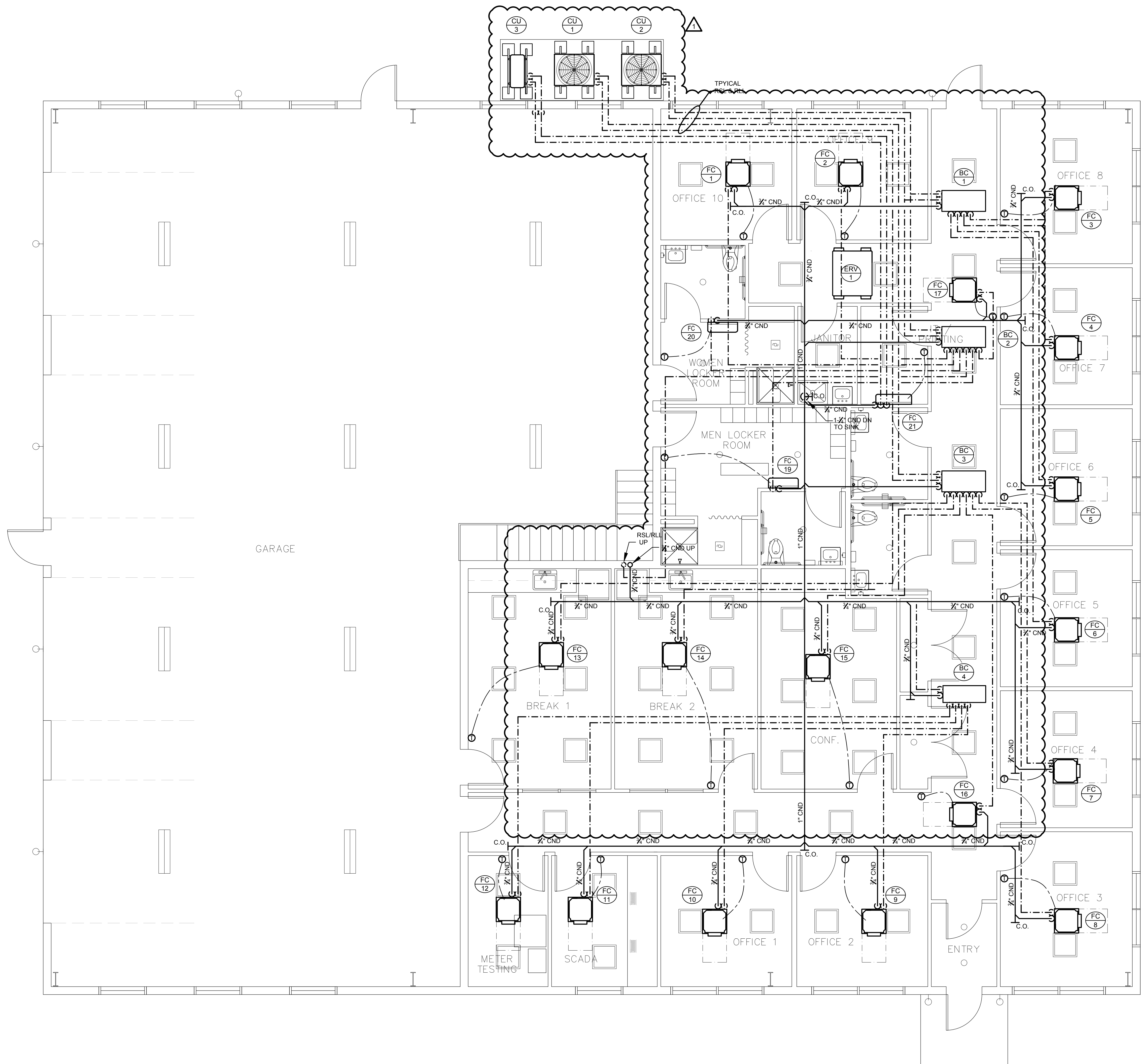


This drawing is copyrighted. Unauthorized use is prohibited.



