



**INVITATION FOR BIDS (IFB) #26-002
HVAC EQUIPMENT & SERVICES AT THE
PINELLAS HEIGHTS SENIOR APARTMENTS**

ADDENDUM NUMBER ONE (1)

April 24, 2026

A. INSTRUCTIONS:

1. This addendum shall be included as part of the original Invitation for Bids documents and the scope of work required therein.
2. Receipt of this addendum must be acknowledged by return of the fully executed "Acknowledgement of Receipt of Documents," attached hereto, and must be submitted with the bid.

Any bids not including the "Acknowledgement of Receipt of Documents" form may be considered non-responsive.

B. ADDITION OF ATTACHED DOCUMENTS:

- **PCHA Phase 1 Revision 1 narrative**
- **PCHA Phase 1 MEP Plans v.8 Revision 1**

Note: the attached MEP Plans v.8 is in the process of being submitted to the city and we do not anticipate any issues.

END OF ADDENDUM #1

**INVITATION FOR BIDS (IFB) #26-002
HVAC EQUIPMENT & SERVICES AT THE
PINELLAS HEIGHTS SENIOR APARTMENTS**

ADDENDUM NUMBER ONE (1)

April 24, 2026

ACKNOWLEDGEMENT OF RECEIPT OF DOCUMENTS

All prospective firms for the above-referenced solicitation must sign this acknowledgement form as verification of receipt of the following documents:

- Addendum #1

NOTE: Each prospective bidder must submit this form with the submission package. Any bids not including this form may be considered non-responsive.

Acknowledged by:

_____ **Company Name**

_____ **Printed Name of Authorized Company Official**

_____ **Signature of Authorized Company Official**

Date: _____

PCHA: Phase 1 Revision 1 Narrative for City of Largo

The need for submission of this revision is due to a discrepancy between the latest version of stamped mechanical plans and the version that was submitted for permitting. There are two changed items in this plan set compared with that approved by City of Largo: 1. Additional work scope to move CU-A-2-1 and 2. Change of OU-A-3 model. The details of the specific changes throughout the plan set are below.

1. Additional Work Scope- CU-A-2-1 Move

The outdoor units CU-A-3-2 and CU-A-2-1 were originally mis-installed. Due to resizing, CU-A-3-2 is no longer needed but CU-A-2-1 will need to be pumped down, moved and recharged.

Item	Plan Change Log Page
Outdoor Unit Change	M000 Sheet Key, Schedule [M000A], Sheet M105, M106

2. Outdoor Unit [OU-A-3] Equipment Change from 408 V to 208/230V

The log of revisions as indicated by red cloud markings in the plan set can be found below.

Change of OU-1 model:

Was Model #	Latest Model #	Plan Change Log Page
REYA168AAYDB 406V/60Hz/3φ	REYA168AATJA 208/230V/60Hz/3φ	M000 Sheet Key, Schedule [M000A&B], Schedule [M003A], Piping Diagram M004, Schedule [M004A]

Mechanical Sheet Key

1. [M000] Cover Sheet-
2. [M001] General Notes & Code References
3. [M002] Loads and HVAC Equipment Summary
4. [M003] Indoor Unit Schedule
5. [M004] Piping Diagrams & Materials Table
6. [M101] 1st Floor Mechanical Plan
7. [M102] 2nd Floor Mechanical Plan
8. [M103] 3rd Floor Mechanical Plan
9. [M104] 4th Floor Mechanical Plan
10. [M105] Roof Mechanical Outdoor Unit Move
11. [M106] Roof Mechanical Plan
12. [M200] Dehumidifier Diagram
13. [M201] Dehumidifier Notes

PCHA Phase 1 Workscope Summary				
Area	Existing	New	Qty	Description
Roof Building Section A Center	CU-A-2-1	NA	NA	System CU-A-2-1 must be moved. This requires system to be pumped down, moved and recharged. See M105.
Roof Building Section A Center	CU-A-3	OU-A-3	1	Replace existing 20 Ton VRV Outdoor Unit with 14 Ton R32 VRV Heat Recovery System. See M002 and M106.
Apartments [117, 118, 132, 133, 222, 223, 237, 238, 322, 323, 337, 338, 422, 423, 437, 438]	FCU	IDU [09/12]	16	Replace existing 16 1.5 and 2 Ton FCU with 0.75 and 1 Ton IDU's. Use existing duct work. See M002 and M101-106.
	T	T	16	Replace existing FCU controllers with new compatible Daikin controllers. See M002 and M101-106.
Mechanical Closets with Split system AHU's serving corridors.	NA	D-1	9	Install dehumidifiers in mechanical closets. Integrate according to installation diagram. See M000B and M200-201.
	NA	DC-1	9	Humidistat controlling dehumidifier ON/OFF installed in return duct upstream of OA intake. See M000B and M200-201.
	MD	MD-1	9	Mechanical Damper set to open as necessary to maintain equivalent of design cfm [250]. See M000B and M200-201.
	NA	DH	9	Humidistat to control Dehumidifier to design setpoint. See M000B and M200-201.
Apartment Bathrooms	EF-1	EF-1	16	Install new bathroom exhaust fans. Seal duct connections. Repair outdoor intakes as necessary. See M000B and M101-106.
Stairwells	EF-2	NA	4	Decommission and Seal Stairwell Exhaust Fans. See M400.
Elevator Hoistways	48"x12" OA Louvre	NA	3	Seal Hoistway Open Louvres. See M106 and M500.

Schedule [M000A]

HVAC Equipment Summary							
Mark	Type	Manuf.	Qty	Model	Size	Electrical	CFM @ ESP
IDU-1	Compact Ducted	Daikin	8	FXSA09AAVJU	0.75 Ton	208/230V/60Hz/1φ	648 @ 0.60 " w.c.
IDU-2	Compact Ducted	Daikin	8	FXSA12AAVJU	1 Ton	208/230V/60Hz/1φ	828 @ 0.60 " w.c.
T	IDU Controller	Daikin	16	BRC1NRV71	-	-	-
BS-1	Branch Selector	Daikin	4	BSF4A64AAVJ	4 port	208/230V/60Hz/1φ	-
OU-A-3	Heat Recovery VRV	Daikin	1	REYA168AATJA	14 Tons	208/230V/60Hz/3φ	-
EF-1	Exhaust Fan	Panasonic	16	FV-20VE01	110 cfm	120V/60Hz/1φ	100 cfm @ 0.4" w.c.
EFC-1	Fan Controller	Panasonic	16	FV-WCCS1_w	-	-	-
MD-1	Mechanical Damper	Santa Fe	9	4042960	-	24V/60Hz/1φ	-
D-1	Dehumidifier	Santa Fe	9	V155 Ultra	155 ppd	115V/60Hz/1φ	360 @ 0.4" w.c.
DC-1	Dehumidifier Controller	Santa Fe	9	4042960	-	-	-
DH	Remote Humidistat	Santa Fe	9	TS-2145	-	24V	-

Schedule [M000B]



