

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-1						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622K06412		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,129		
Total of Terminals (CFM)		5,000			5,129		
Return Airflow (CFM)		5,000			5,129		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.82		
External Static Pressure (in. w.g.)		0.15			0.46		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.20		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.58	1.46	1.34
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/16/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

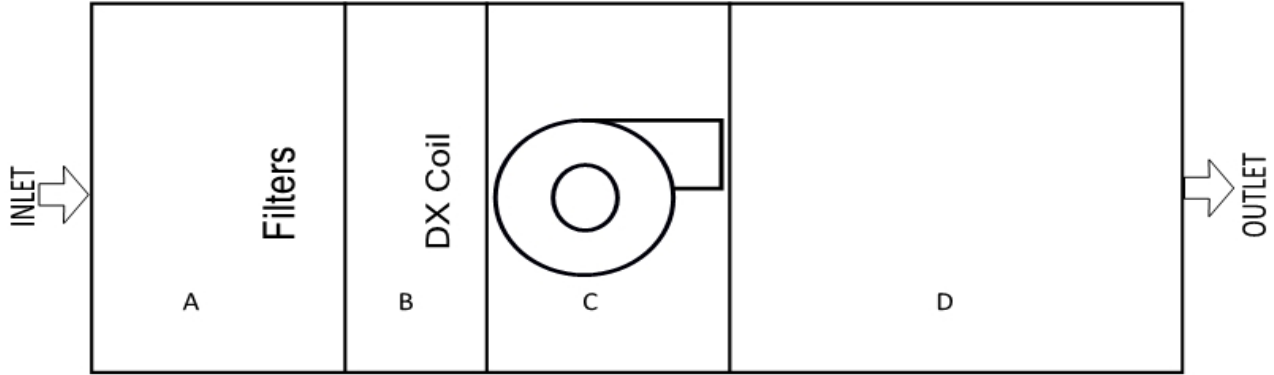
PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-1 - Total Air											
DUCT TRAVERSE INFORMATION													
Duct Zone:		RTU-1				Required CFM:		5000		Required FPM:		1152	
Duct Size:		25	X	25	WxH"	Area:		4.34		Static Pressure:		-0.12 in.w.g.	
Instrument:		Velgrid		Corr Factor	1	Altitude:		5280 FT		Temperature:		n/a	
DUCT TRAVERSE MEASUREMENTS													
Velocity Total (FPM):		4,727			Velocity Average (FPM):			1,182			Actual Airflow (CFM):		5,129
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height	
1	1345	1289										6.3	
2	1132	961										18.8	
3												31.3	
4												43.8	
5												56.3	
6												68.8	
7												81.3	
8												93.8	
9												106.3	
10												118.8	
11												131.3	
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches	
Totals	2477	2250	0	0	0	0	0	0	0	0	0		

Comments: _____

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/19/2024 _____

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-1
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5129



ESP:	0.46	TSP:	0.92
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STATIC PRESSURE READINGS (in. w.g.)											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.12	-0.36	-0.58	0.34							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-2						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM150U4E				LGM150U4EH1G	
SERIAL #						5622L00680	
LOCATION / SERVICE						Sales	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		5,000				5,144	
Total of Terminals (CFM)		5,000				5,144	
Return Airflow (CFM)		5,000				5,144	
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)						0.94	
External Static Pressure (in. w.g.)		0.15				0.54	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/a	
OA Damper Postion (% Open)						n/a	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.26	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.43	1.53	1.62
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

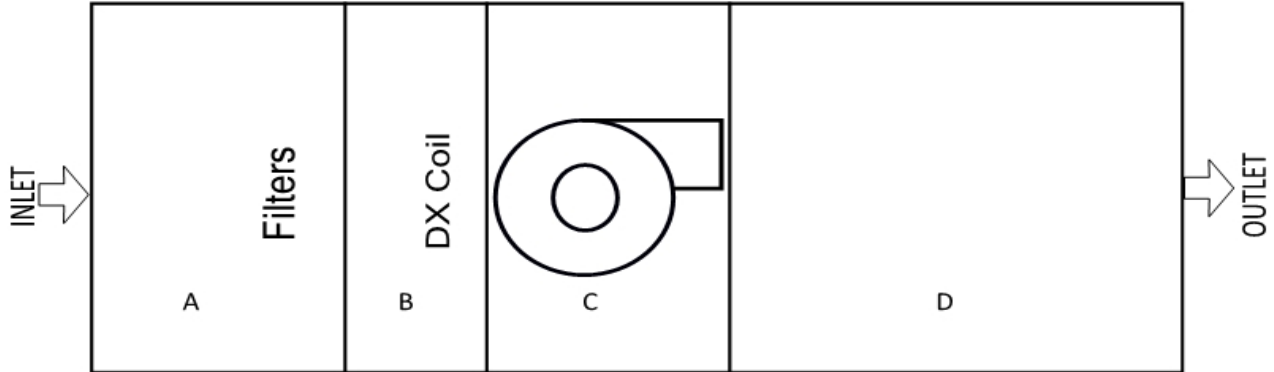
PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-2 - Total Air											
DUCT TRAVERSE INFORMATION													
Duct Zone:		RTU-2				Required CFM:		5000		Required FPM:		1152	
Duct Size:		25	X	25	WxH"	Area:		4.34		Static Pressure:		-0.14 in.w.g.	
Instrument:		Velgrid		Corr Factor	1	Altitude:		5280 FT		Temperature:		n/a	
DUCT TRAVERSE MEASUREMENTS													
Velocity Total (FPM):		4,741			Velocity Average (FPM):			1,185			Actual Airflow (CFM):		5,144
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height	
1	1372	1221										6.3	
2	1056	1092										18.8	
3												31.3	
4												43.8	
5												56.3	
6												68.8	
7												81.3	
8												93.8	
9												106.3	
10												118.8	
11												131.3	
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches	
Totals	2428	2313	0	0	0	0	0	0	0	0	0		

Comments: _____

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/19/2024 _____

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-2
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5144



ESP:	0.54
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TSP:	0.94
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.14	-0.35	-0.54	0.40							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-3						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00676		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,036		
Total of Terminals (CFM)		5,000			5,036		
Return Airflow (CFM)		5,000			5,036		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.87		
External Static Pressure (in. w.g.)		0.15			0.49		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.19		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.61	1.30	1.44
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-3 - Total Air											
DUCT TRAVERSE INFORMATION													
Duct Zone:		RTU-3				Required CFM:		5000		Required FPM:		1152	
Duct Size:		25	X	25	WxH"	Area:		4.34		Static Pressure:		0.09 in.w.g.	
Instrument:		Velgrid		Corr Factor	1	Altitude:		5280 FT		Temperature:		n/a	
DUCT TRAVERSE MEASUREMENTS													
Velocity Total (FPM):		4,641			Velocity Average (FPM):			1,160			Actual Airflow (CFM):		5,036
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height	
1	1346	1296										6.3	
2	1142	857										18.8	
3												31.3	
4												43.8	
5												56.3	
6												68.8	
7												81.3	
8												93.8	
9												106.3	
10												118.8	
11												131.3	
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches	
Totals	2488	2153	0	0	0	0	0	0	0	0	0		

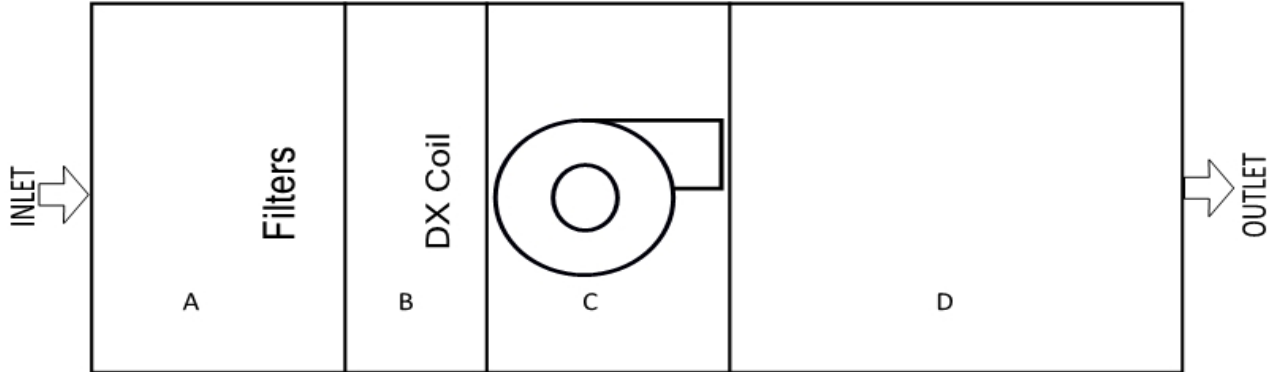
Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-3
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5036



ESP:	0.49	TSP:	0.87
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STATIC PRESSURE READINGS (in. w.g.)											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.09	-0.27	-0.47	0.40							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-4						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00677		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,066		
Total of Terminals (CFM)		5,000			5,066		
Return Airflow (CFM)		5,000			5,066		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.97		
External Static Pressure (in. w.g.)		0.15			0.62		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.21		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.67	1.31	1.42
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

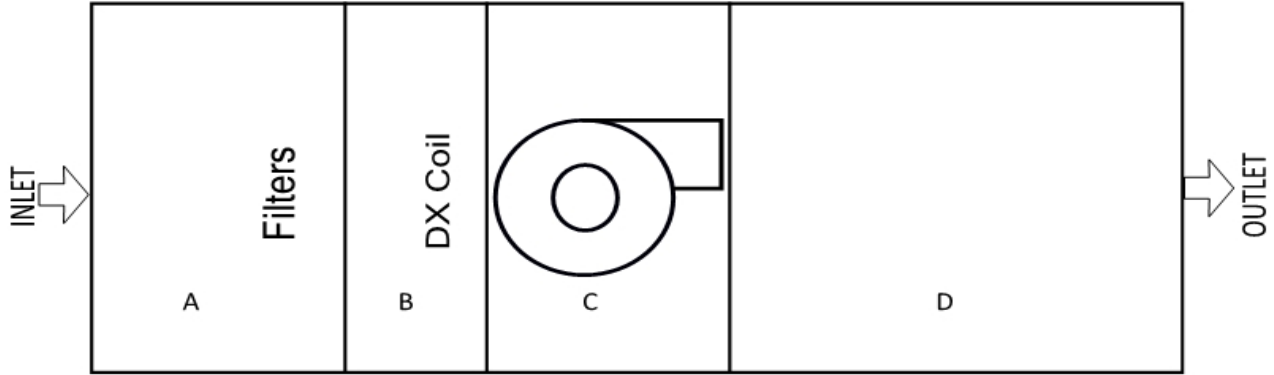
PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-4 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-4					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.16 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,669			Velocity Average (FPM):		1,167		Actual Airflow (CFM):		5,066	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1301	1348										6.3
2	1015	1005										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2316	2353	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/18/2024

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-4
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5066



ESP:	0.62	TSP:	0.96
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.16	-0.35	-0.51	0.46							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-5						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622K06413		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,063		
Total of Terminals (CFM)		5,000			5,063		
Return Airflow (CFM)		5,000			5,063		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.83		
External Static Pressure (in. w.g.)		0.15			0.47		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.24		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.67	1.48	1.37
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

NEBB CERTIFIED TESTING & BALANCING

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-5 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-5					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.16 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,666			Velocity Average (FPM):		1,167		Actual Airflow (CFM):		5,063	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1329	1287										6.3
2	1094	956										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2423	2243	0	0	0	0	0	0	0	0	0	

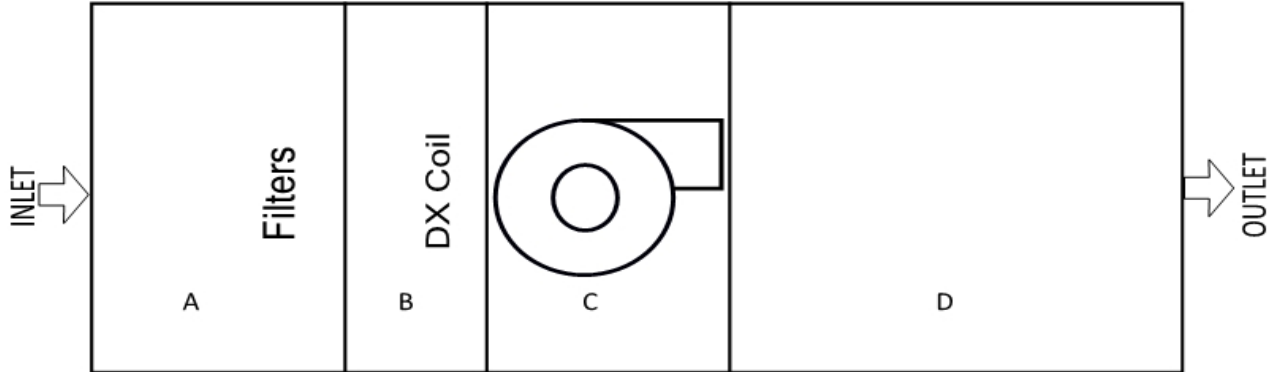
Comments: _____

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/18/2024 _____

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-5
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5063



