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Building #17
Campus Expansion Child
Day-care Center

777 Old Saw Mill River Road
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

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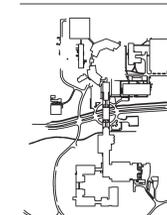
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Key Plan



No. Date Description

0 05/20/2022 ISSUED FOR PERMIT

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Professional Seal and Signature

Vendor Name:
Vendor Project No.:
Discipline: Drawn By:

MECHANICAL
EQUIPMENT
SCHEDULE
SHEET 1

Scale: NTS Floor:

M-600

DEDICATED OUTSIDE AIR SYSTEM (DOAS) SCHEDULE																																		
UNIT TAG	LOCATION	SERVICE	TOTAL SUPPLY CFM (DESIGN/PEAK)	TOTAL EXHAUST CFM (DESIGN/PEAK)	ENTHALPY WHEEL										AIR-COOLD HEAT PUMP COOLING DATA					HOT GAS REHEAT														
					SUMMER E.A.T. (DB/WB)		SUMMER RETURN AIR (DB/WB)		SUMMER L.A.T. (DB/WB)		EFFECTIVENESS		WINTER E.A.T. (DB)		WINTER RETURN AIR (DB/WB)		WINTER L.A.T. (DB/WB)		EFFECTIVENESS		HP	FLA	MINIMUM WHEEL DEPTH (IN.)	MAX P.D. (IN.)		TMBH	SMBH	TONS	E.A.T. (DEG F) (DB/WB)	L.A.T. (DEG F) (DB/WB)	EER @ AHRI	TMBH	L.A.T. (DEG F)	
					TOTAL	SENSIBLE	TOTAL	SENSIBLE	TOTAL	SENSIBLE	TOTAL	SENSIBLE	TOTAL	SENSIBLE	SUPPLY	EXHAUST																		
899-DOAS-R-01	ROOF	VENTILATION SPILL AIR	2,900/3,700	2,100/2,900	95	78	78	62	86.1	71.5	65%	72%	0	72	55	38.8	34.4	74%	74%	0.17	0.4	6	0.12	0.06	171.6	104.5	14.3	86.1	71.5	53.2	53.2	11.0	53	70
899-DOAS-R-02	ROOF	VENTILATION SPILL AIR	3,100/3,900	2,100/2,900	95	78	78	62	86.7	72	65%	72%	0	72	55	36.4	32.6	74%	75%	0.17	0.4	6	0.14	0.06	176.4	108.6	14.7	86.7	72	55	54.6	11.0	51.6	70

NOTES: 1) REFER TO FLOORPLANS FOR LOCATION OF AIR CONNECTIONS
2) ONE ELECTRICAL POINT OF CONNECTION FOR THE 480V OPERATION OF THE UNIT, WITH A SEPARATE CONVENIENCE OUTLET POWERED THROUGH THE UNIT WITH ITS OWN DISCONNECT AND FUSING.
3) UNIT MOUNTED OUTSIDE AIR AND SPILL AIR DAMPER
4) R410A VARIABLE CAPACITY SCROLL COMPRESSOR
5) MODULATING HOT GAS REHEAT
6) ENLARGE OUTSIDE AIR CONNECTION TO PREVENT SNOW BEING PULLED IN. 7) CUSTOM SOUND ATTENUATED CURB BY KINETICS NOISE CONTROL, OR APPROVED EQUAL, AND SUPPLIED BY AHJ MANUFACTURER
8) FULLY MODULATING SCR ELECTRIC HEAT CONTROL. PROVIDE VFD CONTROL OF WHEEL.
9) BAGNET COMMUNICATION CARD, AS REQUIRED BY BMS. REFER TO SPECIFICATION AND CONTROL DRAWING M-705.
10) HEAT PUMP PRIMARY HEAT SHALL BE PROVIDED. BACK UP HEAT SHALL BE AS SCHEDULED. CONTROLS SHALL AUTOMATICALLY USE BACK UP HEAT WHEN NEEDED AND LOCK OUT HEAT PUMP OPERATION WHEN AMBIENT IS TOO COLD.
11) A FACTORY INSTALLED, ENERGY 'CORE' SHALL BE PROVIDED COMPLETE WITH OA AND RA PREFILTERS, AND DEFROST CONTROL. PROVIDE ALL REQUIRED CONTROLS AS INDICATED IN CONTROL DIAGRAMS AND REQUIRED PER SEQUENCE