MO00-MECHANICAL SHEET AND WORKSCOPE



Blue Rabbit Consulting, Inc
Center Hill, FL
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Anthony Amadio,
PE # 79955

Pinellas Heights Senior Apartments
11411 Ulmerton Rd
Largo, FL 33788

Issue Date:
1. 12/19/2025
2. 01/16/2026
3. 04/23/2026

M000
Mechanical
Cover Sheet

GENERAL NOTES

- | | | |
|--|--|---|
| <p>1. All work shown or implied in these documents shall be performed by properly licensed HVAC, electrical, plumbing, and general contractors as required by Florida law and Pinellas County permitting.</p> <p>2. Life-safety systems, hoist way ventilation, stairwell exhaust, fire/smoke dampers, fire-rated shaft penetrations, and any work affecting fire barriers or egress shall be reviewed and executed by a licensed fire protection contractor. No contractor shall modify existing life-safety systems without the Authority Having Jurisdiction (AHJ)'s approval.</p> <p>3. Contractors are fully responsible for verifying all field conditions prior to installation, including but not limited to:
 – Existing shaft pressurization or smoke-control components
 – Existing stairwell ventilation fans or louvers
 – Existing elevator hoist way vents (passive or mechanical)
 – Any penetrations through rated walls, floors, or shafts
 – Existing passive return pathways between bedrooms and living areas
 – Existing outdoor air routing and fresh-air quantities
 – Actual electrical serviceability for added equipment</p> <p>4. These plans are based on the original construction drawings, site observations, and available as-built information. The building was constructed under prior editions of the Florida Building Code (2010). It is the contractor's responsibility to verify all dimensions, locations, and code conditions prior to performing any work.</p> <p>5. No contractor shall assume that existing systems meet current code. Any conflicts between existing conditions and current code</p> | <p>shall be brought to the Engineer and Owner for resolution prior to construction.</p> <p>6. Any work involving penetrations into fire-rated hoist ways, stairwells, or rated demising walls shall be restored to equal or greater fire-resistance rating using listed assemblies and materials.</p> <p>7. Elevator hoist way ventilation shown on these documents must be coordinated with the elevator inspector and AHJ. If a vent is required to remain functional by code, the contractor shall install appropriate fire/smoke dampers or mechanical venting equipment per code.</p> <p>8. Mechanical contractors shall verify equipment selections, clearances, condensate routing, refrigerant pipe sizing, and branch configuration prior to installation. Any deviations based on field conditions must be submitted for review before proceeding.</p> <p>9. Equipment shown in these documents may vary from the original installed systems. The contractor shall verify all existing VRF equipment sizes, line-set routing, branch distribution, passive return paths, and confirm they match the mechanical design intent.</p> <p>10. Oversized or non-functional existing equipment (identified during investigation) must be evaluated during construction. Any units or components found to be inoperable or not meeting current ventilation or dehumidification requirements shall be reported immediately.</p> <p>11. All refrigerant work shall be performed using proper evacuation,</p> | <p>nitrogen purging, pressure testing, and refrigerant handling procedures. All work must comply with applicable EPA and manufacturer requirements.</p> <p>12. Ductwork must be sealed and insulated to SMACNA standards. All new penetrations must be sealed airtight and restored to rated construction where applicable.</p> <p>13. Contractors must coordinate fully with electrical for disconnect placement, new circuits, GFCI requirements, and labeling. All electrical work must comply with the NEC and local amendments.</p> <p>14. Mechanical contractors are responsible for ensuring minimum ventilation rates in these plans are compliance with Florida Mechanical Code and specified in these are met once the system is installed, including proper outdoor air damper settings and damper function testing.</p> <p>15. Prior to turnover, contractors shall provide functional testing of:
 – Dehumidification systems
 – Exhaust changes or removals
 – Any air-sealing or hoistway ventilation modifications
 – VRF indoor unit performance
 – Bedroom passive return pathways (if modified)
 – Fresh air delivery and measured ventilation CFM</p> <p>16. The contractor is responsible for notifying the Engineer of any conflicts between these documents and existing field conditions before work begins or continues.</p> |
|--|--|---|

CODE REFERENCE TABLE

2023	FLORIDA MECHANICAL CODE
2023	FLORIDA BUILDING CODE
2023	FLORIDA EXISTING BUILDING CODE
2023	FLORIDA ENERGY CONSERVATION CODE
2023	FLORIDA PLUMBING CODE
2023	FLORIDA FUEL GAS CODE
2023	NFPA NATIONAL ELECTRICAL CODE
2022	NFPA 72 NATIONAL FIRE ALARM & SIGNALING CODE
2024	NFPA 90A/90B HVAC SYSTEMS INSTALLATION STD

Table [M001A]

PROJECT NOTES:

1. This is Phase 1 of a multiphase mechanical system retrofit involving (16) apartments.
2. Return grille 2", MERV 11, filter to be installed in all 16 units.
3. Duct replacement is not within scope.
4. Bathroom exhaust fans will be replaced.
5. Also included, is the addition of dehumidifiers to the (9) central corridor serving AHU's.



MOO1- GENERAL NOTES



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Senior Apartments**

11411 Ulmerton Rd
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M001

Mechanical
Cover Sheet

CALCULATION NOTES:

1. Heating and Cooling Loads calculated in accordance with ASHRAE Std 183 (RTS) method.
2. Ventilation rates calculated in accordance with Florida Mechanical Code 2023.

Loads Summary					
Apartment #	IDU Mark	Total (Btu/h)	Sensible (Btu/h)	Heating (Btu/h)	Airflow (cfm)
117	IDU-1	7,176	4,765	2,710	230-281
118	IDU-1	7,172	4,761	2,710	230-281
132	IDU-2	8,790	6,659	3,680	230-318
133	IDU-2	8,473	6,342	2,710	230-318
222	IDU-1	6,972	5,034	2,214	230-281
223	IDU-1	6,755	4,344	2,214	230-281
237	IDU-2	8,396	6,265	2,866	230-318
238	IDU-2	8,233	6,103	2,214	230-318
322	IDU-1	6,972	5,034	2,214	230-281
323	IDU-1	6,761	4,351	2,214	230-281
337	IDU-2	8,396	6,265	2,866	230-318
338	IDU-2	8,233	6,103	2,214	230-318
422	IDU-1	7,269	5,331	2,707	230-281
423	IDU-1	7,108	4,698	2,706	230-281
437	IDU-2	8,694	6,563	3,243	230-318
438	IDU-2	8,531	6,400	2,707	230-318

Table [M002A]

2023 FL MECHANICAL VENTILATION TABLE 403.3.1.1					
Space	Area (SF)	0.35ACH cfm	# People	CFM/Person	CFM
1-Bed Apartment	600	28	2	15	30
Bathroom	-	-	-	-	50 cfm Ex/fix
Minimum Continuous Ventilation [CFM]					30
Design for 100 Bath Exhaust timer set at runtime (30/100)x60 [min/hr]					18

Table [M002B]