ESP:	0.47
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TSP:	0.83
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STATIC PRESSURE READINGS (in. w.g.)											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.16	-0.43	-0.54	0.29							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-6						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00679		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,128		
Total of Terminals (CFM)		5,000			5,128		
Return Airflow (CFM)		5,000			5,128		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.85		
External Static Pressure (in. w.g.)		0.15			0.48		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.24		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.38	1.51	1.62
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/a		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

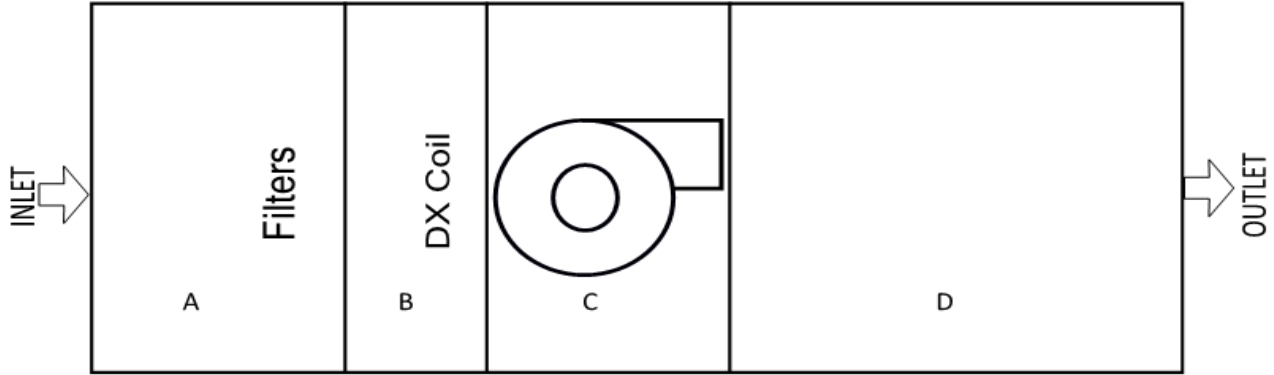
PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-6 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-6					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.16 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,726			Velocity Average (FPM):		1,182		Actual Airflow (CFM):		5,128	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1384	1342										6.3
2	1159	841										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2543	2183	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-6
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5128



ESP:	0.48	TSP:	0.85
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.13	0.33	0.52	0.35							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-7						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM150U4E				LGM150U4EH2G	
SERIAL #						2623D00603	
LOCATION / SERVICE						Sales	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		5,000				5,102	
Total of Terminals (CFM)		5,000				5,102	
Return Airflow (CFM)		5,000				5,102	
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)						0.98	
External Static Pressure (in. w.g.)		0.15				0.61	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/a	
OA Damper Postion (% Open)						n/a	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.59	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.81	1.94	2.05
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-7 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-7					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.14 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,702			Velocity Average (FPM):		1,176		Actual Airflow (CFM):		5,102	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1391	1398										6.3
2	1032	881										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2423	2279	0	0	0	0	0	0	0	0	0	

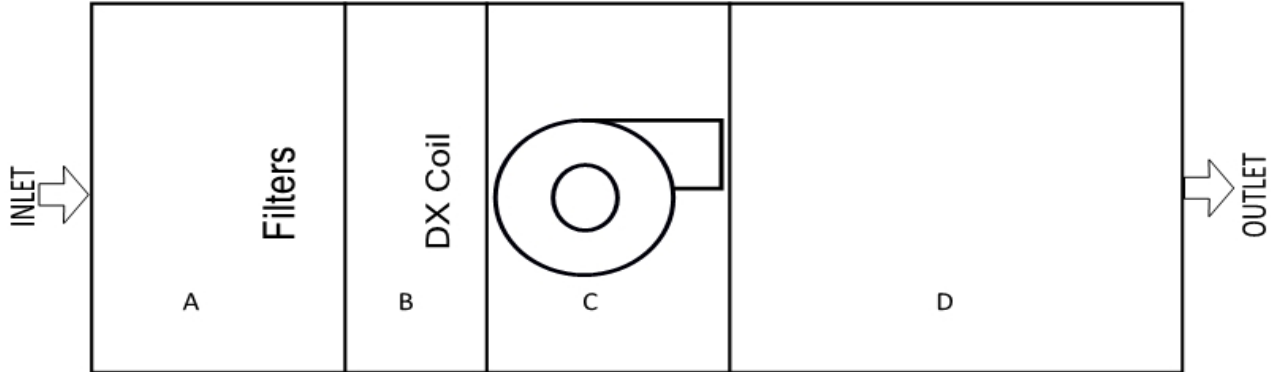
Comments: _____

Technician(s): Curtis Tunink Date: 1/17/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-7
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5102



ESP: 0.61

TSP: 0.98

<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.14	-0.34	-0.51	0.47							

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-8						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00681		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,086		
Total of Terminals (CFM)		5,000			5,086		
Return Airflow (CFM)		5,000			5,086		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.96		
External Static Pressure (in. w.g.)		0.15			0.55		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.20		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.48	1.39	1.50
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-8 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-8					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.18 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,687			Velocity Average (FPM):		1,172		Actual Airflow (CFM):		5,086	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1326	1276										6.3
2	1158	927										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2484	2203	0	0	0	0	0	0	0	0	0	

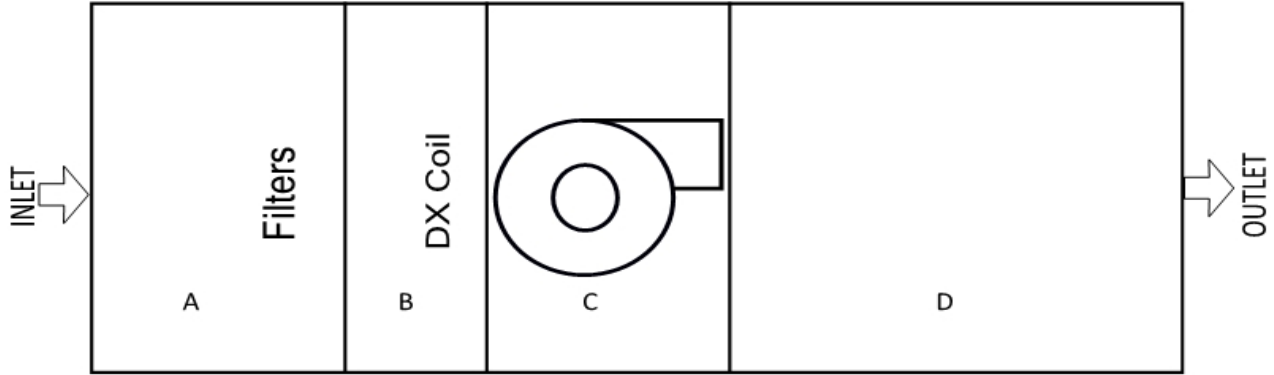
Comments: _____

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/17/2024 _____

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-8
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5086



ESP:	0.55	TSP:	0.96
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.18	-0.42	-0.59	0.37							

Comments: _____

Technician(s): Curtis Tunink Date: 1/17/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-9						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00678		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,052		
Total of Terminals (CFM)		5,000			5,052		
Return Airflow (CFM)		5,000			5,052		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.86		
External Static Pressure (in. w.g.)		0.15			0.45		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						Ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.21	
Volts	Phase	480	3		491	492	493
Full Load Amps		4.30			1.30	1.45	1.68
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/17/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-9 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-9					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.14 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,656			Velocity Average (FPM):		1,164		Actual Airflow (CFM):		5,052	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1305	1215										6.3
2	1084	1052										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2389	2267	0	0	0	0	0	0	0	0	0	

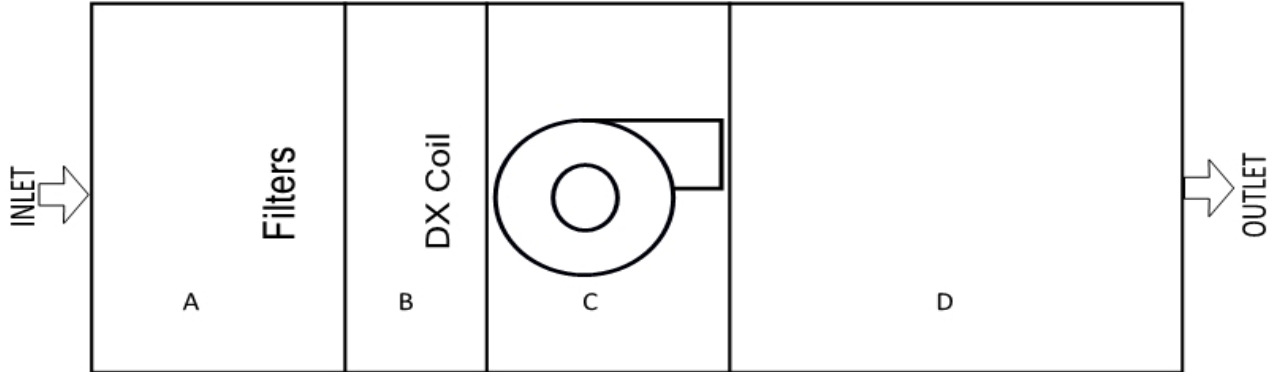
Comments: _____

Technician(s): Curtis Tunink Date: 1/17/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-9
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5052



ESP:	0.45	TSP:	0.86
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.14	-0.36	0.55	0.31							

Comments: _____

Technician(s): Curtis Tunink Date: 1/17/24

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-10						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622K06410		
LOCATION / SERVICE					Sales		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,058		
Total of Terminals (CFM)		5,000			5,058		
Return Airflow (CFM)		5,000			5,058		
Outside Airflow (CFM)							
Total Static Pressure (in. w.g.)					0.95		
External Static Pressure (in. w.g.)		0.15			0.64		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					n/a		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.24		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.37	1.51	1.66
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

NEBB CERTIFIED TESTING & BALANCING

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-10 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-10					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.26 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,661			Velocity Average (FPM):		1,165		Actual Airflow (CFM):		5,058	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1355	1296										6.3
2	914	1096										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2269	2392	0	0	0	0	0	0	0	0	0	

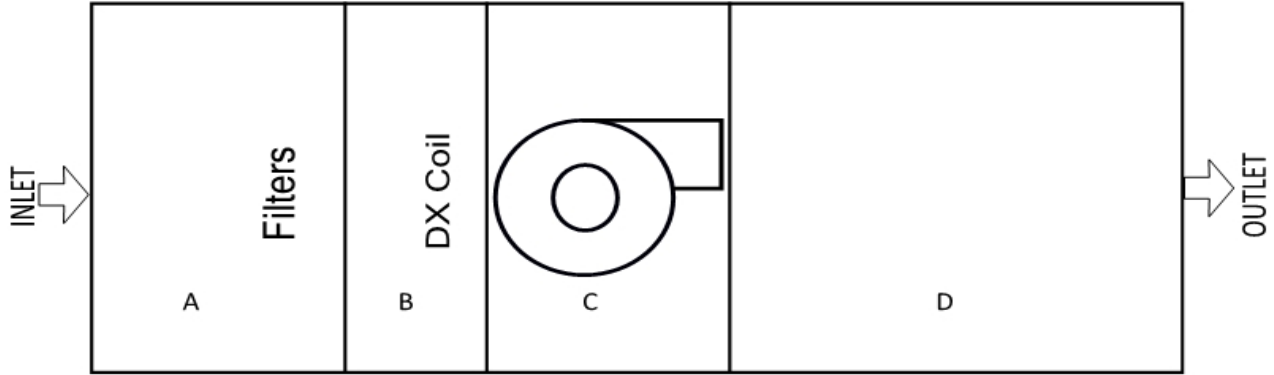
Comments: _____

Technician(s): Curtis Tunink Date: 1/17/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-10
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5058



ESP:	0.64	TSP:	0.95
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.26	-0.40	-0.57	0.38							

Comments: _____

Technician(s): Curtis Tunink Date: 1/17/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-11						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM092U4ES1G		
SERIAL #					5622K06515		
LOCATION / SERVICE					Cart Corral		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		3,000			2,951		
Total of Terminals (CFM)		3,000			2,951		
Return Airflow (CFM)		2,760					
Outside Airflow (CFM)		240					
Total Static Pressure (in. w.g.)					0.57		
External Static Pressure (in. w.g.)		0.15			0.38		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					5%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					0.64		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			0.83	0.68	0.81
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			56% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/22/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-11 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-11					Required CFM:	3000		Required FPM:	691		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.26 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		2,720			Velocity Average (FPM):		680		Actual Airflow (CFM):		2,951	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	693	729										6.3
2	657	641										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	1350	1370	0	0	0	0	0	0	0	0	0	

