

**PACKAGED DX RTU SCHEDULE**

PLAN MARK	SERVING	CONFIGURATION	GENERAL DATA		AIRFLOW (CFM)				SUPPLY FAN DATA				COOLING COIL DATA						ELECTRIC HEATER DATA				COMPRESSOR DATA				UNIT ELECTRIC DATA				APPROX. CURB EXTERIOR DIMENSIONS (L"xW"xH")		SELECTION BASED ON		REMARKS					
			NOMINAL CAPACITY (TONS)	INSTALLED WEIGHT (LBS)	TOTAL	OA	EA	DCV OA	MIN. AIRFLOW	OPERATION (CV or VAV)	DRIVE (BELT OR DIRECT)	E.S.P. (IN. H2O)	T.S.P. (IN. H2O)	FAN RPM	NO. OF FANS	MOTOR HP (EACH)	E.A.T. °F DB	L.A.T. °F WB	°F DB	°F WB	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EER	IEER/SEER	KW	MBH	E.A.T. °F	L.A.T. °F	NO. STEPS	QUANTITY	STEPS/RANGE OF CAPACITY	BI-POLAR	VOLT	PH		MCA	MOCP	APPROX. CURB EXTERIOR DIMENSIONS (L"xW"xH")	MANUF.	MODEL
RTU-1	AREA A (WEST)	DRAW THROUGH	50	5,110	11,635	2,993	N/A	N/A	4,300	VAV	DIRECT	2.5	3.5	1,008	1	15	80.9	68.9	54.1	53.9	550.0	336.0	10	14.6	N/A	N/A	N/A	N/A	N/A	4	6 / 10-100%	YES	208	3	230	250	216"x94"x79"	CARRIER	50K	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
RTU-2	AREA A (EAST)	DRAW THROUGH	60	6,911	12,020	1,975	N/A	N/A	5,100	VAV	DIRECT	2.5	3.3	898	1	20	80.8	68.8	52.6	51.7	632.0	369.5	10	15	N/A	N/A	N/A	N/A	N/A	4	6 / 10-100%	YES	208	3	282	300	312"x94"x79"	CARRIER	50K	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
RTU-3	AREA B	DRAW THROUGH	35	3,895	7,765	1,043	N/A	N/A	3,400	VAV	DIRECT	2.5	3.5	963	1	10	80.3	68.5	54.4	54.0	353.0	216.0	10	14.6	N/A	N/A	N/A	N/A	N/A	2	3 / 20-100%	YES	208	3	159	200	166"x94"x79"	CARRIER	50K	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

**REMARKS:**

- PROVIDE SINGLE POINT POWER CONNECTION WITH FACTORY DISCONNECT.
- PROVIDE FACTORY MOUNTED UNIT CONTROLLER INTEGRAL TO UNIT.
- PROVIDE WITH FACTORY MOUNTED BACNET INTERFACE AND ON BOARD CONTROLS FOR MULT-ZONE VAV OPERATION.
- PROVIDE WITH 2" MERV 8 FILTERS. INCLUDE THREE (3) SETS - ONE FOR START-UP, ONE FOR T&B, AND ONE FOR TURNOVER.
- ALL FAN MOTORS SHALL BE PREMIUM EFFICIENCY.
- COMPRESSOR/CONDENSER PERFORMANCE BASED ON 98°F CONDENSER ENTERING AIR TEMPERATURE.
- DOUBLE WALL CONSTRUCTION MINIMUM R-6 DOWNSTREAM OF COOLING COIL, R-4.2 UPSTREAM OF COOLING COIL.
- PROVIDE FACTORY MOUNTED OUTSIDE AIRFLOW MEASURING STATION.
- PROVIDE VARIABLE SPEED COMPRESSOR FOR FIRST STAGE OF DX COOLING FOR UNIT TURNDOWN.
- PROVIDE FACTORY ECONOMIZER WITH MOTORIZED OUTSIDE AIR AND RETURN AIR DAMPER.
- PROVIDE FACTORY MOUNTED AFD FOR VAV OPERATION.
- PROVIDE WITH ECM CONDENSER FANS.
- PROVIDE HURRICANE RATED MINIMUM 24" TALL FULL PERIMETER EQUIPMENT ROOF CURB.
- PROVIDE BIPOLAR IONIZATION IN THE RTU, WITH ION DETECTOR, BY CONTRACTOR NOT RTU MANUFACTURER.
- PROVIDE FACTORY REFRIGERANT LEAK DETECTION SYSTEM WITH PRE-PROGRAMMED MITIGATION FUNCTIONS.