Central AHU/ Dehu/ Ventilation Summary					
Mechanical Room	AHU Mark	Dehu Capacity (ppd)	Dehu Airflow (cfm)	OA Airflow (cfm)	Notes
1st Flr B	AHU-5	155	360	270	1,2,3,4
1st Flr Storage	AHU-6	155	360	600	1,2,3,4
1st Flr C	AHU-7	155	360	270	1,2,3,4
2nd Flr B	AHU-8	155	360	270	1,2,3,4
2nd Flr C	AHU-9	155	360	270	1,2,3,4
3rd Flr B	AHU-10	155	360	270	1,2,3,4
3rd Flr C	AHU-11	155	360	270	1,2,3,4
4th Flr B	AHU-12	155	360	270	1,2,3,4
4th Flr C	AHU-13	155	360	270	1,2,3,4

Notes:

1. Outdoor Air Flowrate must be field verified for each AHU.
2. Use Existing 8" Outdoor Air Duct.
3. Install New Mechanized Damper and Adjust to Match Design OA cfm.
4. Install Humidistat in Hallway and Wire According to Wiring Diagram.

Table [M002C]



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M002

HVAC
Equipment Load
and Ventilation
Summary



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MO03
VRV Equipment Schedules

VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE																			
TAG: ROOM	BASIS OF DESIGN (DAIKIN)	NOMINAL TONNAGE	DESCRIPTION	COOLING CAPACITY		HEATING CAPACITY		REFRIGERANT CHARGE		CONNECTION RATIO (%)	ELECTRICAL VOLTAGE-PHASE	DIMENSIONS							
				Ton	AMBIENT DESIGN	Ton	AMBIENT DESIGN	Factory Charge	Add Refrigerant			MIN mod #1	total	MAX mod #1	total	(WxHxD)	WEIGHT		
CU-A3	REYA168AATJA	14	Air cooled heat recovery	11.5	95.0	14.5	42.0 / 40.2	25.8	28.2	102.4	208V - 230V 3ph	60.2	60.2	70.0	70.0	48.8 x 65.4 x 30.1	800.3		

Schedule [M003A]

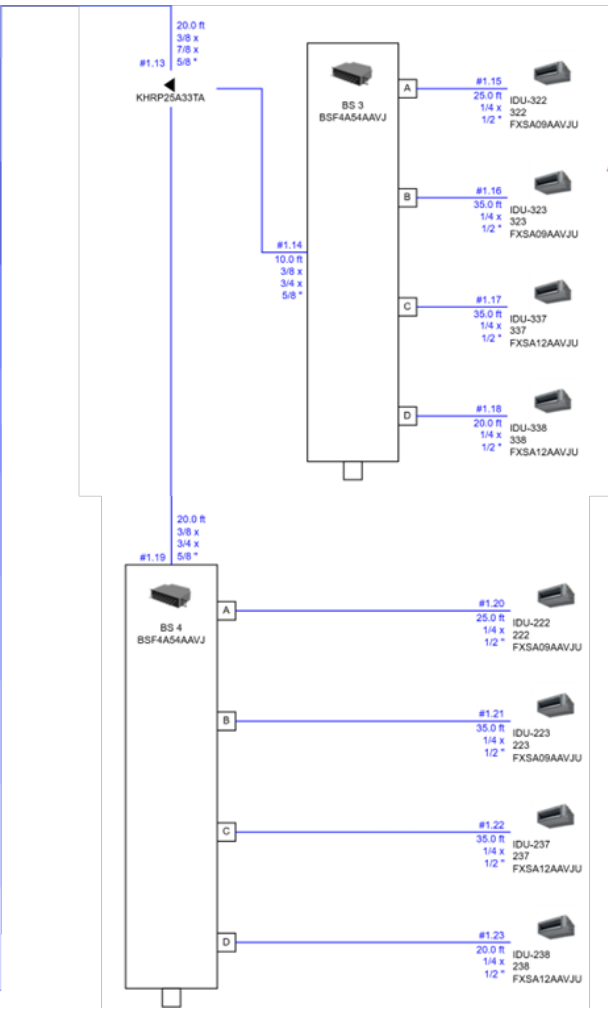
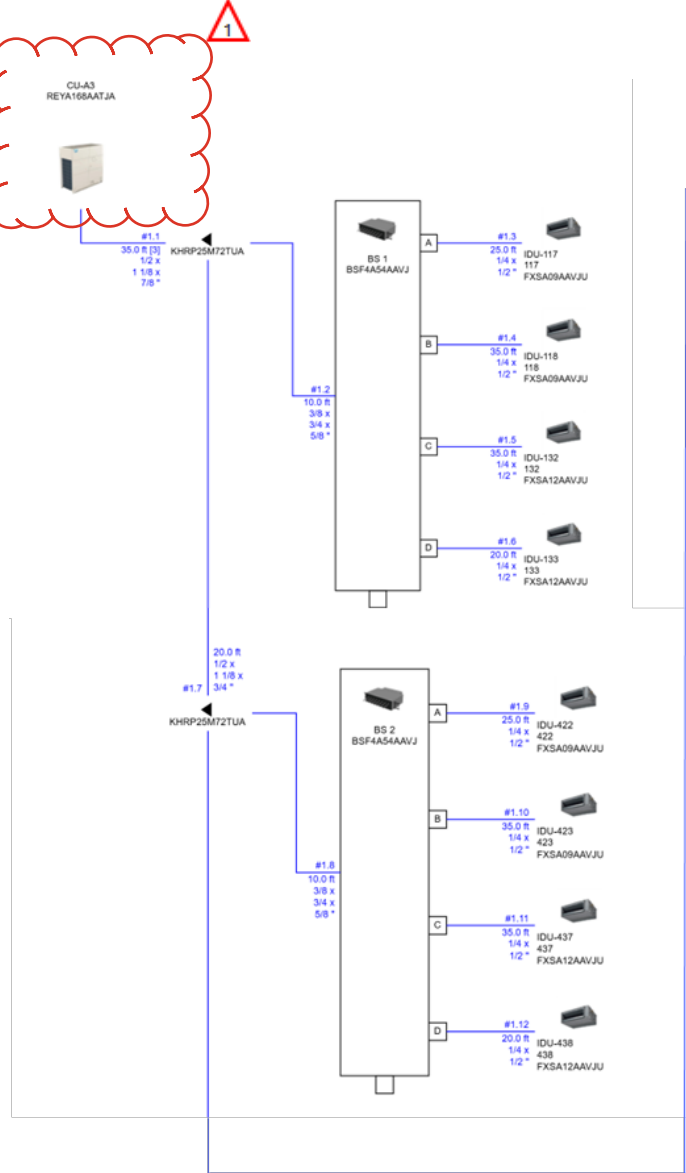
VARIABLE REFRIGERANT VOLUME - ZONE HEAT RECOVERY DEVICE SCHEDULE									
TAG: ROOM	BASIS OF DESIGN (DAIKIN)	CONDENSING UNIT SERVED	Mrel lbs	VOLTAGE-PHASE	MIN CIRCUIT AMPS (MCA)	MAX OVERCURRENT PROTECTION (MOP)	MAX CAPACITY (per Port)	DIMENSIONS (WxHxD inch)	WEIGHT (lbs)
BS 1	BSF4A54AAVJ	CU-A3	54.0	208-230V 1ph	1.2	15.0	4.5	19.3 x 9.5 x 27.7	72.8
BS 2	BSF4A54AAVJ	CU-A3	54.0	208-230V 1ph	1.2	15.0	4.5	19.3 x 9.5 x 27.7	72.8
BS 3	BSF4A54AAVJ	CU-A3	54.0	208-230V 1ph	1.2	15.0	4.5	19.3 x 9.5 x 27.7	72.8
BS 4	BSF4A54AAVJ	CU-A3	54.0	208-230V 1ph	1.2	15.0	4.5	19.3 x 9.5 x 27.7	72.8