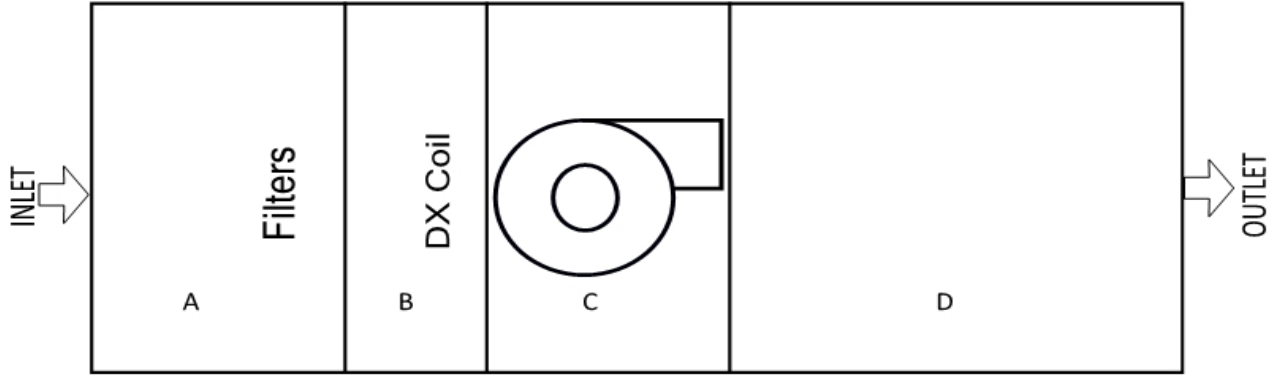
Comments: _____

Technician(s): Curtis Tunink Date: 1/22/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-11
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	3000
Measured Airflow (CFM)	2951



ESP:	0.38	TSP:	0.57
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.18	-0.21	-0.37	0.20							

Comments: _____

Technician(s): Curtis Tunink Date: 1/22/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-13						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			LENNOX		
MODEL #		LGM092U4E			LGM074U4EQ1G		
SERIAL #					5623A02588		
LOCATION / SERVICE					Pharmacy		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		2,400			2,484		
Total of Terminals (CFM)		2,400			2,484		
Return Airflow (CFM)		2,085			2,144		
Outside Airflow (CFM)		315			340		
Total Static Pressure (in. w.g.)					0.80		
External Static Pressure (in. w.g.)		0.15			0.65		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					N/A		
OA Damper Postion (% Open)					13%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					EBMPAPST / N/G		
Horse Power (HP)		3.75			1700 WATTS		
Brake Horse Power (BHP)					1.71		
Volts	Phase	480	3	491	492	493	
Full Load Amps		2.30			1.99	2.11	2.15
Corrected Nameplate Amps		-			2.24		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			N/G		
Current Overload Size/Setting		-			90% SPEED		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x20x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-13 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-13					Required CFM:	315		Required FPM:	116		
Duct Size:	28	X	14	WxH"	Area:	2.72		Static Pressure:	-0.43 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		250			Velocity Average (FPM):		125		Actual Airflow (CFM):		340	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	130	120										7.0
2												21.0
3												35.0
4												49.0
5												63.0
6												77.0
7												91.0
8												105.0
9												119.0
10												133.0
11												147.0
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	130	120	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-14						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM120U4E				LGM120U4EM1G	
SERIAL #						5622L00821	
LOCATION / SERVICE						Deli	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		4,000				3,847	
Total of Terminals (CFM)		4,000				3,847	
Return Airflow (CFM)		3,200				3,035	
Outside Airflow (CFM)		800				812	
Total Static Pressure (in. w.g.)						1.27	
External Static Pressure (in. w.g.)		0.15				1.04	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/a	
OA Damper Postion (% Open)						20%	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.26	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.64	1.41	1.54
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			76% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-14 - Outside Air											
DUCT TRAVERSE INFORMATION													
Duct Zone:		RTU-14				Required CFM:		800		Required FPM:		179	
Duct Size:		28	X	23	WxH"	Area:		4.47		Static Pressure:		-0.65 in.w.g.	
Instrument:		Velgrid		Corr Factor	1	Altitude:		5280 FT		Temperature:		n/a	
DUCT TRAVERSE MEASUREMENTS													
Velocity Total (FPM):		726			Velocity Average (FPM):			182			Actual Airflow (CFM):		812
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height	
1	184	191										5.8	
2	174	177										17.3	
3												28.8	
4												40.3	
5												51.8	
6												63.3	
7												74.8	
8												86.3	
9												97.8	
10												109.3	
11												120.8	
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches	
Totals	358	368	0	0	0	0	0	0	0	0	0		

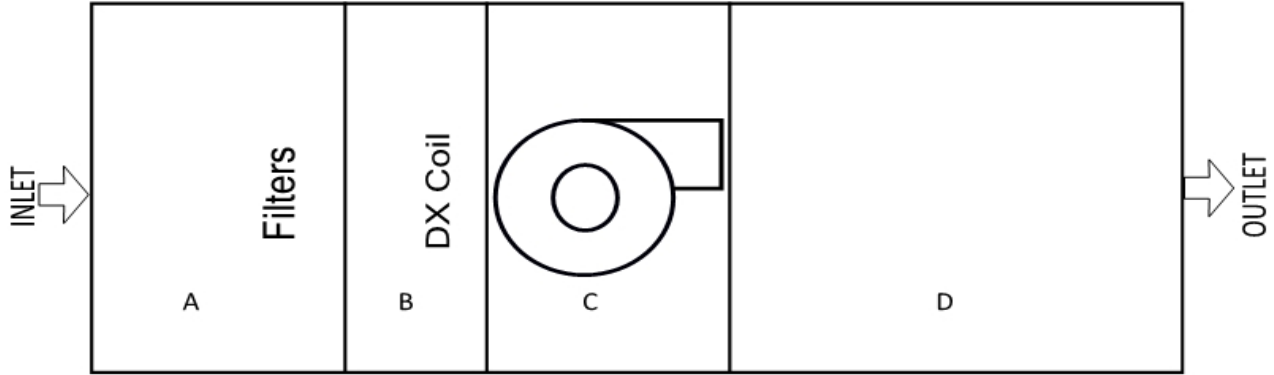
Comments: _____

Technician(s): Curtis Tunink Date: 1/22/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-14
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	4000
Measured Airflow (CFM)	3847



ESP:	1.04	TSP:	1.27
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.65	-0.76	-0.88	0.39							

Comments: _____

Technician(s): Curtis Tunink Date: 1/22/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-15						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM074U4E			LGM074U4EQ1G		
SERIAL #					5623A02606		
LOCATION / SERVICE					Bakery		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		2,400			2,382		
Total of Terminals (CFM)		2,400			2,382		
Return Airflow (CFM)		1,800			1,769		
Outside Airflow (CFM)		600			613		
Total Static Pressure (in. w.g.)					0.83		
External Static Pressure (in. w.g.)		0.15			0.69		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/a		
OA Damper Postion (% Open)					25%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		1.00			n/g		
Brake Horse Power (BHP)					1.23		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.58	1.44	1.46
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			82% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x20x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

NEBB CERTIFIED TESTING & BALANCING

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-15 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-15					Required CFM:	600		Required FPM:	262		
Duct Size:	30	X	11	WxH"	Area:	2.29		Static Pressure:	-0.51 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		535			Velocity Average (FPM):		268		Actual Airflow (CFM):		613	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	277	258										5.5
2												16.5
3												27.5
4												38.5
5												49.5
6												60.5
7												71.5
8												82.5
9												93.5
10												104.5
11												115.5
Distance Width	7.5	22.5	37.5	52.5	67.5	82.5	97.5	112.5	127.5	142.5	157.5	Inches
Totals	277	258	0	0	0	0	0	0	0	0	0	

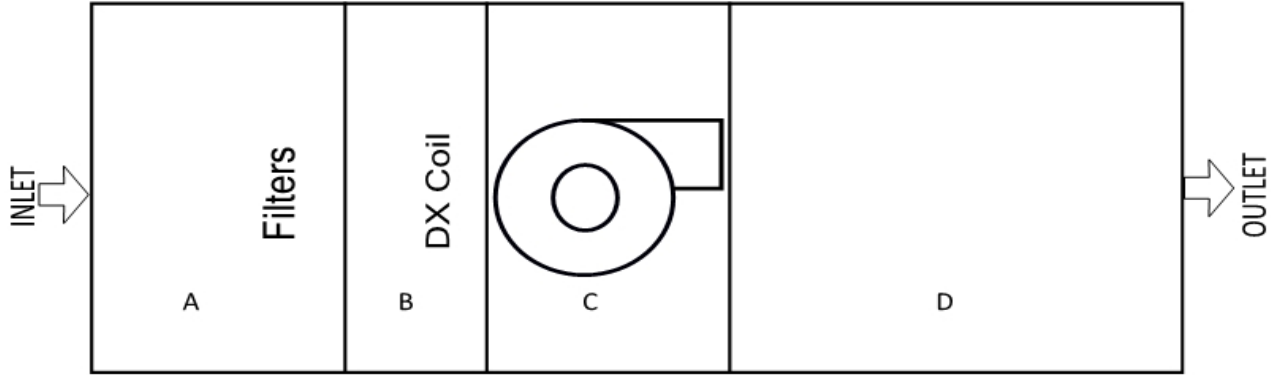
Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-15
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	2400
Measured Airflow (CFM)	2482



ESP:	0.69	TSP:	0.83
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.51	-0.54	-0.65	0.18							

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/24

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-16						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM120U4E				LGM120U4EM1G	
SERIAL #						5622L00823	
LOCATION / SERVICE						Back Room	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		4,000				4,134	
Total of Terminals (CFM)		4,000				4,134	
Return Airflow (CFM)		3,720				3,854	
Outside Airflow (CFM)		280				280	
Total Static Pressure (in. w.g.)						1.09	
External Static Pressure (in. w.g.)		0.15				0.83	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/a	
OA Damper Postion (% Open)						7%	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.21	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.67	1.45	1.30
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			76% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-16 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-16					Required CFM:	4000		Required FPM:	922		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.36 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		3,810			Velocity Average (FPM):		953		Actual Airflow (CFM):		4,134	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1184	1069										6.3
2	812	745										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	1996	1814	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-16 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-16					Required CFM:	280		Required FPM:	63		
Duct Size:	28	X	23	WxH"	Area:	4.47		Static Pressure:	-0.36 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		250			Velocity Average (FPM):		63		Actual Airflow (CFM):		280	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	84	64										5.8
2	52	50										17.3
3												28.8
4												40.3
5												51.8
6												63.3
7												74.8
8												86.3
9												97.8
10												109.3
11												120.8
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	136	114	0	0	0	0	0	0	0	0	0	

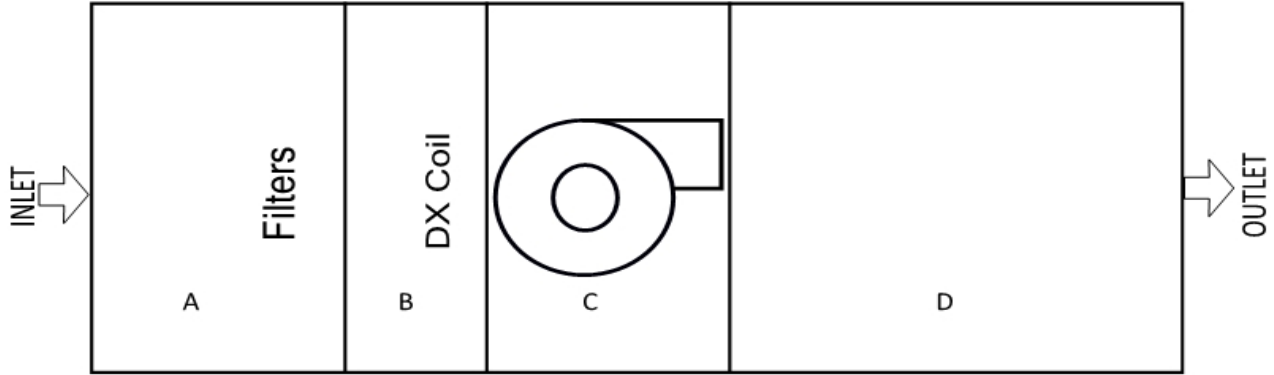
Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-16
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	4000
Measured Airflow (CFM)	4134



ESP:	0.83	TSP:	1.09
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.36	-0.50	-0.62	0.47							

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-17						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM120U4E				LGM120U4EM1G	
SERIAL #						5622L00824	
LOCATION / SERVICE						Back Room	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		4,000				4,120	
Total of Terminals (CFM)		4,000				4,120	
Return Airflow (CFM)		3,720				3,825	
Outside Airflow (CFM)		280				295	
Total Static Pressure (in. w.g.)						1.02	
External Static Pressure (in. w.g.)		0.15				0.73	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/g	
OA Damper Postion (% Open)						7%	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.23	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.66	1.47	1.35
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			76% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/20/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-17 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-17					Required CFM:	4000		Required FPM:	922		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.33 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		3,797			Velocity Average (FPM):		949		Actual Airflow (CFM):		4,120	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1025	1097										6.3
2	934	741										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	1959	1838	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-17 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-17					Required CFM:	280		Required FPM:	63		
Duct Size:	28	X	23	WxH"	Area:	4.47		Static Pressure:	-0.33 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		264			Velocity Average (FPM):		66		Actual Airflow (CFM):		295	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	62	75										5.8
2	60	67										17.3
3												28.8
4												40.3
5												51.8
6												63.3
7												74.8
8												86.3
9												97.8
10												109.3
11												120.8
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	122	142	0	0	0	0	0	0	0	0	0	