**GRAVITY VENTILATOR SCHEDULE**

PLAN MARK	SERVING	DESIGN CFM	ASSEMBLY S.P. (IN. H2O)	THROAT VELOCITY (FT/MIN)	TYPE		UNIT LENGTH (IN)	UNIT WIDTH (IN)	THROAT OPENING DIM. (IN.)	THROAT AREA (SQ.FT.)	APPROX. CURB DIM. (IN.)	APPROX. BLDG. OPENING DIM. (IN.)	APPROX. WEIGHT (LBS)	SELECTION BASED ON		REMARKS
					INTAKE	RELIEF								MANUFACTURER	MODEL	
GRV-1	148 TOILET	100	0.012	225		X	27	22	8" x 8"	0.44	14" x 14"	10.5" x 10.5"	37	GREENHECK	FOR	1, 2, 3, 4

**REMARKS:**

- PROVIDE WITH FACTORY 1/2" ALUMINUM MESH BIRD SCREEN
- PROVIDE WITH COUNTER-BALANCED GRAVITY BACKDRAFT DAMPER
- PROVIDE ROOF CURB
- CERTIFIED HIGH WIND RESISTANT FAN AND CURB ASSEMBLY. PROVIDE FLORIDA PRODUCT APPROVAL. CURB AND FAN ASSEMBLY SHALL BE CERTIFIED FOR USE WITHOUT THE USE OF ADDITIONAL CABLE OR GUY-WIRE RESTRAINTS, WHEN CURB IS ANCHORED TO ROOF AND FAN ANCHORED TO CURB IN ACCORDANCE WITH MANUFACTURER'S CERTIFIED INSTALLATION INSTRUCTIONS.

**IAQ Calculations - Bi-Polar Ionization**

AHU #	UNIT SUPPLY AIR (CFM)	VRP METHOD OA (CFM)	VRP METHOD CO2 (PPM)	IAQ METHOD OA (CFM)	IAQ METHOD CO2 (PPM)	APPROX. TONS REDUCED
RTU-1	11,635	2,993	737	2,005	905	6.9
RTU-2	12,020	2,655	2,655	1,975	671	4.7
RTU-3	7,765	1,688	763	1,055	982	4.4
<b>TOTAL:</b>						<b>16</b>

**NOTES:**

- CO2 CALCULATIONS BASED ON GPS (GLOBAL PLASMA SOLUTIONS) PRODUCTS SOFTWARE USING ASHRAE 62.1-2019 IAQ METHOD.
- ASHRAE 62.1-2019 MAXIMUM SPACE CO2 LEVEL IS 5000 PPM
- VRP - VENTILATION RATE PROCEDURE
- IAQ - INDOOR AIR QUALITY
- DCV - DEMAND CONTROL VENTILATION