Schedule [M003B]

VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE- CONCEALED DUCTED MEDIUM STATIC																						
TAG	APT	Mrel lbs	BASIS OF DESIGN (DAIKIN)	NOMINAL TONNAGE	CONNECTED TO:		SUPPLY AIR FLOW RATE cfm	COOLING CAPACITY					HEATING CAPACITY		ELECTRICAL			DIMENSIONS	WEIGHT	Options and Accessories		
					CONDENSING UNIT	ZONE CHANGEOVER DEVICE		REQUIRED Ton		AVAILABLE Ton		ENTERING AIR		AVAILABLE Ton	ENTERING AIR °F DB	POWER SUPPLY Voltage - Phase	Min Circuit Amps MCA	Max Overcurrent MOP	WxHxD inch		Net lbs	
								TOTAL	SENSIBLE	TOTAL	SENSIBLE	°F DB	°F WB									
IDU-117	117	1.2	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-118	118	1.4	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-132	132	1.5	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-133	133	1.3	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-222	222	1.2	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-223	223	1.4	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-237	237	1.5	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-238	238	1.3	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-322	322	1.2	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-323	323	1.4	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-337	337	1.5	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-338	338	1.3	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-422	422	1.2	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-423	423	1.4	FXSA09AAVJU	0.8	CU-A3	Yes	318	0.6	0.5	0.7	0.5	75.0	62.6	0.9	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-437	437	1.5	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	
IDU-438	438	1.3	FXSA12AAVJU	1.0	CU-A3	Yes	335	0.7	0.6	0.9	0.7	75.0	62.6	1.1	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)	

Schedule [M003C]

MO03-VRV EQUIPMENT SCHEDULES



MATERIALS LIST

Equipment

Model	Qty	Description
REYA168AATJA	1	VRV EMERION (208/230V 3ph)
BSF4A54AAVJ	4	Branch selector unit
FXSA09AAVJU	8	FXSA_AA - Concealed Ducted (Medium Static)
FXSA12AAVJU	8	FXSA_AA - Concealed Ducted (Medium Static)
KHRP25A33TA	1	Refnet branch piping kit
KHRP25M72TUA	2	Refnet branch piping kit
BRC1NRV71	16	Navigation Remote Controller
R32	28.24	Extra refrigerant charge (lbs)

Refrigerant Piping

Pipe Size (inch)	Total Length (ft)	Number of Bends
1/4	460.0	0
3/8	70.0	0
1/2	515.0	3
5/8	70.0	0
3/4	70.0	0
7/8	55.0	3
1 1/8	55.0	3

Schedule [M004A]



Blue Rabbit
Consulting, Inc
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










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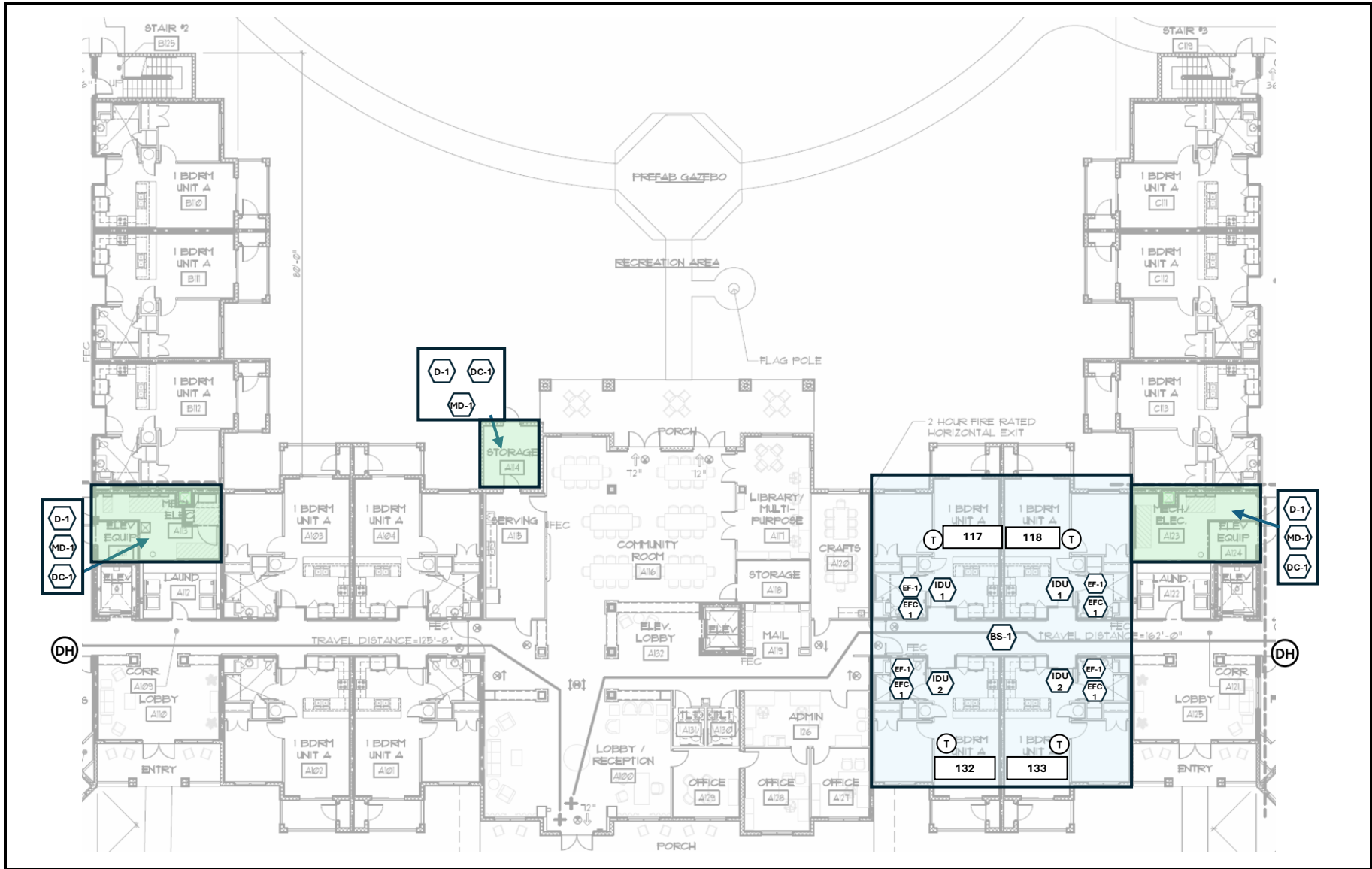
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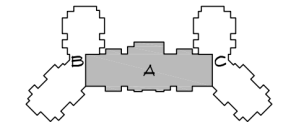
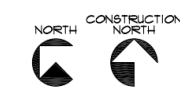
M004
Piping Diagram &
Materials Tables