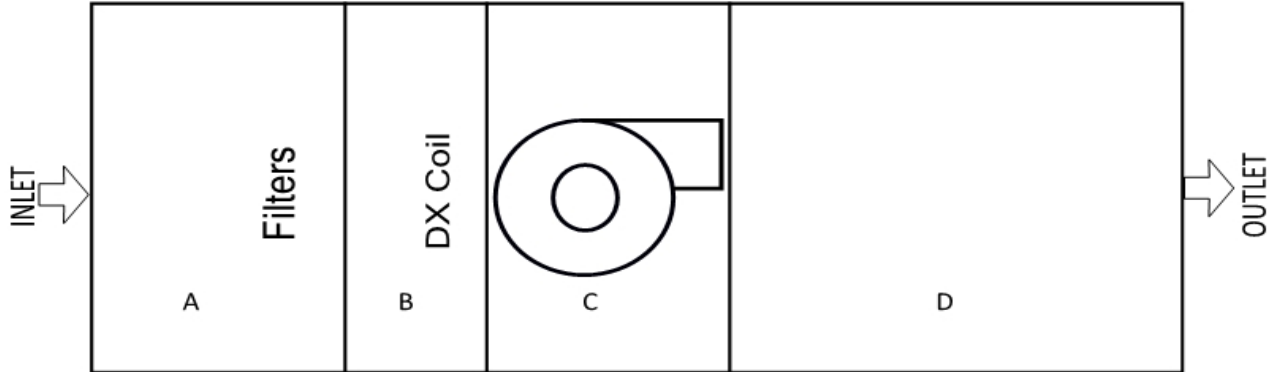
Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-17
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	4000
Measured Airflow (CFM)	4120



ESP: 0.73

TSP: 1.02

STATIC PRESSURE READINGS (in. w.g.)											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.33	-0.49	-0.62	0.40							

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/24

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-18						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM092U4E			LGM092U4ES1G		
SERIAL #					5622K06518		
LOCATION / SERVICE					Office Area		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		3,000			3,079		
Total of Terminals (CFM)		3,000			3,079		
Return Airflow (CFM)		2,495			2,543		
Outside Airflow (CFM)		505			536		
Total Static Pressure (in. w.g.)					0.81		
External Static Pressure (in. w.g.)		0.15			0.63		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					N/A		
OA Damper Postion (% Open)					10%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					EBMPAPST / N/G		
Horse Power (HP)		3.75			N/G		
Brake Horse Power (BHP)					0.42		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			0.52	0.51	0.50
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			N/G		
Current Overload Size/Setting		-			59% SPEED		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
MERV 8		(4) 20X25X2			-		

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

NEBB CERTIFIED TESTING & BALANCING

AIR OUTLET TEST REPORT

PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-18 - Supply											
OUTLET SUMMARY													
Area Served	FH / RVA / TRV	ATI #	Outlet Type	Size LxW /	AK	Design FPM	Design CFM	Initial	Initial	Final	Final	Final %	Notes
								FPM	CFM	FPM	CFM		
		1	cd		1.0	250	250		345		247	99%	
		2	cd		1.0	250	250		320		238	95%	
		3	cd		1.0	100	100		113		107	107%	
		4	cd		1.0	100	100		125		105	105%	
		5	cd		1.0	250	250		245		254	102%	
		6	cd		1.0	100	100		402		105	105%	
		7	cd		1.0	200	200		125		194	97%	
		8	cd		1.0	300	300		226		324	108%	
		9	cd		1.0	200	200		190		188	94%	
		10	cd		1.0	100	100		184		108	108%	
		11	cd		1.0	100	100		188		99	99%	
		12	cd		1.0	250	250		338		265	106%	
		13	cd		1.0	200	200		194		206	103%	
		14	cd		1.0	200	200		198		206	103%	
		15	cd		1.0	200	200		152		215	108%	
		16	cd		1.0	200	200		163		218	109%	
							3000		3508		3079	103%	
												-	
												-	
												-	
Return		1	rg		1.0	800	800		556		823	103%	
		2	rg		1.0	100	100		244		105	105%	
		3	rg		1.0	600	600		591		625	104%	
		4	rg		1.0	100	100		306		105	105%	
		5	rg		1.0	100	100		245		109	109%	
		6	rg		1.0	750	750		967		776	103%	
							2450		2909		2543	104%	
												-	
												-	
												-	
												-	
												-	
												-	
												-	

RVA = Rotating Vane Anemometer : FH = Flow Hood : TRV = Traverse

Comments: _____

Technician(s): Curtis Tunink Date: 1/16/2024

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-19						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM092U4E			LGM074U4EQ1G		
SERIAL #					5623A02612		
LOCATION / SERVICE					Curb Side Pick Up		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		2,400			2,040		
Total of Terminals (CFM)		2,400			2,040		
Return Airflow (CFM)		2,085			1,771		
Outside Airflow (CFM)		315			269		
Total Static Pressure (in. w.g.)					0.69		
External Static Pressure (in. w.g.)		0.15			0.60		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					N/A		
OA Damper Postion (% Open)					15%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					EBMPAPST / N/G		
Horse Power (HP)		3.75			1700 WATTS		
Brake Horse Power (BHP)					1.45		
Volts	Phase	480	3	491	492	493	
Full Load Amps		2.40			1.69	1.74	1.86
Corrected Nameplate Amps		-			2.34		
Motor Speed (RPM / Setting)					N/G		
Service Factor		-			N/G		
Current Overload Size/Setting		-			80% SPEED		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
MERV 8		(4) 20X20X2			-		

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-19										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-19					Required CFM:	315		Required FPM:	116		
Duct Size:	28	X	14	WxH"	Area:	2.72		Static Pressure:	-0.25 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		395			Velocity Average (FPM):		99		Actual Airflow (CFM):		269	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	114	100										3.5
2	85	96										10.5
3												17.5
4												24.5
5												31.5
6												38.5
7												45.5
8												52.5
9												59.5
10												66.5
11												73.5
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	199	196	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-20						
UNIT INFORMATION							
		DESIGN			ACTUAL		
MANUFACTURER		Lennox			Lennox		
MODEL #		LGM150U4E			LGM150U4EH1G		
SERIAL #					5622L00781		
LOCATION / SERVICE					Dock		
FAN INFORMATION							
		DESIGN			ACTUAL		
Total Airflow (CFM)		5,000			5,018		
Total of Terminals (CFM)		5,000			5,018		
Return Airflow (CFM)		4,300			4,304		
Outside Airflow (CFM)		700			714		
Total Static Pressure (in. w.g.)					1.11		
External Static Pressure (in. w.g.)		0.15			0.84		
Fan Speed (RPM / Setpoint)					D.D.		
VFD Speed (Hz)					n/g		
OA Damper Postion (% Open)					14%		
MOTOR INFORMATION							
		DESIGN / NAMEPLATE			ACTUAL		
Manufacturer / Frame - Nameplate					ebmpapst / n/g		
Horse Power (HP)		3.75			n/g		
Brake Horse Power (BHP)					1.24		
Volts	Phase	480	3	491	492	493	
Full Load Amps		4.30			1.52	1.45	1.55
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			77% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)			BANK #2 Style/Size(Qty)		
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/11/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-20 - Total Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-20					Required CFM:	5000		Required FPM:	1152		
Duct Size:	25	X	25	WxH"	Area:	4.34		Static Pressure:	-0.14 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		4,625			Velocity Average (FPM):		1,156		Actual Airflow (CFM):		5,018	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	1348	1359										6.3
2	1061	857										18.8
3												31.3
4												43.8
5												56.3
6												68.8
7												81.3
8												93.8
9												106.3
10												118.8
11												131.3
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches
Totals	2409	2216	0	0	0	0	0	0	0	0	0	

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-20 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-20					Required CFM:	700		Required FPM:	157		
Duct Size:	28	X	23	WxH"	Area:	4.47		Static Pressure:	-0.41 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		639			Velocity Average (FPM):		160		Actual Airflow (CFM):		714	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	174	159										5.8
2	145	161										17.3
3												28.8
4												40.3
5												51.8
6												63.3
7												74.8
8												86.3
9												97.8
10												109.3
11												120.8
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	319	320	0	0	0	0	0	0	0	0	0	

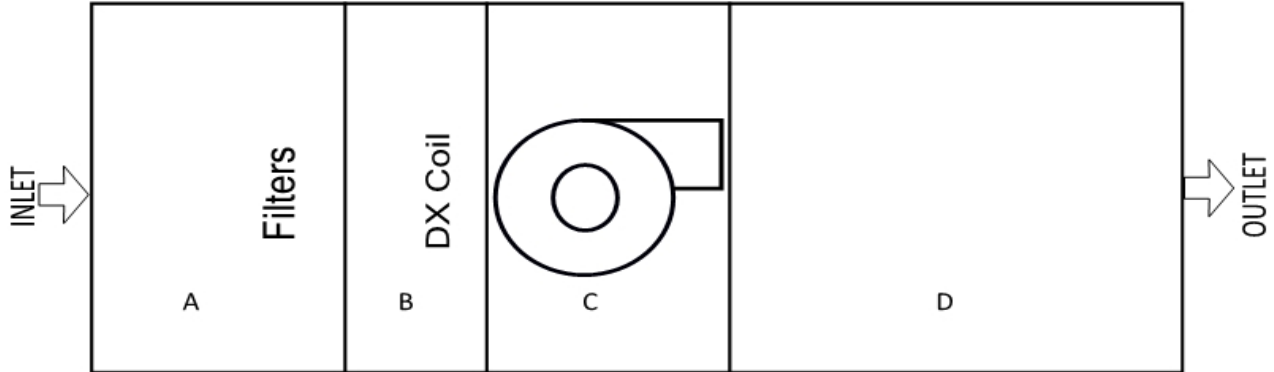
Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-20
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	5000
Measured Airflow (CFM)	5018



ESP:	0.84
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TSP:	1.11
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STATIC PRESSURE READINGS (in. w.g.)											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.41	-0.53	-0.68	0.43							

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/24

NEBB CERTIFIED TESTING & BALANCING

AIR APPARATUS TEST REPORT

PROJECT NAME:	1330 - King Soopers 147						
EQUIPMENT / SYSTEM:	RTU-21						
UNIT INFORMATION							
		DESIGN				ACTUAL	
MANUFACTURER		Lennox				Lennox	
MODEL #		LGM120U4E				LGM120U4EM1G	
SERIAL #						5622L00819	
LOCATION / SERVICE						Seating	
FAN INFORMATION							
		DESIGN				ACTUAL	
Total Airflow (CFM)		4,000				4,141	
Total of Terminals (CFM)		4,000				4,141	
Return Airflow (CFM)		3,320				3,449	
Outside Airflow (CFM)		680				692	
Total Static Pressure (in. w.g.)						0.96	
External Static Pressure (in. w.g.)		0.15				0.70	
Fan Speed (RPM / Setpoint)						D.D.	
VFD Speed (Hz)						n/a	
OA Damper Postion (% Open)						17%	
MOTOR INFORMATION							
		DESIGN / NAMEPLATE				ACTUAL	
Manufacturer / Frame - Nameplate						ebmpapst / n/g	
Horse Power (HP)		3.75				n/g	
Brake Horse Power (BHP)						1.22	
Volts	Phase	480		3	491	492	493
Full Load Amps		4.30			1.57	1.40	1.48
Corrected Nameplate Amps		-			4.20		
Motor Speed (RPM / Setting)					D.D.		
Service Factor		-			n/g		
Current Overload Size/Setting		-			76% Speed		
FILTER INFORMATION							
DESIGN (MERV Rating)		BANK #1 Style/Size(Qty)				BANK #2 Style/Size(Qty)	
Merv 8		(4) 20x25x2					

Technician(s): _____ Curtis Tunink _____ Date: _____ 1/20/2024 _____

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147											
EQUIPMENT / SYSTEM:		RTU-21 - Total Air											
DUCT TRAVERSE INFORMATION													
Duct Zone:		RTU-21				Required CFM:		4000		Required FPM:		922	
Duct Size:		25	X	25	WxH"	Area:		4.34		Static Pressure:		0.39 in.w.g.	
Instrument:		Velgrid		Corr Factor	1	Altitude:		5280 FT		Temperature:		n/a	
DUCT TRAVERSE MEASUREMENTS													
Velocity Total (FPM):		3,816			Velocity Average (FPM):			954			Actual Airflow (CFM):		4,141
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height	
1	1243	1041										6.3	
2	915	617										18.8	
3												31.3	
4												43.8	
5												56.3	
6												68.8	
7												81.3	
8												93.8	
9												106.3	
10												118.8	
11												131.3	
Distance Width	6.3	18.8	31.3	43.8	56.3	68.8	81.3	93.8	106.3	118.8	131.3	Inches	
Totals	2158	1658	0	0	0	0	0	0	0	0	0		