**VAV TERMINAL BOX WITH AND WITHOUT ELECTRIC HEATING COIL SCHEDULE FOR:** 815

UNIT DESIGNATION	SERVING	AIR DATA		ELECTRIC HEATING COIL										SELECTION BASED ON		REMARKS					
		TOTAL CFM	MAX CFM	PRIMARY AIR	AIRSIDE	HEATING CFM	EAT °F	LAT °F	CAPACITY BTUH	KW	VOLTS	PHASE	STEPS/CTRL	MANUFACTURER	MODEL		INLET SIZE (IN)	1	2	3	
VAV-1-1	EV ROOMS (A,B,C)	365	365	60	125	54.0	0.1	182.5	54.0	88.5	6826	2	208	1	2	CARRIER	35E	6	1	2	---
VAV-1-2	THERAPY GYM	1460	1460	250	490	54.0	0.1	730	54.0	84.2	23891	7	208	1	2	CARRIER	35E	12	1	2	---
VAV-1-3	EV ROOMS (D,E,F)	260	260	45	90	54.0	0.21	130	54.0	90.3	5119.5	1.5	208	1	2	CARRIER	35E	5	1	2	---
VAV-1-4	PRE-SCH	655	655	120	220	54.0	0.1	327.5	54.0	82.8	10239	3	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-5	PRE-SCH	720	720	125	240	54.0	0.17	360	54.0	84.6	11945.5	3.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-6	PRE-K	730	730	125	245	54.0	0.17	365	54.0	84.2	11945.5	3.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-7	PRE-K	795	795	130	265	54.0	0.17	397.5	54.0	85.7	13652	4	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-8	LOBBY	990	990	160	330	54.0	0.1	495	54.0	85.8	17065	5	208	1	2	CARRIER	35E	10	1	2	---
VAV-1-9	CONFERENCE	400	400	65	135	54.0	0.1	200	54.0	85.5	6826	2	208	1	2	CARRIER	35E	6	1	2	---
VAV-1-10	RECEPTION/WORKROOMS	125	125	25	75	54.0	0.1	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-11	CLINIC	140	140	25	75	54.0	0.1	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-12	OFFICES	130	130	25	75	54.0	0.1	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-13	OFFICES	150	150	25	75	54.0	0.1	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-14	OFFICES	130	130	25	75	54.0	0.1	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-15	BREAKROOM	95	95	25	75	54.0	0.05	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-1-16	CORRIDOR	375	375	65	125	54.0	0.1	187.5	54.0	87.6	6826	2	208	1	2	CARRIER	35E	6	1	2	---
VAV-1-17	CORRIDOR	400	400	65	135	54.0	0.1	200	54.0	85.5	6826	2	208	1	2	CARRIER	35E	6	1	2	---
VAV-1-18	LR PRE-K	610	610	100	205	54.0	0.1	305	54.0	84.9	10239	3	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-19	LR K-2	540	540	100	180	54.0	0.1	270	54.0	83.1	8532.5	2.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-20	LR 3-5	465	465	80	155	54.0	0.1	232.5	54.0	87.8	8532.5	2.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-21	TODD 1	620	620	105	210	54.0	0.1	310	54.0	84.4	10239	3	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-22	TODD 2	550	550	100	185	54.0	0.1	275	54.0	88.3	10239	3	208	1	2	CARRIER	35E	8	1	2	---
VAV-1-23	KINDER	830	830	150	280	54.0	0.1	415	54.0	84.3	13652	4	208	1	2	CARRIER	35E	10	1	2	---
VAV-1-24	ELECTRICAL	100	100	30	75	54.0	0.05	-----	-----	-----	-----	-----	-----	-----	-----	CARRIER	35E	4	1	---	3
VAV-2-1	KITCHEN	530	530	85	180	54.0	0.1	265	54.0	83.7	8532.5	2.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-2	RESTROOMS	170	170	25	75	54.0	0.01	90	54.0	89.0	3413	1	120	1	2	CARRIER	35E	4	1	2	---
VAV-2-3	3RD GRADE	855	855	140	285	54.0	0.1	427.5	54.0	83.4	13652	4	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-4	3RD/4TH GRADE	855	855	140	285	54.0	0.1	427.5	54.0	83.4	13652	4	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-5	5TH/6TH GRADE	815	815	135	275	54.0	0.1	407.5	54.0	84.9	13652	4	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-6	6TH GRADE	990	990	160	330	54.0	0.1	495	54.0	85.8	17065	5	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-7	CORRIDOR	540	540	95	180	54.0	0.1	270	54.0	83.1	8532.5	2.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-8	KINDER	835	835	135	280	54.0	0.1	417.5	54.0	84.1	13652	4	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-9	1ST GRADE	735	735	125	245	54.0	0.17	367.5	54.0	84.0	11945.5	3.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-10	1ST GRADE	800	800	130	270	54.0	0.17	400	54.0	85.5	13652	4	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-11	2ND GRADE	760	760	125	255	54.0	0.17	380	54.0	83.0	11945.5	3.5	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-12	2ND GRADE	940	940	155	315	54.0	0.1	470	54.0	84.1	13588.5	4.5	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-13	MULTIPURPOSE (N)	1185	1185	195	395	54.0	0.17	592.5	54.0	85.9	20476	6	208	1	2	CARRIER	35E	10	1	2	---
VAV-2-14	MULTIPURPOSE (S)	790	790	135	265	54.0	0.17	395	54.0	85.9	13652	4	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-15	OFFICES	300	300	50	100	54.0	0.21	150	54.0	85.5	5119.5	1.5	208	1	2	CARRIER	35E	5	1	2	---
VAV-2-16	CORRIDOR	240	240	50	80	54.0	0.1	120	54.0	93.3	5119.5	1.5	208	1	2	CARRIER	35E	5	1	2	---
VAV-2-17	CORRIDOR	585	585	100	195	54.0	0.1	292.5	54.0	86.3	10239	3	208	1	2	CARRIER	35E	8	1	2	---
VAV-2-18	ELECTRICAL	95	95	30	75	54.0	0.05	-----	-----	-----	-----	-----	-----	-----	-----	CARRIER	35E	4	1	---	3
VAV-3-1																					