Keyed Notes

-  Outdoor Unit
-  Indoor Unit 09
-  Indoor Unit 12
-  Branch Selector Box
-  Indoor Unit Controller
-  Exhaust Fan
-  Exhaust Fan Control
-  Mechanical Damper
-  Dehumidifier 155 ppd
-  Dehumidifier Control
-  Dehumidifier Humidistat



1ST FLOOR MECHANICAL



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








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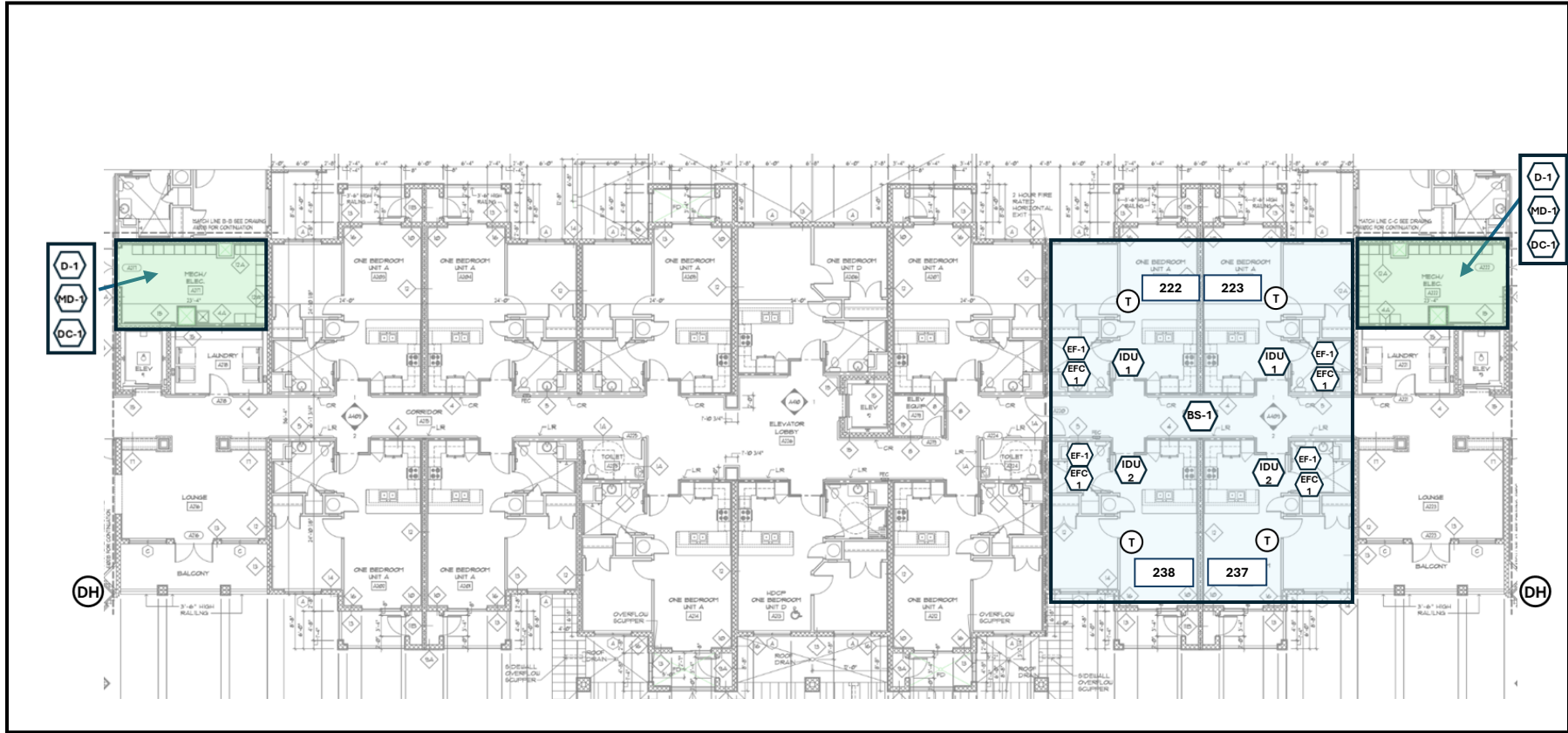
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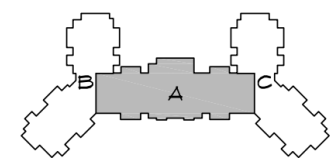
M101
1st Floor
Mechanical Plan

Keyed Notes

-  Outdoor Unit
-  Indoor Unit 09
-  Indoor Unit 12
-  Branch Selector Box
-  Indoor Unit Controller
-  Exhaust Fan
-  Exhaust Fan Control
-  Mechanical Damper
-  Dehumidifier 155 ppd
-  Dehumidifier Control
-  Dehumidifier Humidistat