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		1330 - King Soopers 147										
EQUIPMENT / SYSTEM:		RTU-21 - Outside Air										
DUCT TRAVERSE INFORMATION												
Duct Zone:	RTU-21					Required CFM:	680		Required FPM:	152		
Duct Size:	28	X	23	WxH"	Area:	4.47		Static Pressure:	0.39 in.w.g.			
Instrument:	Velgrid		Corr Factor	1	Altitude:	5280 FT		Temperature:	n/a			
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		619			Velocity Average (FPM):		155		Actual Airflow (CFM):		692	
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	166	160										5.8
2	142	151										17.3
3												28.8
4												40.3
5												51.8
6												63.3
7												74.8
8												86.3
9												97.8
10												109.3
11												120.8
Distance Width	7.0	21.0	35.0	49.0	63.0	77.0	91.0	105.0	119.0	133.0	147.0	Inches
Totals	308	311	0	0	0	0	0	0	0	0	0	

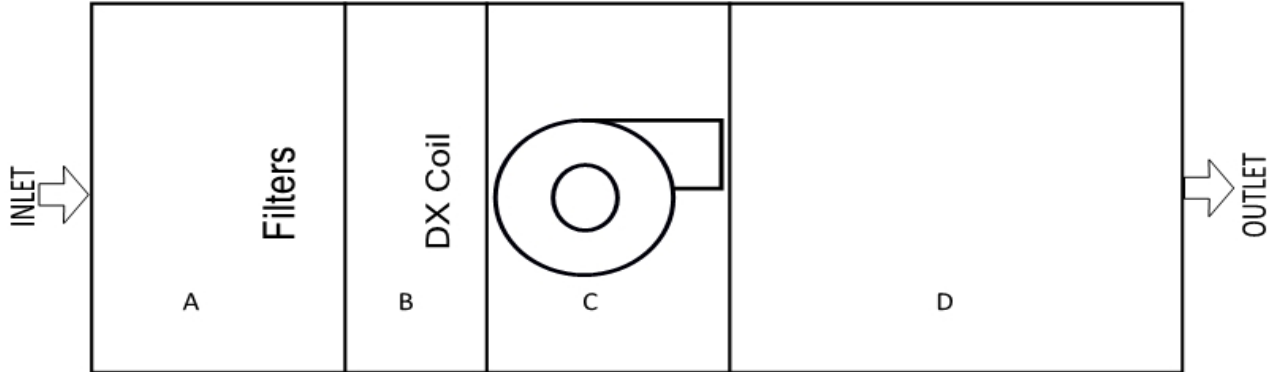
Comments: _____

Technician(s): Curtis Tunink Date: 1/20/2024

NEBB CERTIFIED TESTING & BALANCING

STATIC PRESSURE PROFILE

PROJECT NAME:	1330 - King Soopers 147
EQUIPMENT / SYSTEM:	RTU-21
SYSTEM INFORMATION	
Static Pressure Profile Setup:	FILTER, COIL, FAN
Design Airflow (CFM)	4000
Measured Airflow (CFM)	4141



ESP:	0.70
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TSP:	0.96
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<i>STATIC PRESSURE READINGS (in. w.g.)</i>											
Location	A	B	C	D	E	F	G	H	I	J	K
Supply	-0.39	-0.50	-0.64	0.31							

Comments: _____

Technician(s): Curtis Tunink Date: 1/20/24

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147					
EQUIPMENT / SYSTEM:	EF-CC					
UNIT INFORMATION						
		DESIGN			ACTUAL	
MANUFACTURER		Captive Aire			Captive Aire	
MODEL #		DR12HFA			DR12HFA	
SERIAL #					4050672	
LOCATION / SERVICE					Wash Bay	
FAN INFORMATION						
		DESIGN			ACTUAL	
Total Airflow (CFM)		600			579	
Total of Terminal Airflows (CFM)		600			579	
External Static Pressure		0.125 in.w.g.			0.08 in.w.g.	
SP Reading - Intake					-0.08 in.w.g.	
SP Reading - Discharge					ATM	
Fan Speed (RPM / Setpoint)					D.D. / Variable	
MOTOR INFORMATION						
		DESIGN / NAMEPLATE				ACTUAL
Manufacturer / Frame - Nameplate						HSSA / 42Y
Horse Power (HP)						0.16
Brake Horse Power (BHP)						0.11
Volts	Phase	115		1		121
Full Load Amps		1.90				0.92
Corrected Nameplate Amps		-				1.81
Motor Speed (RPM / Setting)						1,625
Service Factor		-				1.00
Current Overload Size/Setting		-				Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/18/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-ER				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DR30HFA			DR30HFA
SERIAL #					4050672
LOCATION / SERVICE					Electrical Room
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		750			760
Total of Terminal Airflows (CFM)		750			760
External Static Pressure		0.15 in.w.g.			0.10 in.w.g.
SP Reading - Intake					-0.1 in.w.g.
SP Reading - Discharge					ATM
Fan Speed (RPM / Setpoint)					D.D. / Variable
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					HSSA / 48Y
Horse Power (HP)		0.25			0.25
Brake Horse Power (BHP)					0.19
Volts	Phase	115	1		121
Full Load Amps		3.00			1.65
Corrected Nameplate Amps		-			2.85
Motor Speed (RPM / Setting)		1,261			1,625
Service Factor		-			1.00
Current Overload Size/Setting		-			Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/11/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147		
EQUIPMENT / SYSTEM:	EF-ER2		
UNIT INFORMATION			
		DESIGN	ACTUAL
MANUFACTURER		Captive Aire	Captive Aire
MODEL #		DR12HFA	DR12HFA
SERIAL #			4050672
LOCATION / SERVICE			Electrical Closet
FAN INFORMATION			
		DESIGN	ACTUAL
Total Airflow (CFM)		600	641
Total of Terminal Airflows (CFM)		600	641
External Static Pressure		0.125 in.w.g.	nac
SP Reading - Intake			nac
SP Reading - Discharge			atm
Fan Speed (RPM / Setpoint)			D.D. / Variable
MOTOR INFORMATION			
		DESIGN / NAMEPLATE	ACTUAL
Manufacturer / Frame - Nameplate			HSSA / 42Y
Horse Power (HP)		0.18	0.16
Brake Horse Power (BHP)			0.15
Volts	Phase	115	122
			1
Full Load Amps		1.90	1.28
Corrected Nameplate Amps		-	1.79
Motor Speed (RPM / Setting)		1,467	1,625
Service Factor		-	1.00
Current Overload Size/Setting		-	Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/11/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-ER1				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DR10HFA			DR10HFA
SERIAL #					4050672
LOCATION / SERVICE					Family RR
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		150			152
Total of Terminal Airflows (CFM)		150			152
External Static Pressure		0.13 in.w.g.			nac
SP Reading - Intake					nac
SP Reading - Discharge					atm
Fan Speed (RPM / Setpoint)					D.D. / Variable
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					HSSA / n/g
Horse Power (HP)					0.06
Brake Horse Power (BHP)					0.06
Volts	Phase	115	1		122
Full Load Amps		0.94			0.47
Corrected Nameplate Amps		-			0.89
Motor Speed (RPM / Setting)					1,550
Service Factor		-			n/g
Current Overload Size/Setting		-			Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147		
EQUIPMENT / SYSTEM:	EF-R2		
UNIT INFORMATION			
		DESIGN	ACTUAL
MANUFACTURER		Captive Aire	Captive Aire
MODEL #		DR30HFA	DR30HFA
SERIAL #			4050672
LOCATION / SERVICE			Customer RR
FAN INFORMATION			
		DESIGN	ACTUAL
Total Airflow (CFM)		850	817
Total of Terminal Airflows (CFM)		850	817
External Static Pressure		0.15 in.w.g.	nac
SP Reading - Intake			nac
SP Reading - Discharge			atm
Fan Speed (RPM / Setpoint)			D.D. / Variable
MOTOR INFORMATION			
		DESIGN / NAMEPLATE	ACTUAL
Manufacturer / Frame - Nameplate			HSSA / 48Y
Horse Power (HP)		0.25	0.25
Brake Horse Power (BHP)			0.24
Volts	Phase	115	122
			1
Full Load Amps		3.00	2.06
Corrected Nameplate Amps		-	2.83
Motor Speed (RPM / Setting)		1,393	1,625
Service Factor		-	1.00
Current Overload Size/Setting		-	Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/11/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-R3				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DR12HFA			DR10HFA
SERIAL #					4050672
LOCATION / SERVICE					Associate RR
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		300			305
Total of Terminal Airflows (CFM)		300			305
External Static Pressure		0.125 in.w.g.			nac
SP Reading - Intake					nac
SP Reading - Discharge					atm
Fan Speed (RPM / Setpoint)					D.D. / Variable
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					HSSA / n/g
Horse Power (HP)		0.18			0.06
Brake Horse Power (BHP)					0.06
Volts	Phase	115	1		122
Full Load Amps		0.94			0.55
Corrected Nameplate Amps		-			0.89
Motor Speed (RPM / Setting)		1,467			1,550
Service Factor		-			n/g
Current Overload Size/Setting		-			Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/11/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-S				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DR30HFA			DR30HFA
SERIAL #					4050672
LOCATION / SERVICE					Seafood
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		900			947
Total of Terminal Airflows (CFM)		900			947
External Static Pressure		0.125 in.w.g.			0.11 in.w.g.
SP Reading - Intake					-0.11 in.w.g.
SP Reading - Discharge					ATM
Fan Speed (RPM / Setpoint)					D.D. / Variable
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					HSSA / 48Y
Horse Power (HP)		0.25			0.25
Brake Horse Power (BHP)					0.27
Volts	Phase	115	1		121
Full Load Amps		4.00			2.32
Corrected Nameplate Amps		-			3.80
Motor Speed (RPM / Setting)		1,442			1,625
Service Factor		-			1.00
Current Overload Size/Setting		-			Variable

Comments: _____

Technician(s): Curtis Tunink Date: 1/11/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-G1				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DU50HFA			DU50HFA
SERIAL #					4050672
LOCATION / SERVICE					Bakery Hood
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		900			887
Total of Terminal Airflows (CFM)		900			887
External Static Pressure		0.125 in.w.g.			0.4 in.w.g.
SP Reading - Intake					0.4 in.w.g.
SP Reading - Discharge					ATM
Fan Speed (RPM / Setpoint)					D.D.
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					Nema / n/g
Horse Power (HP)					0.50
Brake Horse Power (BHP)					0.43
Volts	Phase	115	1		121
Full Load Amps		6.30			3.70
Corrected Nameplate Amps		-			5.99
Motor Speed (RPM / Setting)					1,800
Service Factor		-			n/g
Current Overload Size/Setting		-			65% SPEED

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

NEBB CERTIFIED TESTING & BALANCING

RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		King Soopers 147										
EQUIPMENT / SYSTEM:		EF-G1										
DUCT TRAVERSE INFORMATION												
Duct Zone:	TOTAL EXHAUST				Required CFM:	900		Required FPM:	307			
Duct Size:	65	X	6.5	WxH"	Area:	2.93		Static Pressure:	-0.4 in.w.g.			
Instrument:	VELGRID	Corr.	1	Altitude:	5280 FT		Temperature:	N/A				
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):	1,511			Velocity Average (FPM):	302			Actual Airflow (CFM):	887			
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	309	285	294	302	321							0
2												#VALUE!
3												#VALUE!
4												#VALUE!
5												#VALUE!
6												#VALUE!
7												#VALUE!
8												#VALUE!
9												#VALUE!
10												#VALUE!
11												#VALUE!
Distance Width	0	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	Inches
Totals	309	285	294	302	321	0	0	0	0	0	0	

Comments: _____

Technician(s): Tony Short Date: 1/19/2024

NEBB CERTIFIED TESTING & BALANCING

FAN TEST REPORT

PROJECT NAME:	1330 - King Soopers 147				
EQUIPMENT / SYSTEM:	EF-G2				
UNIT INFORMATION					
		DESIGN			ACTUAL
MANUFACTURER		Captive Aire			Captive Aire
MODEL #		DU50HFA			DU50HFA
SERIAL #					4050672
LOCATION / SERVICE					Bakery Hood
FAN INFORMATION					
		DESIGN			ACTUAL
Total Airflow (CFM)		900			914
Total of Terminal Airflows (CFM)		900			914
External Static Pressure		0.125 in.w.g.			0.42 in.w.g.
SP Reading - Intake					-0.42 in.w.g.
SP Reading - Discharge					ATM
Fan Speed (RPM / Setpoint)					D.D.
MOTOR INFORMATION					
		DESIGN / NAMEPLATE			ACTUAL
Manufacturer / Frame - Nameplate					Nema / n/g
Horse Power (HP)					0.50
Brake Horse Power (BHP)					0.40
Volts	Phase	115	1		121
Full Load Amps		6.30			3.42
Corrected Nameplate Amps		-			5.99
Motor Speed (RPM / Setting)					1,800
Service Factor		-			n/g
Current Overload Size/Setting		-			65% SPEED