DEDICATED OUTSIDE AIR SYSTEM (DOAS) SCHEDULE (CONTINUED)																															
UNIT TAG	AIR-COOLD HEAT PUMP HEATING DATA				AUXILIARY HEAT		SUPPLY FAN										EXHAUST FAN			PRE FILTERS			ELECTRICAL INFO				WEIGHT (LBS)	MODEL NO.	NOTES		
	TMBH	EAT (DEG F)	LAT (DEG F)	COP @ 47 DEG_F	KW (0 DEG F - 60 DEG F)	SUPPLY FAN										EXHAUST FAN			PRE FILTERS			ELECTRICAL INFO									
						TYPE	CFM	E.S.P. (IN. W.C.)	T.S.P. (IN. W.C.)	RPM	BHP	HP	FLA/MOTOR	TYPE	CFM	E.S.P. (IN. W.C.)	T.S.P. (IN. W.C.)	RPM	BHP	HP	FLA/MOTOR	SUPPLY ONLY	SUPPLY ONLY	RETURN ONLY	FLA	MCA				MOP	V/PH/Hz
899-DOAS-R-01	164.2	45.0	97.2	3.64	72	SWSI AF, ECM DIRECT DRIVE	2,900/3,700	2.5	3.9	1,550	3.3	8	6.1	SWSI AF, ECM DIRECT DRIVE	2,100/2,900	2.5	3.8	2,050	1.67	4	4	2" MERV 8	4" MERV 14	2" MERV 8	119	122	125	460/3/60	2,800	DPS015A	1 TO 10
899-DOAS-R-02	165.5	45.00	94.2	3.64	72	SWSI AF, ECM DIRECT DRIVE	3,100/3,900	2.5	4	1,600	3.5	8	6.1	SWSI AF, ECM DIRECT DRIVE	2,100/2,900	2.5	3.8	2,100	1.7	4	4	2" MERV 8	4" MERV 14	2" MERV 8	119	122	125	460/3/60	2,800	DPS015A	1 TO 10

FAN SCHEDULE																			
FAN TAG	LOCATION	SERVICE	CFM	STATIC PRESS. (IN. W.G.)	RPM	OUTLET VELOC. (FPM)	TYPE	DRIVE	MODEL NO.	MOTOR				WEIGHT (LBS.)	VIBRATION ISOLATION		ECM/ EMERGENCY POWER	NOTES	
										BHP (AMPS)	HP (WATTS)	VOLT/PH/Hz	VELOCITY (IN. W.C.)		SPEC. TYPE	DEFLECTION (IN.)			
										HP	FLA/MOTOR	HP	FLA/MOTOR						
899-TXF-R-01	ROOF	TOILET ROOM EXHAUST	400	0.6	1,450	600	UTILITY - UNIVERSAL SINGLE WIDTH FAN	ECM	USF-06	0.09	0.25	208/1/60	100	SEE SPECS	YES/NO	1.2			
899-TXF-R-02	ROOF	TOILET ROOM EXHAUST	650	1.0	1,750	1,000	UTILITY - UNIVERSAL SINGLE WIDTH FAN	ECM	USF-08	0.19	0.50	208/1/60	100	SEE SPECS	YES/NO	1.2			
899-GXF-R-01	ROOF	WARMING KITCHEN	225	0.4	1,225	350	UTILITY - UNIVERSAL SINGLE WIDTH FAN	ECM	USF-04	0.04	0.25	208/1/60	100	SEE SPECS	YES/NO	1.2			
899-TF-1-01	ELECTRICAL CLOSET	CLOSET HEAT TRANSFER	225	0.10	875	-	CEILING EXHAUST FAN	ECM	SP-A390-VG	(.8)	(100)	277/1/60	25	SEE SPECS	YES/YES	1.3			
899-TF-1-02	IDF ROOM	BACK-UP HEAT TRANSFER	225	0.10	875	-	CEILING EXHAUST FAN	ECM	SP-A390-VG	(.8)	(100)	277/1/60	25	SEE SPECS	YES/YES	1.3			
899-TF-1-03	ELECTRICAL ROOM	BACK-UP HEAT TRANSFER	675	0.20	1,025	-	INLINE CABINET	ECM	CSP-A700-VG	(4.1)	(104)	120/1/60	40	SEE SPECS	YES/YES	1.3			

GENERAL NOTES: A) PROVIDE UNIT MOUNTED DISCONNECT
1) VARI-GREEN ECM MOTOR
2) PROVIDE WITH MOTORIZED EXHAUST DAMPER TO BE INTERLOCKED WITH FAN OPERATION
3) VARI-GREEN MOTOR TO INCLUDE MANUAL DIAL FOR BALANCING. CONTRACTOR TO PROVIDE NECESSARY CONTROLS FOR ON/OFF OPERATION VIA SPACE TEMPERATURE SENSOR