2ND FLOOR MECHANICAL



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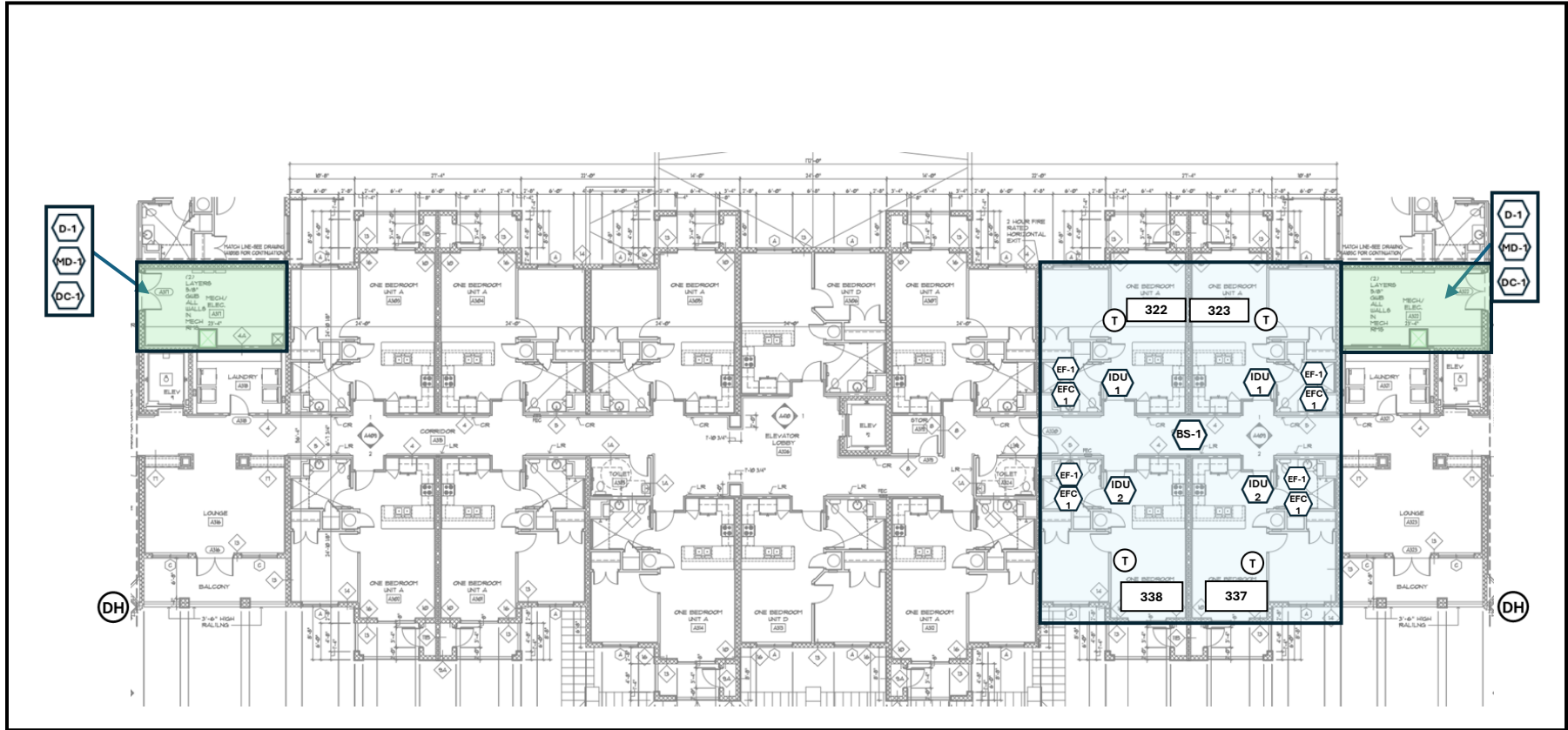
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- Issue Date:**
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 2. 01/16/2026
 3. 04/23/2026

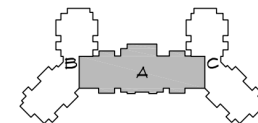
M102
2nd Floor
Mechanical Plan

Keyed Notes

-  Outdoor Unit
-  Indoor Unit 09
-  Indoor Unit 12
-  Branch Selector Box
-  Indoor Unit Controller
-  Exhaust Fan
-  Exhaust Fan Control
-  Mechanical Damper
-  Dehumidifier 155 ppd
-  Dehumidifier Control
-  Dehumidifier Humidistat



3RD FLOOR MECHANICAL



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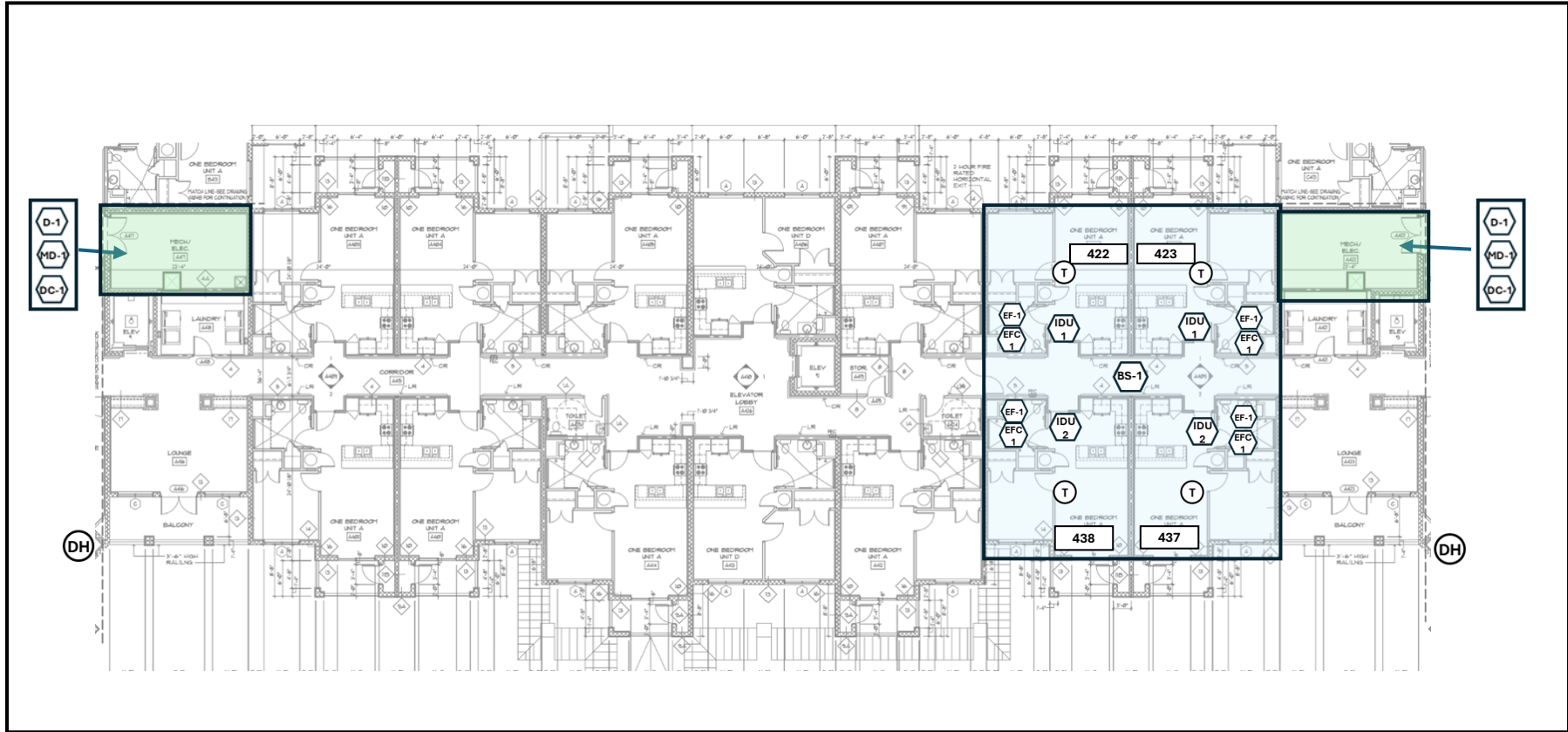
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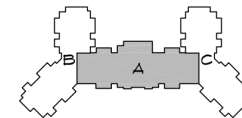
M103
3rd Floor
Mechanical Plan