**GRILLE, REGISTER AND DIFFUSER SCHEDULE:**

UNIT NO.	TYPE			SERVICE			MOUNTING DATA			CONSTRUCTION DATA							SELECTION BASED ON:		REMARKS		
	G	R	D	SA	RA	EA	CEILING	DUCT	WALL		SHAPE	MATERIAL	COLOR	PATTERN				MANUFACTURER		MODEL	
									HIGH	LOW				1-W	2-W	3-W	4-W				E/R
G-1			X	X			X			X	SQUARE - 24x24	ALUMINUM	OFF-WHITE		X	X	X		TITUS	TMS-AA	1,2,3,4
G-2			X	X			X			X	SQUARE - 12x12	ALUMINUM	OFF-WHITE		X	X	X		TITUS	TMS-AA	1,2,3,4
G-3	X				X	X	X			X	SQUARE - 24x24	ALUMINUM	OFF-WHITE					X	TITUS	50F	1,2,3,4
G-4	X				X	X	X			X	SQUARE - 12x12	ALUMINUM	OFF-WHITE					X	TITUS	50F	1,2,3,4
G-5			X	X			X			X	LINEAR DIFFUSER - 3 SLOT	ALUMINUM	OFF-WHITE	X	X				TITUS	ML-39	1,2,4,5
G-6			X	X			X			X	LINEAR DIFFUSER - 5 SLOT	ALUMINUM	OFF-WHITE	X	X				TITUS	ML-39	1,2,4,5
G-7			X	X			X			X	LINEAR DIFFUSER - 7 SLOT	ALUMINUM	OFF-WHITE	X	X				TITUS	ML-39	1,2,4,5
G-8	X				X		X			X	LINEAR REGISTER - 4 SLOT	ALUMINUM	OFF-WHITE	X	X				TITUS	MLR-39	1,2,4,5
G-9	X				X		X			X	RECTANGULAR	ALUMINUM	OFF-WHITE					X	TITUS	300FL	1,2,4
G-10	X				X	X	X			X	RECTANGULAR	ALUMINUM	OFF-WHITE					X	TITUS	350FL	1,2,4

**NOTES:**

- COORDINATE AND CONFIRM FINAL DIFFUSER/GRILLE/REGISTER COLOR WITH ARCHITECTURAL PLANS PRIOR TO PURCHASE.
- PROVIDE RECT-ROUND, ROUND-ROUND, OR RECT-RECT TRANSITION AS REQUIRED.
- PROVIDE OPPOSED BLADE DAMPER FOR ALL LOCATIONS ABOVE HARD CEILINGS.
- IN 24" X 12" LAY-IN APPLICATIONS, PROVIDE EXTRA 24" 1"-BAR IN CEILING GRID.
- COORDINATE MOUNTING STYLE WITH ARCHITECTURAL REFLECTED CEILING PLAN. SURFACE MOUNT IN SHEETROCK CEILINGS/LAY-IN MOUNT IN LAY-IN CEILINGS.
- PROVIDE 4' LENGTH LINEAR SLOT DIFFUSER/REGISTER UNLESS OTHERWISE NOTED ON PLANS. ALIGN DIFFUSER/REGISTER WITH 4' LENGTH ACOUSTICAL WALL PANEL.
- PROVIDE 4' LENGTH DIFFUSER WITH 1/4" THICK BARS, 15" DEFLECTION, AND 12" SPACING WIDTH. ALIGN DIFFUSER WITH 4' LENGTH ACOUSTICAL WALL PANEL.

**SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE:**

UNIT NO.	SERVING	FAN DATA				MOTOR DATA				UNIT ELECTRICAL DATA				SELECTION BASED ON		REMARKS	
		TOTAL CFM	OUTSIDE AIR CFM	EXT. STATIC P. IN H2O	REFRIG TYPE	WATTS	SPEED	VOLT	PH	SEER @ AHRI	VOLT	PH	FAN FLA	MCA	MOCPP		MANUFACTURER
DFU-1	120 - SYSTEMS	250	N/A	N/A	13	HIGH	208	1	21.7	208	1	0.40	0.19	N/A	CARRIER	40MHHAQ9XA3	1, 2, 4

**REMARKS:**

- 100' MAX TOTAL LINE LENGTH, 50' MAX LIFT/DROP, INDOOR UNIT POWERED FROM OUTDOOR UNIT.
- INDOOR UNIT POWERED FROM OUTDOOR UNIT.
- PROVIDE WIRELESS REMOTE CONTROL.
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT.
- PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH LOCAL PASSWORD LOCKOUT.
- PROVIDE PAC-US44CN-1 THERMOSTATIC ADAPTOR BOARD OR EQUIVALENT.

**SPLIT SYSTEM AIR COOLED CONDENSING UNIT SCHEDULE:**

UNIT NO.	SERVING	UNIT DATA		FAN MOTOR				COMPRESSOR DATA				UNIT ELECTRICAL DATA				SELECTION BASED ON		REMARKS					
		NOM CAP	SEER	COND. EAT F	REFRIG TYPE	NO.	HP	VOLT	PH	QTY	STEPS	VOLT	PH	RLA	LRA	VOLT	PH		FAN FLA	MCA	MOCPP	MANUFACTURER	MODEL
DCU-1	120 - SYSTEMS	0.75	21.7	95	R-454	1	0.05	208	1	1	1	208	1	6	N/A	208	1	0.8	12	15	CARRIER	38MHRQ9AA3	1, 2, 3

**REMARKS:**

- LINE LENGTHS TO AHU SHALL NOT EXCEED MANUFACTURER'S MAXIMUM LENGTH.
- PROVIDE UNIT WITH ALL MANUFACTURER'S RECOMMENDED REFRIGERANT SPECIALTIES.
- SIZE REFRIGERANT PIPING IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR INSTALL CONDENSING UNIT.

**SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE:**

UNIT NO.	SERVING	UNIT DATA		FAN DATA				COOLING COIL DATA				UNIT ELECTRICAL DATA				SELECTION BASED ON		REMARKS		
		TOTAL CFM	EXT. STATIC P. IN H2O	HP	RPM	VOLT	PH	EAT F	LAT F	SEER @ ARI	VOLT	PH	FLA	MCA	MOCPP	MANUFACTURER	MODEL			
Ducted DFU-2	147/148 - STORAGE TOILET	400	0.2	0.18	1350	208	1	81.2	69.06	52	-	19.5	208	1	1.11	1.11	-	CARRIER	40MBQ12-3	1, 2, 4

**REMARKS:**

- PROVIDE SINGLE POINT POWER.
- PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT.
- PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT WITH PASSWORD LOCKOUT.
- LINE LENGTHS TO CU SHALL NOT EXCEED MANUFACTURER'S MAXIMUM LENGTH.

**SPLIT SYSTEM CONDENSING UNIT SCHEDULE:**

UNIT NO.	SERVING	UNIT DATA		FAN MOTOR				COMPRESSOR DATA				UNIT ELECTRICAL DATA				SELECTION BASED ON		REMARKS			
		CAPACITY MBH	COND. EAT F	NO.	HP (EACH)	VOLT	PH	FLA	QUANTITY	STEPS	VOLT	PH	RLA (ea)	LRA (ea)	VOLT	PH	MCA		MOCPP	MANUFACTURER	MODEL
DCU-2	147/148 - STORAGE/TOILET	12	95	1	0.05	208	1	-	1	1	208	1	8.5	-	208	1	15	15	CARRIER	38MAQ	1

**REMARKS:**

- LINE LENGTHS TO AHU SHALL NOT EXCEED MANUFACTURER'S MAXIMUM LENGTH.