AIR OUTLET & INLET SCHEDULE										MANUFACTURER "TITUS"									
TAG	SERVICE	SPEC. TYPE	SIZE IN INCHES			MAX CFM	TOTAL PRESSURE (IN. W.C.)	VELOCITY PRESSURE (IN. W.C.)	THROW	MAX NC	MODEL NUMBER	NOTES							
			FACE	NECK/ NOM. DUCT SIZE	BLADE SPACING														
CD-1	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12	4" Ø	-	75	0.134	0.040	2-3-6	21	OMNI								
CD-2	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12	6" Ø	-	157	0.194	0.040	4-6-12	21	OMNI								
CD-3	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12	8" Ø	-	244	0.213	0.021	5-8-16	17	OMNI								
CD-4	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24	6" Ø	-	160	0.044	0.040	2-4-7	13	OMNI								
CD-5	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24	8" Ø	-	280	0.072	0.040	4-6-12	17	OMNI								
CD-6	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24	10" Ø	-	450	0.107	0.040	5-8-14	20	OMNI								
CR-1	EXHAUST/RETURN AIR	CEILING REGISTER (SQUARE PANEL)	12x12	-	-	350	-	-	-	-	OMNI								
CR-2	EXHAUST/RETURN AIR	CEILING REGISTER (SQUARE PANEL)	24x24	-	-	800	-	-	-	-	OMNI								
SG-1	SUPPLY AIR	SUPPLY GRILLE	8x8	6x6	3/4"	150	0.131	0.040	10-12-18	24	301RL								
SG-2	SUPPLY AIR	SUPPLY GRILLE	10x10	8x8	3/4"	300	0.131	0.040	14-17-25	27	301RL								
SG-3	SUPPLY AIR	SUPPLY GRILLE	12x12	10x10	3/4"	450	0.131	0.040	18-22-31	29	301RL								
EG-1	EXHAUST AIR	EXHAUST GRILLE	8x8	6x6	3/4"	150	-	0.040	-	25	350RL								
EG-2	EXHAUST AIR	EXHAUST GRILLE	14x12	12x10	3/4"	360	0.051	0.016	-	11	350RL								
EG-3	EXHAUST AIR	EXHAUST GRILLE	20x14	18x12	3/4"	675	0.051	0.016	-	13	350RL								

COMMON NOTES:
A. DATA OBTAINED FROM TESTS CONDUCTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.
B. THROW VALUES ARE GIVEN FOR TERMINAL VELOCITIES OF 150, 100 AND 50 FPM AND FOR ISOTHERMAL CONDITIONS.
C. NC VALUES BASED ON OCTAVE BAND 2 TO 7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB.
D. EACH NC VALUE REPRESENTS THE NOISE CRITERIA CURVE WHICH WILL NOT BE EXCEEDED BY THE SOUND PRESSURE IN ANY OF THE OCTAVE BANDS, 2 THROUGH 7, WITH A ROOM ABSORPTION OF 10 DB, RE 10⁻¹² WATTS.
E. DATA UNDER TOTAL PRESSURE FOR RETURN GRILLES IS NEGATIVE STATIC PRESSURE.
F. COORDINATE BORDER TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS. OFFICE BATHROOMS TO HAVE BORDER TYPE 3.
G. PROVIDE CABLE OPERATED DAMPER THRU DIFFUSER IN UNACCESSIBLE CEILING (SEE DETAIL).
H. PROVIDE LIGHT SHIELD FOR RETURN GRILLES.
NOTES:
1) THROW AND PRESSURE DROP INFO PROVIDED FOR 45 DEG DEFLECTION ANGLE
2) BORDER TYPE 7. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS. GRILLE TO BE HEAVY DUTY CONSTRUCTION. DAMPER ACCESS IS THROUGH THE GRILLE. FINISH BY ARCHITECT.
3) PROVIDE WITH REMOTE CABLE OPERATED DAMPER FOR AIR OUTLETS NEAR UNACCESSIBLE CEILINGS.
4) THROW AND PRESSURE DROP INFO PROVIDED FOR 22.5 DEG DEFLECTION ANGLE

LINEAR DIFFUSER SCHEDULE										(TITUS AS STANDARD)									
TAG	LOCATION	MODEL NO.	MAX CFM PER FT OF EXTENDED PIPE LENGTH	ACTIVE LENGTH	NO. OF SLOTS	SLOT WIDTH (IN.)	MAXIMUM STATIC PRESSURE (IN. W.C.)	MAXIMUM DIFFUSER NC	PATTERN	THROW DIRECTION	SIZE OF DUCT CONNECTION TO PLENUM (IN.)		NOTES						
											THROW	CONNECTION							
LD-1	REFER TO PLANS	ML-39	25	SEE PLAN	1	1	0.05	20	ADJUSTABLE	VERTICAL &/OR HORIZONTAL	SEE PLANS	1.2,3,4,5							
LD-2	REFER TO PLANS	ML-39	50	SEE PLAN	2	1	0.05	23	ADJUSTABLE	VERTICAL &/OR HORIZONTAL	SEE PLANS	1.2,3,4,5							
LR-1	OFFICE SPACE	MLR-39	25 (50)	SEE PLAN	1	1	10 (25)	NA	SEE PLAN	N/A	1.2,3								
LR-2	OFFICE SPACE	MLR-39	50 (100)	SEE PLAN	2	1	12 (28)	NA	SEE PLAN	N/A	1.2,3								