Keyed Notes

-  Outdoor Unit
-  Indoor Unit 09
-  Indoor Unit 12
-  Branch Selector Box
-  Indoor Unit Controller
-  Exhaust Fan
-  Exhaust Fan Control
-  Mechanical Damper
-  Dehumidifier 155 ppd
-  Dehumidifier Control
-  Dehumidifier Humidistat



4TH FLOOR MECHANICAL



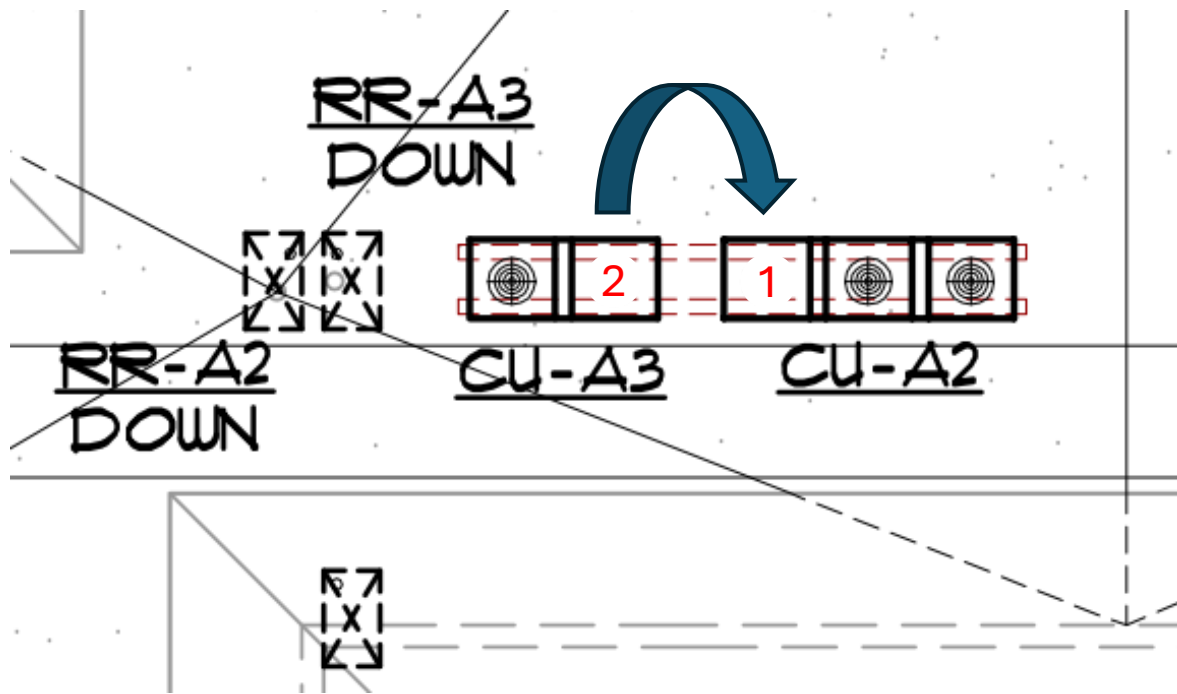
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M104
4th Floor
Mechanical Plan



System CU-A3-2 and CU-A2-1 were installed backwards.

For this reason, the system marked 2 must be moved to the place where the system marked 1 is on the diagram on the left.

System CU-A2 must be pumped down, the system marked 2 moved, reconnected and recharged. Replacement system OU-A-3 only has a single unit so that the system marked 1 is to be removed.

*Installing contractor to verify in field.