Comments: _____

Technician(s): Curtis Tunink Date: 1/19/2024

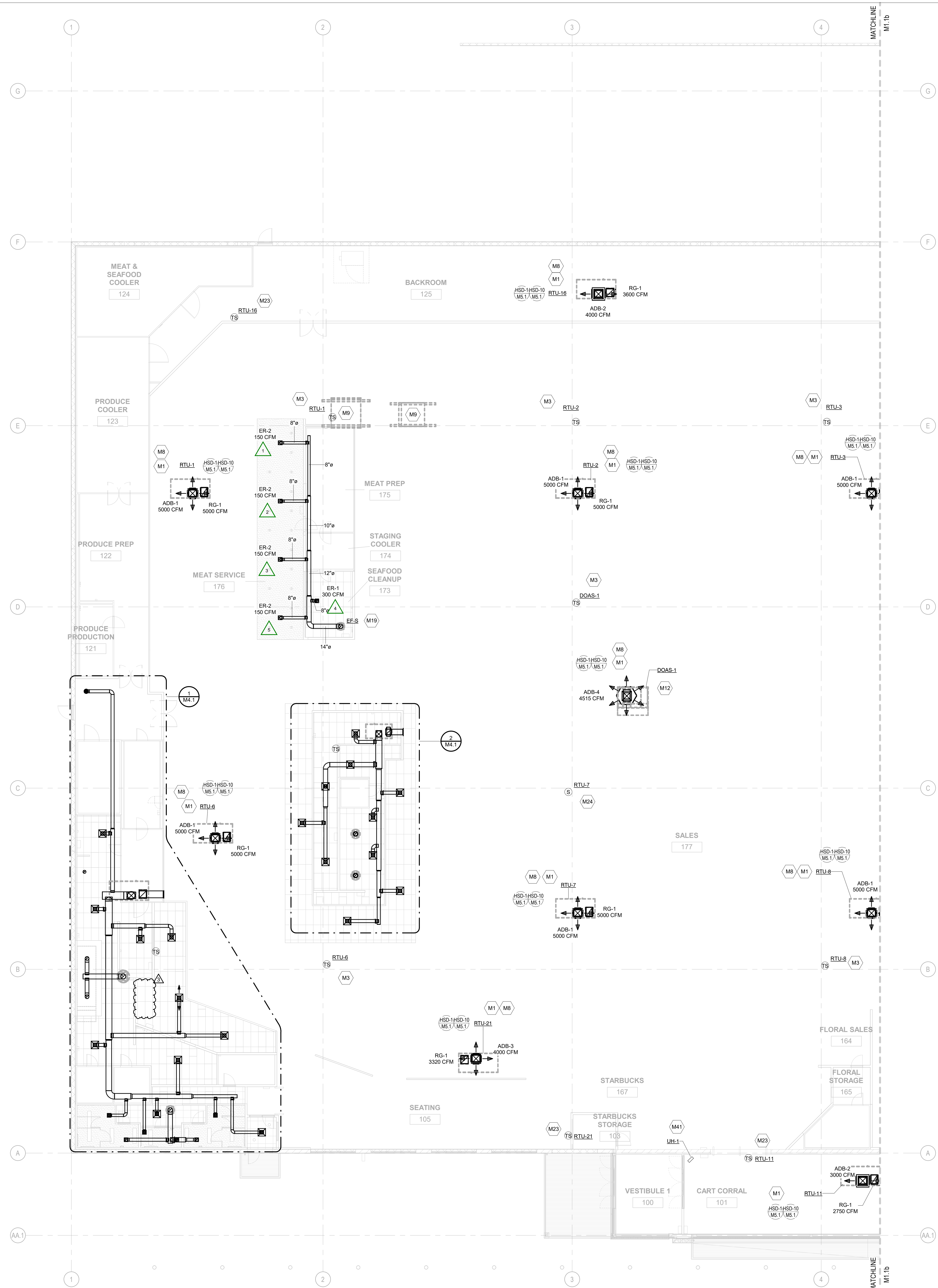
RECTANGLE DUCT TRAVERSE TEST REPORT

PROJECT NAME:		King Soopers 147										
EQUIPMENT / SYSTEM:		EF-G1										
DUCT TRAVERSE INFORMATION												
Duct Zone:	TOTAL EXHAUST				Required CFM:	900		Required FPM:	307			
Duct Size:	65	X	6.5	WxH"	Area:	2.93		Static Pressure:	-0.42 in.w.g.			
Instrument:	VELGRID	Corr.	1	Altitude:	5280 FT		Temperature:	N/A				
DUCT TRAVERSE MEASUREMENTS												
Velocity Total (FPM):		1,557		Velocity Average (FPM):		311		Actual Airflow (CFM):		914		
POS	1	2	3	4	5	6	7	8	9	10	11	Distance Height
1	313	296	307	316	325							0
2												#VALUE!
3												#VALUE!
4												#VALUE!
5												#VALUE!
6												#VALUE!
7												#VALUE!
8												#VALUE!
9												#VALUE!
10												#VALUE!
11												#VALUE!
Distance Width	0	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	Inches
Totals	313	296	307	316	325	0	0	0	0	0	0	

Comments: _____

Technician(s): Tony Short Date: 1/19/2024

NUMBER	KEYNOTE
M1	DROP BOX DIFFUSER SYSTEM. REFER TO DIFFUSER SCHEDULE FOR AES MODEL NUMBERS AND QUANTITIES. REFER TO PLANS FOR THROW DIRECTIONS AND CFM.
M3	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR 7'-6" AFF ON COLUMN. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M8	REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION.
M9	NEW ROOFTOP REFRIGERATION EQUIPMENT. REFER TO REFRIGERATION DRAWINGS FOR UNIT LOCATIONS AND PIPE ROUTINGS PRIOR TO ANY WORK.
M12	REFER TO DRAWINGS M5.8 AND M5.9 FOR DOAS UNIT INFORMATION.
M19	EXTEND FULL SIZE DUCTWORK (CURB SIZE) UP THROUGH ROOF AND SEAL OPENING AIRTIGHT. REFER TO DRAWINGS M5.3 AND M5.4 FOR EXHAUST FAN INFORMATION.
M23	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR A MINIMUM OF 4'-0" AFF ON WALL. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M24	COMBINATION RELATIVE HUMIDITY/TEMPERATURE SENSOR TO BE MOUNTED 7'-6" AFF AND, IN THE CASE OF RTU-5, USED FOR CYCLING ANTI-SWEAT CASE HEATERS AND HVAC HUMIDITY CONTROL.
M41	SUSPENDED ELECTRIC HEATER USING THREADED ROD TO UNISTRUT CHANNEL OR APPROVED EQUAL. MOUNT 12'-0" AFF TO BOTTOM OF UNIT. VERIFY LOCATION AND REQUIREMENTS WITH OWNER. REFER TO M6.1 FOR MORE INFORMATION.



WHERE SMOKE DETECTORS ARE INSTALLED MORE THAN 10 FEET ABOVE THE FINISHED FLOOR OR IN ARRANGEMENT WHERE THE DETECTORS ALARM OR SUPERVISORY INDICATOR IS NOT VISIBLE TO RESPONDING PERSONNEL, THE DETECTOR SHALL BE PROVIDED WITH REMOTE ALARM OR SUPERVISORY INDICATOR IN A LOCATION ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. PROVIDE AN LED INDICATOR LIGHT ON CEILING BENEATH EACH HVAC UNIT THAT IS EQUIPPED WITH A SMOKE DETECTOR WHEN ACTIVATION LIGHT IS NOT VISIBLE FROM BELOW.

1 HVAC PLAN - WEST
M1.1a SCALE: 3/32" = 1'-0"

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DATE	REVISION
1 10/25/2021	ADDENDUM NO. 2
2 12/01/2021	BULLETIN NO. 1
3 09/06/2023	BULLETIN NO. 10

PROJECT TITLE
**KING SOOPERS
KS147**

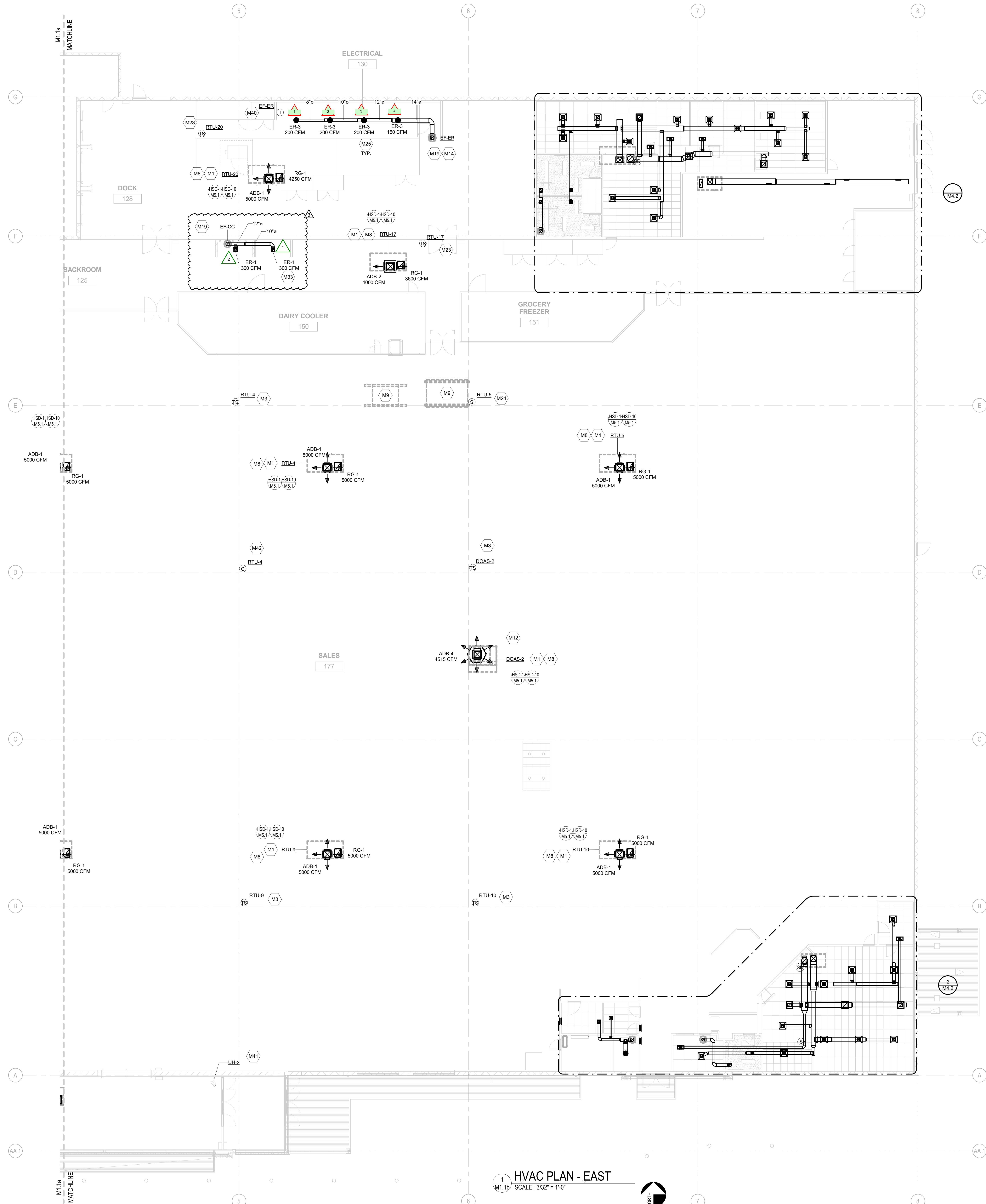
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COMMISSION NO. 519000
ISSUE DATE 10/04/2021

SHEET TITLE
HVAC PLAN - WEST

SHEET NO.
M1.1a

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NUMBER	KEYNOTE
M1	DROP BOX DIFFUSER SYSTEM. REFER TO DIFFUSER SCHEDULE FOR AES MODEL NUMBERS AND QUANTITIES. REFER TO PLANS FOR THROW DIRECTIONS AND CFM.
M3	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANELS. MOUNT SENSOR 7'-6" AFF ON COLUMN. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M8	REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION.
M9	NEW ROOFTOP REFRIGERATION EQUIPMENT. REFER TO REFRIGERATION DRAWINGS FOR UNIT LOCATIONS AND PIPE ROUTINGS PRIOR TO ANY WORK.
M12	REFER TO DRAWINGS M5.8 AND M5.9 FOR DOAS UNIT INFORMATION.
M14	DUCT UP TO OPENING THROUGH ROOF. H.C. TO PROVIDE REVERSE ACTING THERMOSTAT FOR FAN. FAN TO ENERGIZE WHEN SPACE TEMPERATURE EXCEEDS 80 DEG F.
M19	EXTEND FULL SIZE DUCTWORK (CJRB SIZE) UP THROUGH ROOF AND SEAL OPENING AIRTIGHT. REFER TO DRAWINGS M5.3 AND M5.4 FOR EXHAUST FAN INFORMATION.
M23	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR A MINIMUM OF 4'-0" AFF ON WALL. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M24	COMBINATION RELATIVE HUMIDITY/TEMPERATURE SENSOR TO BE MOUNTED 7'-6" AFF AND, IN THE CASE OF RTU-5, USED FOR CYCLING ANTI-SWEAT CASE HEATERS AND HVAC HUMIDITY CONTROL.
M25	DIFFUSER/GRILLE/REGISTER TO BE INSTALLED 10'-2" AFF.
M33	EXHAUST GRILLE TO BE INSTALLED 8'-0" AFF.
M40	THERMOSTAT TO BE MOUNTED AT 5'-0" AFF. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE. REFER TO EM DRAWINGS FOR MORE INFORMATION.
M41	SUSPENDED ELECTRIC HEATER USING THREADED ROD TO UNISTRUT CHANNEL OR APPROVED EQUAL. MOUNT 12'-0" AFF TO BOTTOM OF UNIT. VERIFY LOCATION AND REQUIREMENTS WITH OWNER. REFER TO M8.1 FOR MORE INFORMATION.
M42	CO2 SENSOR FOR SALES FLOOR TO BE MOUNTED 7'-6" AFF ON COLUMN.