NOTES:
1) NC VALUE REPRESENTS THE NOISE CRITERIA THAT WILL NOT BE EXCEEDED BY THE SOUND PRESSURE IN ANY OF THE OCTAVE BANDS, 2 THROUGH 7, WITH A ROOM ABSORPTION OF 10 DB, RE 10⁻¹² WATTS.
2) DATA OBTAINED FROM TESTS CONDUCTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991 "METHOD OF TESTING FOR RATING THE PERFORMANCE OF AIR OUTLETS AND INLETS."
3) COORDINATE BORDER TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
4) CONTRACTOR SHALL FIELD SET PATTERN DEFLECTORS AS REQUIRED. 5) PROVIDE WITH REMOTE CABLE OPERATED DAMPER

VARIABLE REFRIGERANT VOLUME AIR CONDITIONING UNIT SCHEDULE - CRITICAL SPACES																				MANUFACTURER "DAIKIN" OR APPROVED EQUAL														
INDOOR UNIT TAG	OUTDOOR CONDENSING UNIT TAG	SERVICE	TYPE	OUTDOOR UNIT										INDOOR UNIT										REFRIGERANT		PIPING				VIBRATION ISOLATION		REMARKS		
				OPERATING RANGE		ELECTRICAL		QUANTITY	MAX AIR FLOW RATE (CFM)	SOUND PRESSURE (DBA)	WEIGHT (LBS)	EER	SEER	Region IV HSPF RATING (HEATING)	MODEL NO.	TOTAL COOLING CAPACITY (BTU/HR)	SENSIBLE COOLING CAPACITY (BTU/HR)	HEATING CAPACITY (BTU/HR)	ELECTRICAL			FAN AIR FLOW (CFM) HIL	SOUND PRESSURE (DBA) HIL	WEIGHT (LBS)	MODEL NO.	TYPE	CHARGE (LBS)	LIQUID LINE (IN., OD)	VAPOR LINE (IN., OD)	MAX PIPE LENGTH (FT.)	MAX ELEVATION (FT.)		TYPE	DEFLECTION (IN.)
				COOLING DB	HEATING DB	V / PH / HZ	MOP												MCA	V / PH / HZ	MOP													
899-AC-1-06	899-CUR-06	ELECTRICAL ROOM	SINGLE ZONE EXTENDED PIPE	95	5	208 / 1 / 60	20	18.25	1	2,800	59	150	9.1	15.9	9.2	RX36NMVJU	34,400	22,800	15,740	208 / 1 / 60	64 WATTS	.37 FLA	915 / 575	54/40	40	FTX36NVJU	410A	3.96	1/4	5/8	98	65	SEE SPECS	
899-AC-1-07	899-CUR-07	IT CLOSET	SINGLE ZONE EXTENDED PIPE	95	0	208 / 1 / 60	20	16.5	1	2,900	58	175	10.2	17.6	8.4	FAQ24TAVJU	24,000	18,000	27,000	208 / 1 / 60	64 WATTS	0.6	635 / 470	43 / 37	35	RZQ24TAVJUA	410A	6.44	3/8	5/8	25	-	SEE SPECS	

NOTES:
A) PROVIDE UNITS WITH THE FOLLOWING:
1) PROVIDE TEMPERATURE SENSOR AND BAGNET INTERFACES TO BE MONITORED BY BMS
2) PROVIDE CONDENSATE PUMP TO BE POWERED THROUGH THE UNIT. PROVIDE SHELVE ON WALL FOR PUMP
3) VIBRATION ISOLATORS
4) DISCONNECT SWITCHES

ELECTRIC HEATER SCHEDULE												
UNIT TAG	TYPE	LOCATION	MODEL NO.	CFM	EXT S.P. IN.W.G.	FAN SPEED	HEATING CAPACITY			ELECTRICAL DATA	NOTES/ REMARKS	
							FLA	E.A.T.	L.A.T.			
							AMPS	(°F) DB	(°F) DB			
899-EH-1-01	HORIZONTAL	LOBBY VESTIBULE	P-963U1T05U-DEU6L4	350 (170-950)	0.2	HIGH	8	30.0	75.0	5 KW	480/3/60	INDEECO MODEL WITH DUCT COLLAR.
899-EH-1-02	VERTICAL	PLUMBING ROOM	T330D052033830D0F	250	0.2	HIGH	7.8	30.0	75.0	6 KW	480/3/60	REDD-1 MODEL

NOTES: 1) PROVIDE WITH INTEGRAL THERMOSTAT IN RETURN AIR PATHWAY OF UNIT AND DISCONNECT SWITCH

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

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