**Duct & Pipe Construction & Insulation Requirements Schedule**

Service	Thickness	Type	Notes
<b>Supply Air Ducts</b>			
From AHU's connection to 50 feet downstream on supply side for all air handling unit systems:	1" Internally lined Installed R-6	with perforated inner liner and mylar film separating insulation from air stream	Double Wall Duct
After 50 feet downstream of AHU on supply side for all air handling units:	Installed R-6	Concealed - 2" thick external wrap Exposed - 1-1/2" rigid board with corner angles.	
Downstream of VAV terminals:	Installed R-6	Concealed - 2" thick external wrap Exposed - 1-1/2" rigid board with corner angles.	
All low pressure exposed ductwork in public areas:	1" Internally lined Installed R-6	with perforated inner liner and mylar film separating insulation from air stream	Double Wall Duct
Ducts located outdoors or in soffit exposed to weather:	Installed R-8	Exposed: Rigid fiberglass with corner angles with outer weatherproof sheet metal jacket sealed with Flex-Clad 400 as manufactured by MFM Building Products Corps. Concealed: .75# density blanket	
AC Unit to Terminal - Balance of ductwork to terminal 50 deg air system:	Installed R-6	Exposed: 2" rigid fiberglass with corner angles Concealed: 2" with .75# density blanket	
AC Unit to Terminal - Balance of ductwork to terminal exposed 50 deg air system:	Installed R-6	Exposed: 2" rigid fiberglass with corner angles. Concealed: .75# density blanket.	
Terminal to Outlet:	Installed R-6	.75# density blanket.	
Fire Dampers and reheat coils in internally insulated duct:	1" Internally lined Installed R-4.2	Exposed: 1" rigid fiberglass with corner angles. Concealed: Installed R-6 with .75# density blanket.	
<b>Return Air Ducts</b>			
From AHU connection to 50 feet upstream on return side for all air handling unit systems	1" Internally lined Installed R-4.2	with perforated inner liner and mylar film separating insulation from air stream	Double Wall Duct
All other return air ductwork:	Installed R-4.2	Concealed - 2" thick external wrap - 1-1/2" rigid board with corner angles	Exposed
<b>Transfer Air Ducts</b>			
All transfer ducts:	Installed R-4.2	1-1/2" .75# density blanket. Mechanical Space or Exposed: 1" rigid fiberglass with corner angles.	
<b>Exhaust Air Ducts</b>			
All general restroom exhaust ducts:		Not Required, except for within 10' from discharge opening. Mechanical Space or Exposed: 2" thick external wrap Exposed - 1-1/2" rigid board with corner angles	
<b>Refrigerant Piping</b>			
RS (Suction) (Temp < 40 deg F):		Up to 3/4": 3/4" Closed Cell Elast. 1" thru 8": 1-1/2" Foamglas	with Aluminum Jacket
RL (Temp 90 - 130 deg F):		Up to 2": Not Required 2-1/2" thru 4": Not Required 5" thru 8": 1-1/2" Foamglas	with Aluminum Jacket
RHG (Temp 90 - 150 deg F):		Up to 2": 3/4" Closed Cell Elast. 2-1/2" thru 4": 1" Closed Cell Elast. 5" thru 8": 1-1/2" Foamglas	with Aluminum Jacket
Rupture Disk Piping		Size per manufacturers & ASHRAE 15 recommendations	Schedule 40 Black Steel - primed and painted black
<b>EQUIPMENT &amp; MISCELLANEOUS INSULATION REQUIREMENTS</b>			
Domestic Water (Outdoor):	1"	Closed Cell Elastomeric	with Aluminum Jacket
<b>REMARKS:</b>			
Refer to specification section 23-07-00 for more details and information			
Duct System Construction & Sealing must meet or exceed the 8th Edition of the FBC 2023 - Energy Conservation Code Table C403.2.9.2			
Insulation must meet or exceed the 8th Edition of the FBC 2023 - Energy Conservation Code Tables C403.2.9.1 and C403.2.10			
Insulation must meet or exceed 8th Edition of the FBC 2023 - Mechanical Code sections 604.1 through 604.13			
Insulation must meet or exceed ASHRAE 90.1-2019, Tables 6.8.2, 6.8.3-1, and 6.8.3-2			



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**UCP OSCEOLA CAMPUS**

PROJECT LOCATION:

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MPE JOB #: 2024-147

REVISIONS		
MARK	DESCRIPTION	DATE

COMM. NO.: 2024903  
ISSUE DATE: 12/06/2024  
DRAWN BY: JA

**MECHANICAL SCHEDULES**

**M602**

100% CONSTRUCTION DOCUMENTS