MECHANICAL NOTES:
1. REFRIGERANT LINES SIZED PER
MANUFACTURE'S RECOMMENDATIONS.
2. REFRIGERANT LINES SHOWN SINGLE LINE
FOR CLARITY

ISSUED FOR BIDDING

Ed Wojcik
architect, ltd
One Richmond Square
Providence, RI 02906
401-861-7139
Fax: 401-861-7165

Proposed Design for:
**Noonsocket
Water Division**
New Garage and Offices
Roy Ave
Noonsocket, RI 02895

**Engineering Design Services
INCORPORATED**
144 ROUTE 1025, SUITE 100, PROVIDENCE, RI 02904
TEL: 401-752-5200 FAX: 401-752-5204

SHEET CONTENTS:

**MECHANICAL
REFRIGERANT
PIPING
PLAN**

PROJECT # 4222
DATE: 08/07/2023
REVISED DATE:
08/30/2023

M3.1

This drawing is copyrighted. Unauthorized use is prohibited.

GAS UNIT HEATER SCHEDULE (BASED ON REZNOR)

SYMBOL	MODEL	CFM	HEATING DATA						ELECTRICAL DATA				NOTES
			FUEL	MIN. INWG	INPUT MBH	OUTPUT MBH	EDB °F	LDB °F	HP	FLA	MOP	VOLTAGE	
GUH-1	UDX-45	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-2	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-3	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5
GUH-4	UDX-60	630	PG	5	45.0	37.35	60	120	.06	2.4	15	120	1,2,3,4,5

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT. BY E.C., REFER TO ELEC. DWG.
2. PROVIDE HANGING BRACKETS & ISOLATORS.
3. PROVIDE ENCLOSED FAN MOTOR.
4. PROVIDE PROPANE CONVERSION KIT.
4. PROVIDE WALL MOUNTED THERMOSTATS.
5. MOUNT AT 12'-0" W/ LOUVERS SET TO 30°.

EXHAUST FAN SCHEDULE (BASED ON GREENHECK)

SYMBOL	MODEL	TYPE	DRIVE	CFM	ESP (IN)	FAN RPM	MOTOR DATA			APROX. WEIGHT (LBS)	NOTES
							POWER	RPM	VOLTAGE		
EF-1	AER-20-VG	PROP	DIRECT	160	.25	599	1/4HP	925	120	61	1,2,5
EF-2	AER-36-VG	PROP	DIRECT	2,400	.25	917	3/4HP	1000	120	61	1,2,4,6

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
2. FAN TO BE INTERCONNECT WITH CO/NOX SYSTEMS.
3. FAN SHALL OPERATE CONTINUOUSLY. PROVIDE DIGITAL TIMECLOCK.
4. PROVIDE MOTOR GUARD ENCLOSURES.
5. PROVIDE GRAVITY DAMPER.
6. PROVIDE MOTORIZED DAMPER (120V).

AIR FLOW REGULATOR SCHEDULE (BASED ON ALDES)

SYMBOL	MODEL	TYPE	STATIC PRESSURE	CFM	SIZE	NOTES
AFR-1	CAR3	INLINE	.8	15	4Ø	
AFR-2	CAR3	INLINE	.8	15	4Ø	
AFR-3	CAR3	INLINE	.8	15	4Ø	
AFR-4	CAR3	INLINE	.8	15	4Ø	
AFR-5	CAR3	INLINE	.8	15	4Ø	
AFR-6	CAR3	INLINE	.8	15	4Ø	
AFR-7	CAR3	INLINE	.8	15	4Ø	
AFR-8	CAR3	INLINE	.8	15	4Ø	
AFR-9	CAR3	INLINE	.8	15	4Ø	
AFR-10	CAR3	INLINE	.8	15	4Ø	
AFR-11	CAR3	INLINE	.8	15	4Ø	
AFR-12	CAR3	INLINE	.8	15	4Ø	
AFR-13	CAR3	INLINE	.8	100	6Ø	
AFR-14	CAR3	INLINE	.8	100	6Ø	
AFR-15	CAR3	INLINE	.8	75	6Ø	
AFR-16	CAR3	INLINE	.8	30	4Ø	
AFR-17	CAR3	INLINE	.8	30	4Ø	
AFR-18	CAR3	INLINE	.8	25	4Ø	

ELECTRIC HEATER SCHEDULE (BASED ON INDEECO)

SYMBOL	MODEL	TYPE	CFM	KW	MBH	ELECTRICAL DATA		NOTES
						AMPS	VOLTAGE	
EWH-1	WCI	RECESSED, WALL	160	2.0	6.8	10.0	208/1/60	1, 2
EWH-2	WCI	RECESSED, WALL	160	1.5	5.2	12.9	120	1, 2

NOTES:
1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
2. THERMOSTAT TO BE INTEGRAL TO THE UNIT.

