" (INDICATE ON BMS NETWORK).
5. PROVIDE SENSING FOR SINGLE PHASE CONDITION IN BYPASS MODE (INDICATE ON BACNET).
6. VFD SHALL HAVE AT LEAST THE NOTED MINIMUM OUTPUT AMPS, USE HIGHER HP RATING IF REQUIRED.
7. VFD SHALL HAVE MINIMUM OF 65KAIC RATING.
8. COORDINATE THE LOCATION OF VFD'S WITH ELECTRICAL CONTRACTOR AND BUILDING MANAGEMENT PRIOR TO INSTTALLATION.
9. PROVIDE NEMA 3R ENCLOSURE FOR OUTDOOR USE.

DIFFUSER/GRILLES/REGISTER SCHEDULE									
(FURNISHED AND INSTALLED BY CONTRACTOR)									
TAG	MFR.	MODEL	TYPE	SYSTEM	AIRFLOW (CFM)	MATERIAL	SIZE (IN.)	NECK SIZE	REMARKS
AD-1	PRICE	ASPD	PLAQUE	SUPPLY	SEE DWG	ALUM	24x24	SEE DWG	1-3
AD-2	PRICE	ASPD	PLAQUE	SUPPLY	SEE DWG	ALUM	12x12	SEE DWG	1-3
AR-1	PRICE	80	EGGCRATE	RETURN	SEE DWG	ALUM	24x24	SEE DWG	1-3
EG-1	PRICE	600	LOUVERED	EXHAUST	SEE DWG	ALUM	12x12	SEE DWG	1-3
EG-2	PRICE	600	LOUVERED	EXHAUST	SEE DWG	ALUM	24x24	SEE DWG	1-3

REMARKS:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR AIR DEVICES.
2. ALL DIFFUSERS, GRILLES, GRATES, AND FRAMES SHALL BE WHITE. COORDINATE MOUNTING, FRAME, AND BOARDERS WITH CEILING SPECIFIED ON THE ARCHITECTURAL DRAWINGS.
3. PROVIDE DIFFUSERS AND GRILLES WITH NECK SIZE SHOWN ON THE MECHANICAL PLANS. PROVIDE BACK PAN AND ROUND OR SQUARE NECK ADAPTERS AS NECESSART TO ACCOMMODATE CONNECTIONS TO FLEX OR HARD DUCTS.

0	ISSUED FOR BID AND CONSTRUCTION	LG	24 SEPT 21
REV	REVISION DESCRIPTION	BY	DATE
<div><div><div>EI</div><div>ARCHITECTURE ENGINEERING PLANNING</div></div><div><div>EI Associates</div><div>ARCHITECTS & ENGINEERS, PC</div><div>8 RIDGEDALE AVENUE•CEDAR KNOLLS NJ 07927•973.775.7777</div></div></div>			
GAETANO P. CIPRIANO, P.E.		PROFESSIONAL ENGINEER LICENSE NO. NY 064215-1	MECHANICAL
SCALE	AS NOTED	PROJECT	EIA DRAWING NO.
DRAWN BY:	PTC 9/24/21	INSTRUMENTATION LABORATORY LOCKER ROOM EXPANSION ORANGEBURG NEW YORK	M60
DESIGNED BY:	JC 9/24/21		
CHECKED BY:			
APPROVED BY:		TITLE	CLIENT DWG. NO. - - - - -
PROJECT MANAGER:		SCHEDULES	EIA PROJECT NO. EG8577.03