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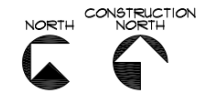
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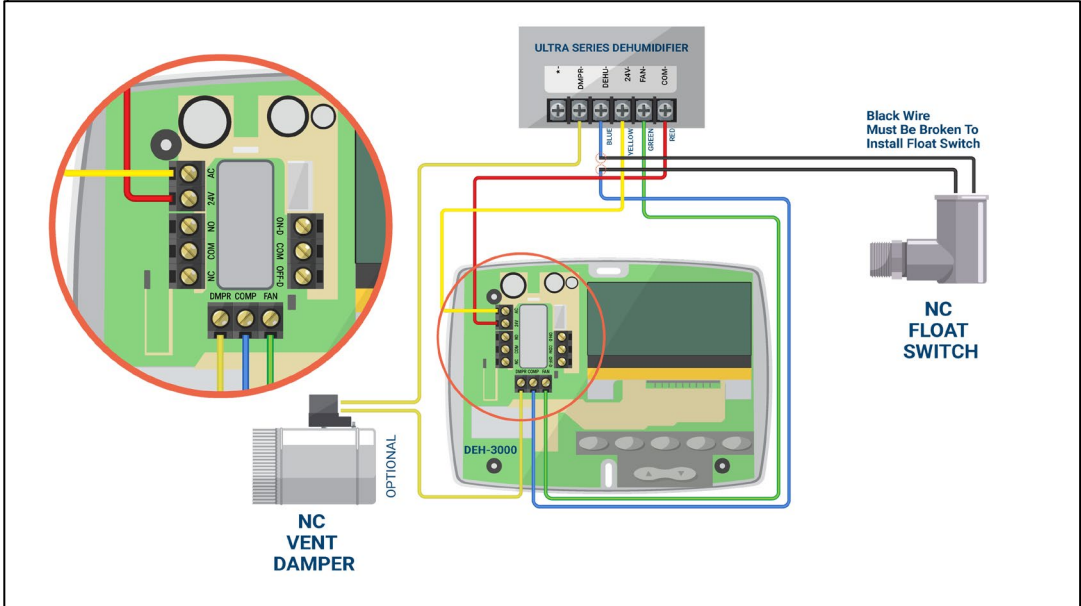
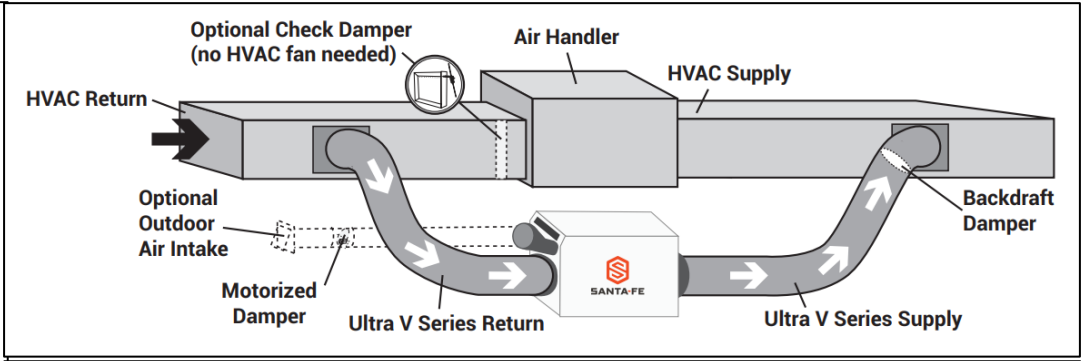
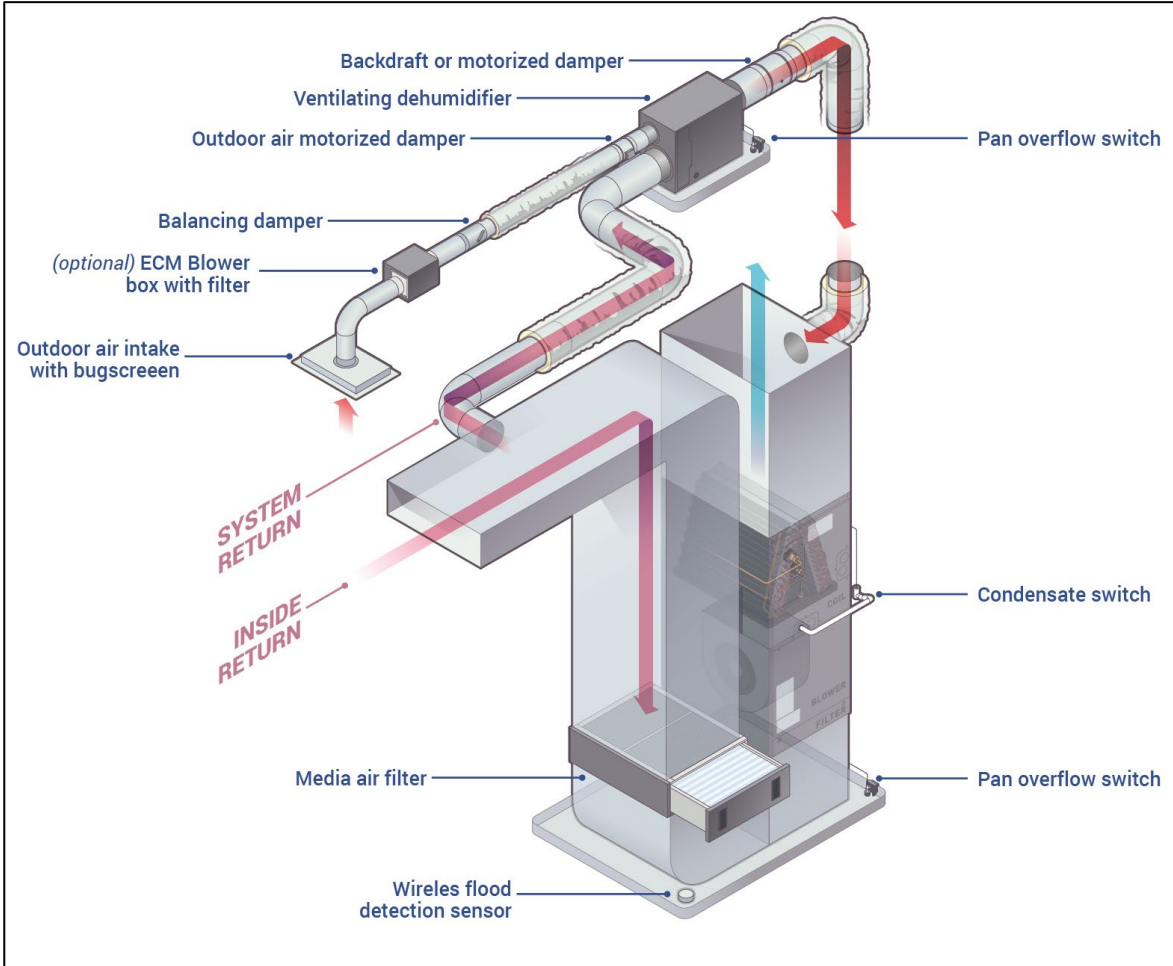
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M105
Roof Mechanical Plan


Roof Mechanical- Outdoor Unit Move



Two Examples of Return to Supply Duct Installation



Ultra-series Wiring Diagram



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M200
Dehumidifier Installation

SANTA FE ULTRA V155 – DEHUMIDIFIER INSTALLATION & CONTROL SPECIFICATION

1. EQUIPMENT

Provide and install **Santa Fe Ultra V155 [D-1]**, model 4044100.
Mount unit on **Santa Fe Riser Kit**, part number **4042109**, per manufacturer requirements for leveling, stability and condensate drainage. MERV 13 filter should be installed.

2. DUCT CONFIGURATION

The dehumidifier will operate **return → dehumidifier → supply**, dedicated to hallways.

2.1 RETURN AIR

Bring hallway air into the V155 through the existing system return.
10" duct is recommended per manufacturer installation guidance.
Return must come from an open hallway zone, not from closed rooms, mechanical rooms, kitchens or bathrooms.

2.2 SUPPLY AIR

Dehumidifier supply duct should be integrated into the existing system supply duct at a 45° angle to ensure entrainment into supply air stream.

2.3 OUTDOOR AIR

Use the existing OA duct and damper to meet original design cfm as specified in Table [M002B].

3. DAMPER CONTROL

Motorized Supply Damper [MD-1] for Recirculation Prevention prevents supply side backflow when V155 is OFF.

- Opens only on dehumidification call from dehumidification call from [DH] in central hallways in accordance with plans [M101-M104].
- Closes upon loss of power.

Damper actuator is powered from the V155's call output or fan relay so damper only opens when V155 fan is on.

4. HUMIDITY CONTROL

Use Santa Fe SmartAire Remote Sensor, part number 4042960, [DH]

- Place sensor in central hallway location near indicated location on plans [M101-M104].
- Do not place sensor in a mechanical room, enclosed space or near supply registers.
- Design RH=55%
- ON at ~57%, OFF at ~53% (typical hysteresis).

5. CONDENSATE MANAGEMENT

- Install dehumidifier on risers with a secondary drain pan.
- Primary drain: ¾" line to code-approved drain with proper trap and vent.
- Secondary pan float switch (N.C.) wired in series with V155 control to shut down unit and close damper on high water instance.
- Where unit elevation does not allow for gravity drainage, a condensate pump should be used.

6. ELECTRICAL

- Provide dedicated 115V/15A circuit.
- Install a local disconnect or plug cord-connected outlet within 9' of AHU (10' cord installed with V155).
- Bond and ground according to NEC.
- Low-voltage wiring must be protected from hot surfaces, sharp edges and conduit strain.

7. SEQUENCE OF OPERATIONS

1. Hall RH rises above 55% setpoint.
2. SmartAire sensor [DH] calls for dehumidification.
3. V155 energizes.
4. Motorized supply damper opens [MD-1].
5. V155 delivers dry air to hallway serving supply duct.
6. When RH falls below setpoint, V155 stops and damper springs close.

8. INSTALLATION NOTES

- All duct joints sealed per SMACNA
- Supply AHU ducts insulated to R6
- Maintain full service access to filter, drains and electrical
- Label damper: "Dehumidifier Supply Damper- Normally Closed."
- Label unit: "Corridor Dehumidifier"
- Verify airflow (target 360-395 CFM at operating static).



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M201

**Dehumidifier
Installation**



M201-INSTALLATION AND CONTROLS