LOUVER SCHEDULE (BASED ON GREENHECK)

SYMBOL	MODEL	TYPE	SIZE (in x in)	FREE AREA (ft²)	CFM	SP LOSS (inwg)	NOTES
LV-1	ESJ-401	INTAKE	20x12	35.1	160	0.03	1,2,3
LV-2	ESJ-401	INTAKE	40x40	51.8	2,400	0.03	1,2,3

NOTES:
1. PROVIDE WITH BIRDSCREEN.
2. MOTORIZED DAMPERS (120V) TO BE INTERCONNECTED WITH EXHAUST FANS.
3. COLOR FINISH BY OWNER/ARCHITECT.

REFRIGERANT LEAK DETECTOR

SYMBOL	MANUFACTURER	MODEL	AMPS	VOLTAGE	NOTES
RLD-1	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-2	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-3	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-4	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-5	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-6	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-7	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-8	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-9	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-10	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-11	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-12	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-13	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-14	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-15	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-16	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-17	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-18	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-19	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-20	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6
RLD-21	SENSAC	U4762R410A	44 mA	120/1/60	1 - 6

NOTES:
1. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. SENSOR SHALL INCLUDE ONBOARD ARLARM RELAYS, AUDIBLE HORN, & LED'S.
3. UNIT SHALL BE RECESSED IN WALL WITHIN A STANDARD 2-GANG ELECTRICAL BOX.
4. UNIT SHOULD BE MOUNTED APPROXIMATELY 12" TO 18" ABOVE FINISHED FLOOR.
5. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
6. PROVIDE WITH ALARM BUZZER (76dB) AT 10'.

VRF INDOOR UNIT SCHEDULE (BASED ON CARRIER)

SYMBOL	CONDENSER SYMBOL	BRANCH CONTROLLER	MODEL	UNIT TYPE	NOMINAL CAPACITY (TONS)	AIRFLOW CFM	O.A. FLOW CFM	COOLING DATA	HEATING DATA	ELECTRICAL DATA			NOTES
								TOTAL MBH	TOTAL MBH	MCA	MOP	VOLTAGE	
FC-1	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-2	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-3	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-4	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-5	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-6	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-7	CU-1	BC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-8	CU-1	SBC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-9	CU-1	SBC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-10	CU-1	SBC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-11	CU-1	SBC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-12	CU-1	SBC-1	MMU-UP-0071MH-UL	CASSETTE	.5	320	15	7.5	8.5	0.5	15	208/1/60	1,2,3,5
FC-13	CU-1	BC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-14	CU-1	BC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-15	CU-1	BC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-16	CU-1	SBC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-17	CU-1	BC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,5
FC-18	CU-1	BC-1	MMU-UP0091MH-UL	CASSETTE	.8	340	15	9.5	10.5	0.5	15	208/1/60	1,2,3,4,5
FC-19	CU-1	BC-1	MMK-UP0071HP-UL	WALL	.8	285	-	7.5	8.5	0.21	15	208/1/60	1,2,3,4, 5
FC-20	CU-1	BC-1	MMK-UP0071HP-UL	WALL	.8	285	-	7.5	8.5	0.21	15	208/1/60	1,2,3,4, 5

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, CONTROLS WIRING, AND ALL INSTALLATION INSTRUCTIONS.
3. PROVIDE WITH SPACE MOUNTED THERMOSTAT.
4. PROVIDE WITH INTEGRAL CONDENSATE PUMPS.
5. PROVIDE BMS-CT1280UL CENTRAL CONTROLLER.