WHERE SMOKE DETECTORS ARE INSTALLED MORE THAN 10 FEET ABOVE THE FINISHED FLOOR OR IN ARRANGEMENT WHERE THE DETECTOR'S ALARM OR SUPERVISORY INDICATOR IS NOT VISIBLE TO RESPONDING PERSONNEL, THE DETECTOR SHALL BE PROVIDED WITH REMOTE ALARM OR SUPERVISORY INDICATOR IN A LOCATION ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. PROVIDE AN LED INDICATOR LIGHT ON CEILING BENEATH EACH HVAC UNIT THAT IS EQUIPPED WITH A SMOKE DETECTOR WHEN ACTIVATION LIGHT IS NOT VISIBLE FROM BELOW.

1 HVAC PLAN - EAST
M1.1b SCALE: 3/32" = 1'-0"



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1 10/25/2021	ADDENDUM NO. 2
2 12/01/2021	BULLETIN NO. 1
3 09/04/2023	BULLETIN NO. 10

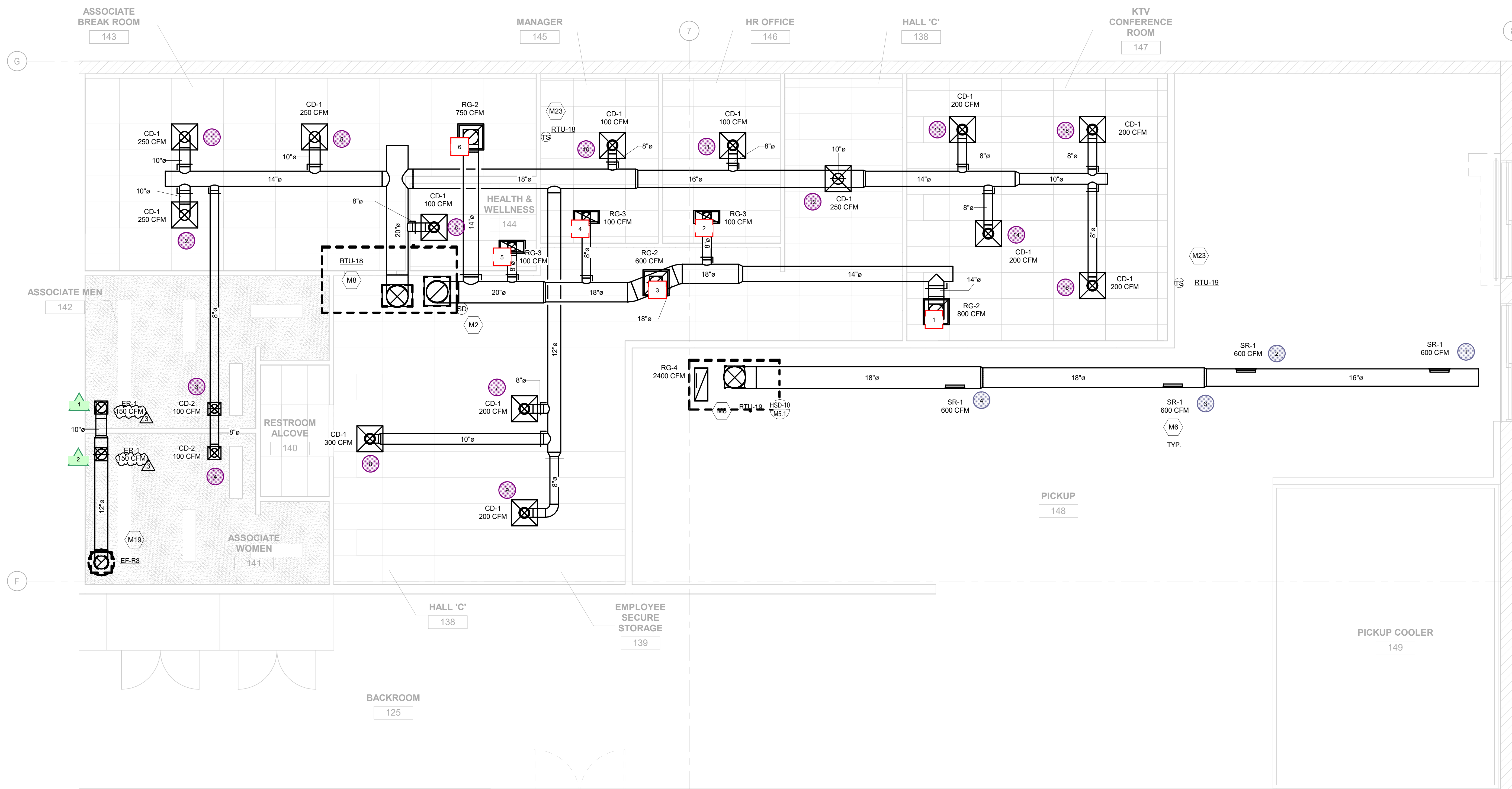
PROJECT TITLE
KING SOOPERS KS147

MERIDIAN + WOODMEN
FALCON, CO

COMMISSION NO. 519000
ISSUE DATE 10/04/2021
SHEET TITLE
HVAC PLAN - EAST

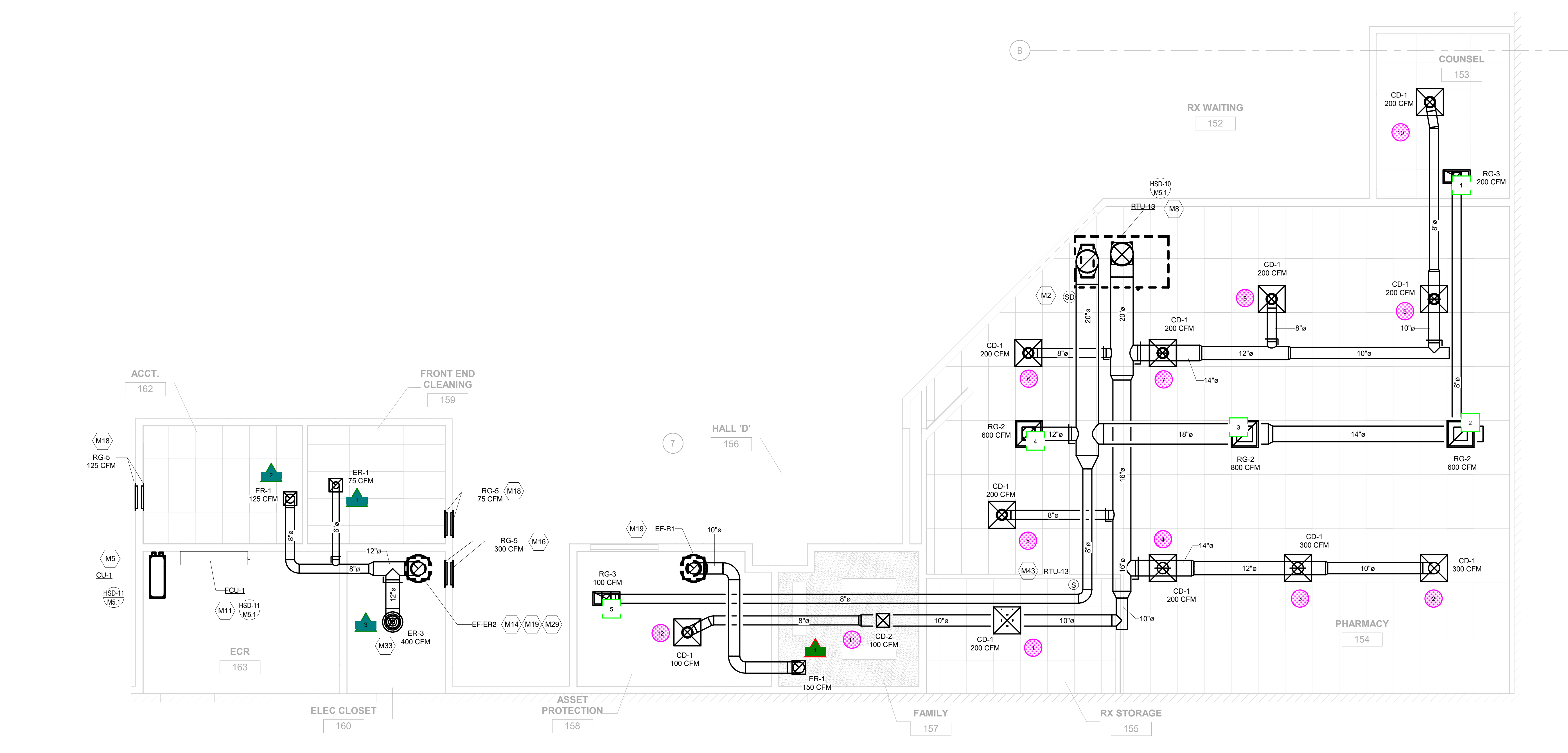
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M1.1b

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1 HVAC PLAN - BACK OFFICE AND PICKUP
SCALE: 1/4" = 1'-0"

NUMBER	KEYNOTE
M2	INSTALL SMOKE DETECTOR IN THE RETURN DUCTWORK DOWNSTREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS. INSTALL SAMPLING TUBES(S) AND DETECTOR HOUSING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. DETECTOR FAN SHUTDOWN WIRING AND CONTROLS BY OTHERS.
M5	NEW ROOF TOP OUTDOOR CONDENSING UNIT. PROVIDE SUPPORTS PER MANUFACTURER'S INSTALLATION PROCEDURES. COORDINATE LOCATION WITH OTHER ROOF TOP EQUIPMENT. FIELD VERIFY REFRIGERANT PIPE ROUTINGS PRIOR TO INSTALLATION.
M6	SIDEWALL DIFFUSERS TO BE INSTALLED AT 45 DEGREES DOWNWARD.
M8	REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOF TOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR RUST AND SEAL LOCATIONS AND DIMENSIONAL INFORMATION.
M11	INSTALL WALL-MOUNTED AIR CONDITIONING UNIT AT 7'-0" (BOTTOM OF UNIT) PER MANUFACTURER'S INSTALLATION PROCEDURES. EXTEND CONDENSATE PIPE AND DRAIN TO NEAREST DRAIN HUB. REFER TO PLUMBING DRAWINGS FOR LOCATION. COORDINATE POWER REQUIREMENTS WITH HG.
M14	DUCT UP TO OPENING THROUGH ROOF. I.C. TO PROVIDE REVERSE ACTING THERMOSTAT FOR FAN. FAN TO ENERGIZE WHEN SPACE TEMPERATURE EXCEEDS 80 DEGF.
M16	INSTALL TRANSFER GRILLE IN WALL 15' AFF. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT.
M18	INSTALL TRANSFER GRILLE AND NECESSARY DUCTWORK IN WALL AS LOW AS POSSIBLE. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT.
M19	EXTEND FULL SIZE DUCTWORK GORE SIZE UP THROUGH ROOF AND SEAL OPENING AIRTIGHT. REFER TO DRAWINGS M5.3 AND M5.4 FOR EXHAUST FAN INFORMATION.
M23	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR A MINIMUM OF 4'-0" AFF. ON WALL. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M29	DROP DUCT DOWN TO 12'-6" TO MINIMIZE VISIBILITY FROM THE SALES FLOOR.
M33	EXHAUST GRILLE TO BE INSTALLED 8'-0" AFF.
M43	PHARMACY TO RECEIVE COMBINATION RELATIVE HUMIDITY/TEMPERATURE SENSOR. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR A MINIMUM OF 4'-0" AFF. ON WALL. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.