ENERGY RECOVERY VENTILATOR SCHEDULE (BASED ON RENEWAIRE)

SYMBOL	MODEL	DESIGN CONDITIONS				OUTDOOR AIR		EXHAUST AIR		ELECTRICAL DATA			APROX. WEIGHT (LBS)	NOTES
		SUMMER		WINTER										
		OUTDOOR	INDOOR	OUTDOOR	INDOOR	CFM	ESP	CFM	ESP	MCA	MOP	VOLTAGE		
		DB°F/WB°F	DB°F/RH%	DB°F/WB°F	DB°F/RH%									
ERV-1	HE1XINV	95.0/78.0	73.0/50	0.0/-1.7	72.0/35.0	600	.8	600	.8	5.2	15	208/1/60	123	1,2,3,4

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE WITH DOUBLE WALL CONSTRUCTION & HANGING ISOLATORS.
3. PROVIDE MERV 8 FILTERS.
4. UNIT SHALL BE INTERLOCKED WITH BMS-CT 128UL CONTROLLER.

VRF HEAT PUMP SCHEDULE (BASED ON CARRIER)

SYMBOL	LOCATION	MODEL	NOMINAL CAPACITY (MBH)		EFFECICIENCIES			ELECTRICAL DATA			NOTES
			COOLING	HEATING	IEER	EER	COP	MCA	MOP	VOLTAGE	
CU-1	GRADE	MMY-MAP0726FT2P-UL	72.0	81.0	20.6	13.2	3.67	47.0	50	208/1/60	1,2,3,4,5
CU-2	GRADE	MMY-MAP0726FT2P-UL	72.0	81.0	20.6	13.2	3.67	47.0	50	208/1/60	1,2,3,4,5

NOTES:
1. PROVIDE WITH DISCONNECTS. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, AND ALL INSTALLATION INSTRUCTIONS.
3. PROVIDE WIND BAFFLES GUARDS FOR LOW AMBIENT CONTROLS.
4. PROVIDE 18" EQUIPMENT STAND.
5. REFER TO PIPING DIAGRAM FOR ADDITIONAL INFORMATION.

BRANCH CONTROLLER SCHEDULE (BASED ON CARRIER)

SYMBOL	MODEL	TYPE	ASSOCIATED HEAT PUMP	ASSOCIATED MAIN CONTROLLER	CONNECTED CAPACITY (MBH)	PORTS	ELECTRICAL DATA			NOTES
							MCA	MOP	VOLTAGE	
BC-1	RMB-Y0411F6UL	MAIN	CU-1		-	4	1.0	15	208/1/60	1,2,3,4,5
BC-2	RMB-Y0611F6UL	MAIN	CU-1		-	6	1.0	15	208/1/60	1,2,3,4,5
BC-3	RMB-Y0611F6UL	MAIN	CU-1		-	6	1.0	15	208/1/60	
BC-4	RMB-Y0411F6UL	MAIN	CU-1		-	4	1.0	15	208/1/60	

NOTES:
1. PROVIDE WITH DISCONNECT. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE WITH FULL PORT BALL VALVES.
3. REFER TO MANUFACTURERS' GUIDELINES FOR LINE SIZING, CONTROLS WIRING, AND ALL INSTALLATION INSTRUCTIONS.

SPLIT HEAT PUMP SCHEDULE (BASED ON MITSUBISHI)

SYMBOL	MODEL	CFM	COOLING MBH	HEATING MBH	ELECTRICAL DATA				NOTES	
					KW	FAN FLA	MCA	MAX. FUSE		VOLTAGE
FC-21	RAV-SM122KRTP-UL	477	12.0	14.0	-	-	1.0	-	208/1/60	1,2,3

SYMBOL	MODEL	FAN FLA	COMP RLA	COMP LRA	NOMINAL MBH	ELECTRICAL DATA				NOTES	
						SEER	COP	MCA	MAX. FUSE		VOLTAGE
CU-3	RAV-SP122AT2P-UL	0.5	7	12.0	12.0	25.2	3.9	15.0	25	208/1/60	1,3,4,5

NOTES:
1. PROVIDE DISCONNECT. REFER TO ELECTRICAL PLANS FOR RATINGS & COORDINATE WITH E.C.
2. PROVIDE SPACE MOUNTED THERMOSTAT AND FACTORY CONDENSATE PUMP.
3. INDOOR UNIT IS POWERED THROUGH THE OUTDOOR UNIT.
4. PROVIDE EQUIPMENT SUPPORT STAND.
5. PROVIDE LOW AMBIENT KIT AND WIND BAFFLE.