2 HVAC PLAN - PHARMACY
SCALE: 1/4" = 1'-0"

WHERE SMOKE DETECTORS ARE INSTALLED MORE THAN 10 FEET ABOVE THE FINISHED FLOOR OR IN ARRANGEMENT WHERE THE DETECTOR'S ALARM OR SUPERVISORY INDICATOR IS NOT VISIBLE TO RESPONDING PERSONNEL, THE DETECTOR SHALL BE PROVIDED WITH REMOTE ALARM OR SUPERVISORY INDICATOR IN A LOCATION ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. PROVIDE AN LED INDICATOR LIGHT ON CEILING BENEATH EACH HVAC UNIT THAT IS EQUIPPED WITH A SMOKE DETECTOR WHEN ACTIVATION LIGHT IS NOT VISIBLE FROM BELOW.

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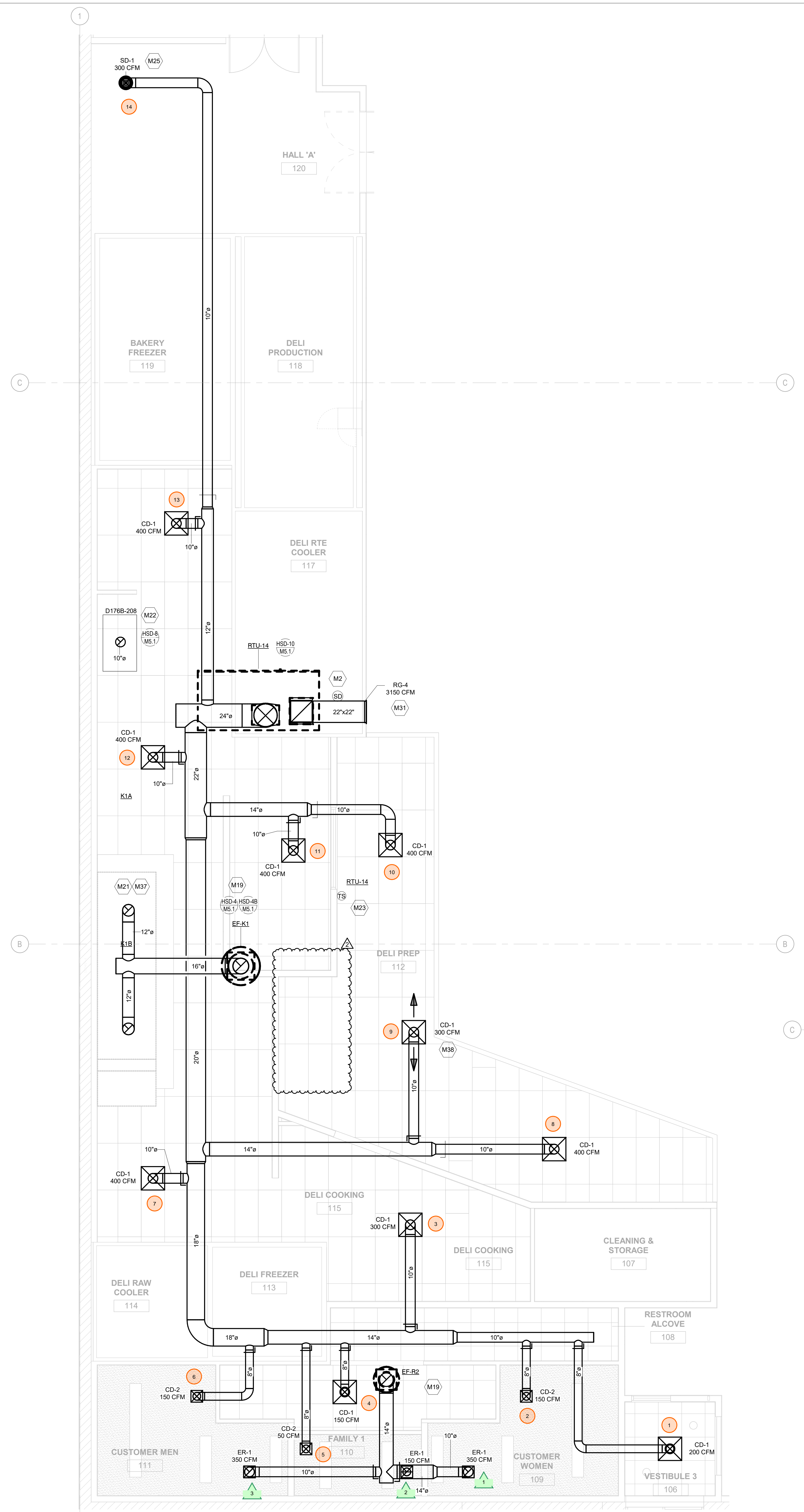
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SHEET TITLE
**HVAC ENLARGED
PLANS**

SHEET NO.
M4.2

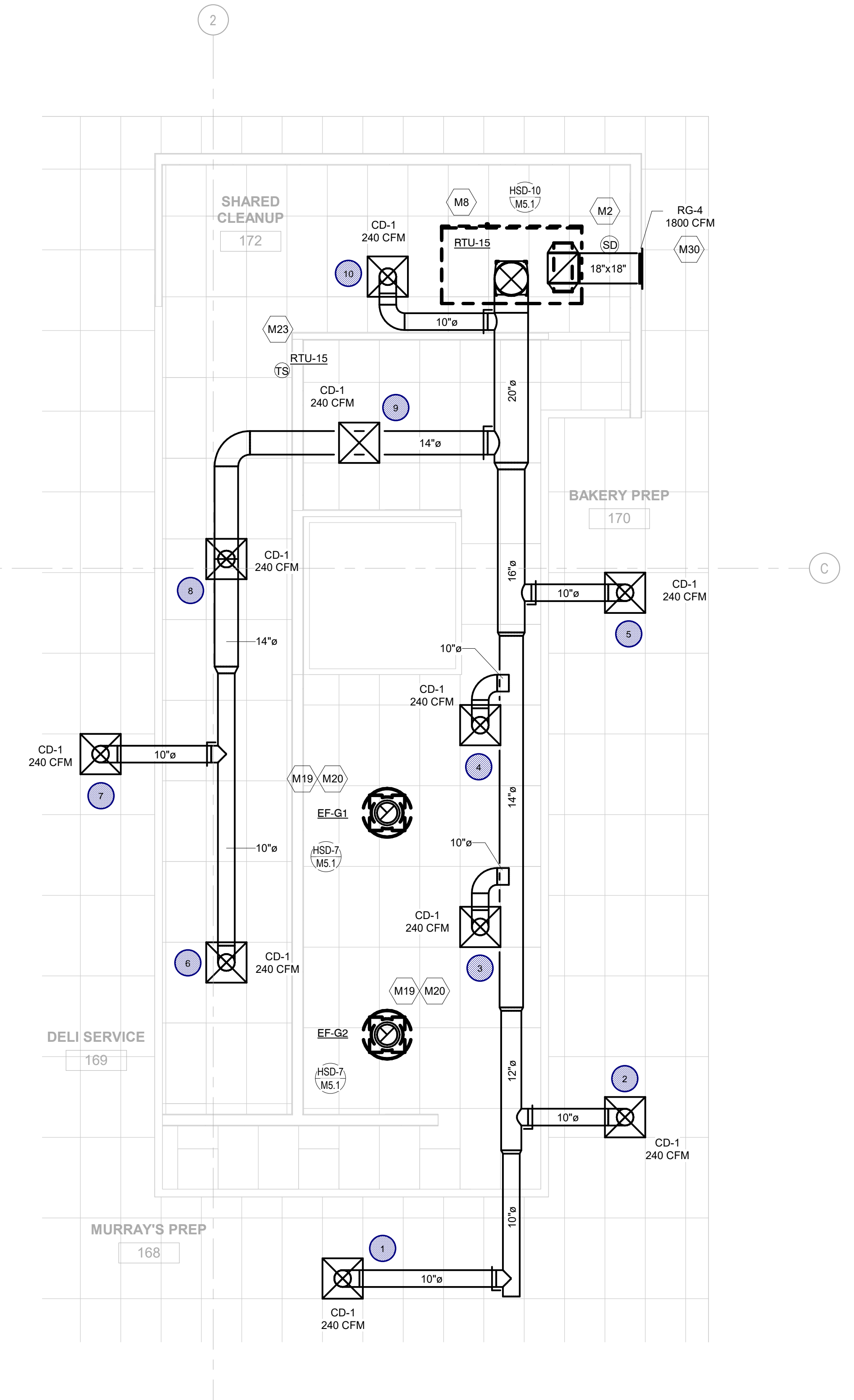
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1 HVAC PLAN - DELI M.T.O
M4.1 SCALE: 1/4" = 1'-0"



2 HVAC PLAN - DELI/BAKERY
M4.1 SCALE: 1/4" = 1'-0"

KEYNOTE LEGEND	
NUMBER	KEYNOTE
M2	INSTALL SMOKE DETECTOR IN THE RETURN DUCTWORK DOWNSTREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS. INSTALL SAMPLING TUBES(S) AND DETECTOR HOUSING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. DETECTOR FAN SHUTDOWN WIRING AND CONTROLS BY OTHERS.
M8	REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION.
M19	EXTEND FULL SIZE DUCTWORK (CURB SIZE) UP THROUGH ROOF AND SEAL OPENING AIRTIGHT. REFER TO DRAWINGS M5.3 AND M5.4 FOR EXHAUST FAN INFORMATION.
M20	VENT DUCT UP FROM OVEN RACK VENT COLLAR THROUGH ROOF. DUCTS ARE ONLY TO BE OFFSET ABOVE CEILING TIE. DUCTS ARE TO BE STRAIGHT AND VERTICAL WHEN VISIBLE TO SALES FLOOR.
M21	GREASE DUCT FROM EXHAUST HOOD TO OPENING THROUGH ROOF PER NFPA 96. H.C. TO INSTALL PROVIDED HOME KIT. DUCTWRAP TO BE INSTALLED THE ENTIRE LENGTH OF GREASE DUCT FROM CEILING PENETRATION TO FAN.
M22	INSTALL LW-50 VENT KIT INCLUDED WITH UNIT AND SUPPLIED BY HOBART. H.C. TO CONNECT STAINLESS STEEL DUCT TO VENT KIT OPENING THROUGH ROOF.
M23	TEMPERATURE SENSOR FOR ROOF MOUNTED RTU FURNISHED BY CONTROL PROVIDER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL. MOUNT SENSOR A MINIMUM OF 4'-0" AFF ON WALL. COORDINATE LOCATION WITH KROGER EQUIPMENT AND FURNISHINGS. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
M25	DIFFUSER/GRILLE/REGISTER TO BE INSTALLED 12" AFF.
M30	INSTALL TOP OF RETURN GRILLE 15' AFF. COORDINATE LOCATION WITH ARCHITECT AND WITH DECOR. LOCATION OF DECOR TAKES PRECEDENCE OVER LOCATION OF RETURN GRILLE.
M31	INSTALL TOP OF RETURN GRILLE 17' AFF. COORDINATE LOCATION WITH ARCHITECT AND WITH DECOR. LOCATION OF DECOR TAKES PRECEDENCE OVER LOCATION OF RETURN GRILLE.
M37	REMOTE MANUAL HOOD ANSUL PULL STATION TO BE LOCATED IN THE MAIN PATH OF EGRESS. A MINIMUM OF 10 FEET AND A MAXIMUM OF 20 FEET FROM THE HOOD. MOUNTING HEIGHT SHOULD BE 42" AFF. COORDINATE FINAL LOCATION WITH OWNER AND ARCHITECT. PROVIDE NAMEPLATE AT STATION WITH HOOD NUMBER AND LOCATION. REFER TO DETAIL SHEETS M5.5 AND M5.6 FOR ADDITIONAL INFORMATION.
M38	DIFFUSER AROUND HOOD TO BE 2-WAY DIFFUSER FACING AWAY FROM THE HOOD TO PREVENT INTERFERENCE WITH THE HOODS CONTAIN AND CAPTURE.

WHERE SMOKE DETECTORS ARE INSTALLED MORE THAN 10 FEET ABOVE THE FINISHED FLOOR OR IN ARRANGEMENT WHERE THE DETECTOR'S ALARM OR SUPERVISORY INDICATOR IS NOT VISIBLE TO RESPONDING PERSONNEL, THE DETECTOR SHALL BE PROVIDED WITH REMOTE ALARM OR SUPERVISORY INDICATOR IN A LOCATION ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. PROVIDE AN LED INDICATOR LIGHT ON CEILING BENEATH EACH HVAC UNIT THAT IS EQUIPPED WITH A SMOKE DETECTOR WHEN ACTIVATION LIGHT IS NOT VISIBLE FROM BELOW.

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HVAC ENLARGED PLANS

SHEET NO.
M4.1

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