ISSUED FOR BIDDING

Ed Wojcik
architect, ltd

One Richmond Square
Providence, RI 02906
401-861-7139
Fax: 401-861-7165

Proposed Design for:
Noonsocket
Water Division
New Garage and offices
Roy Ave
Noonsocket, RI 02895

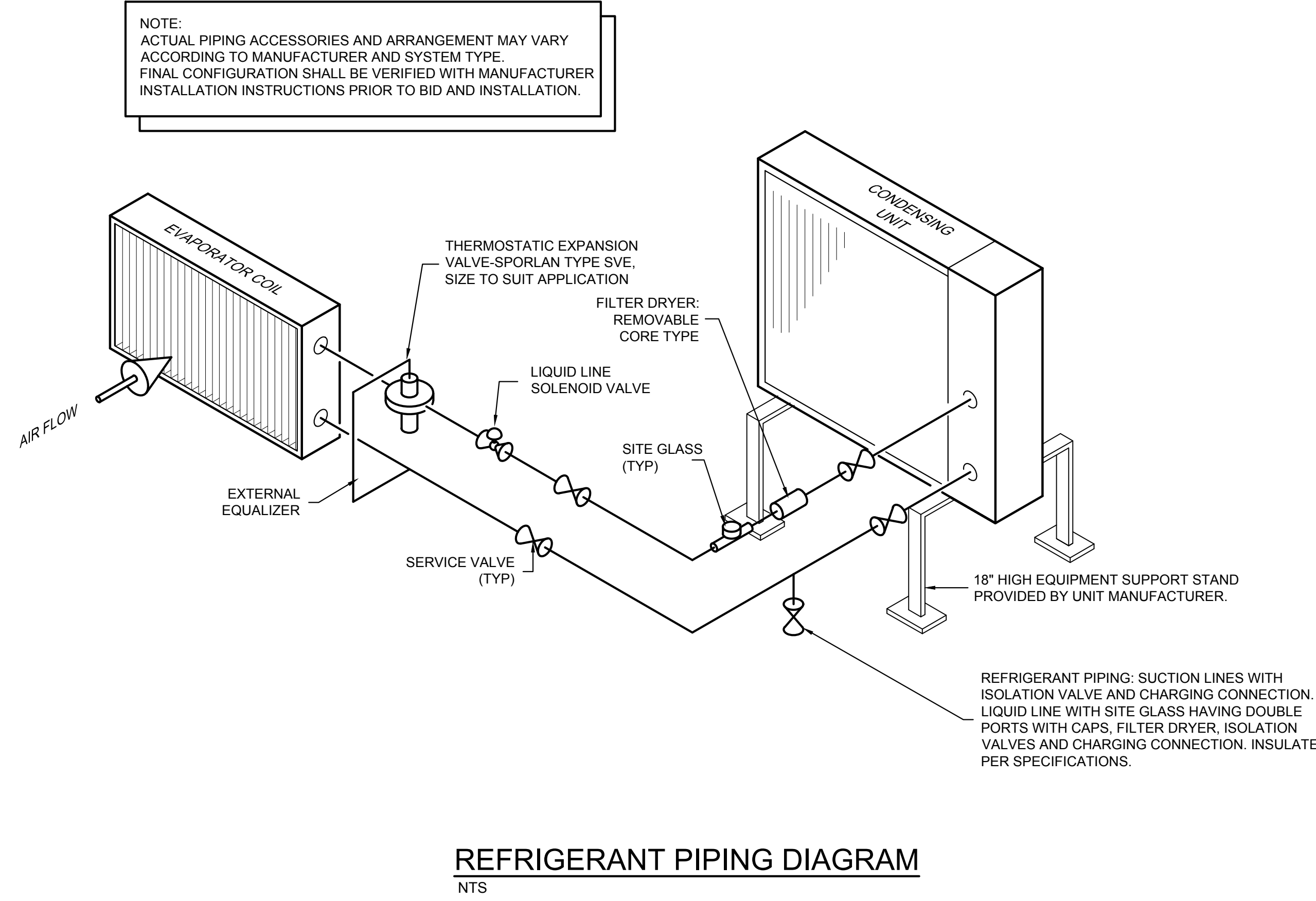
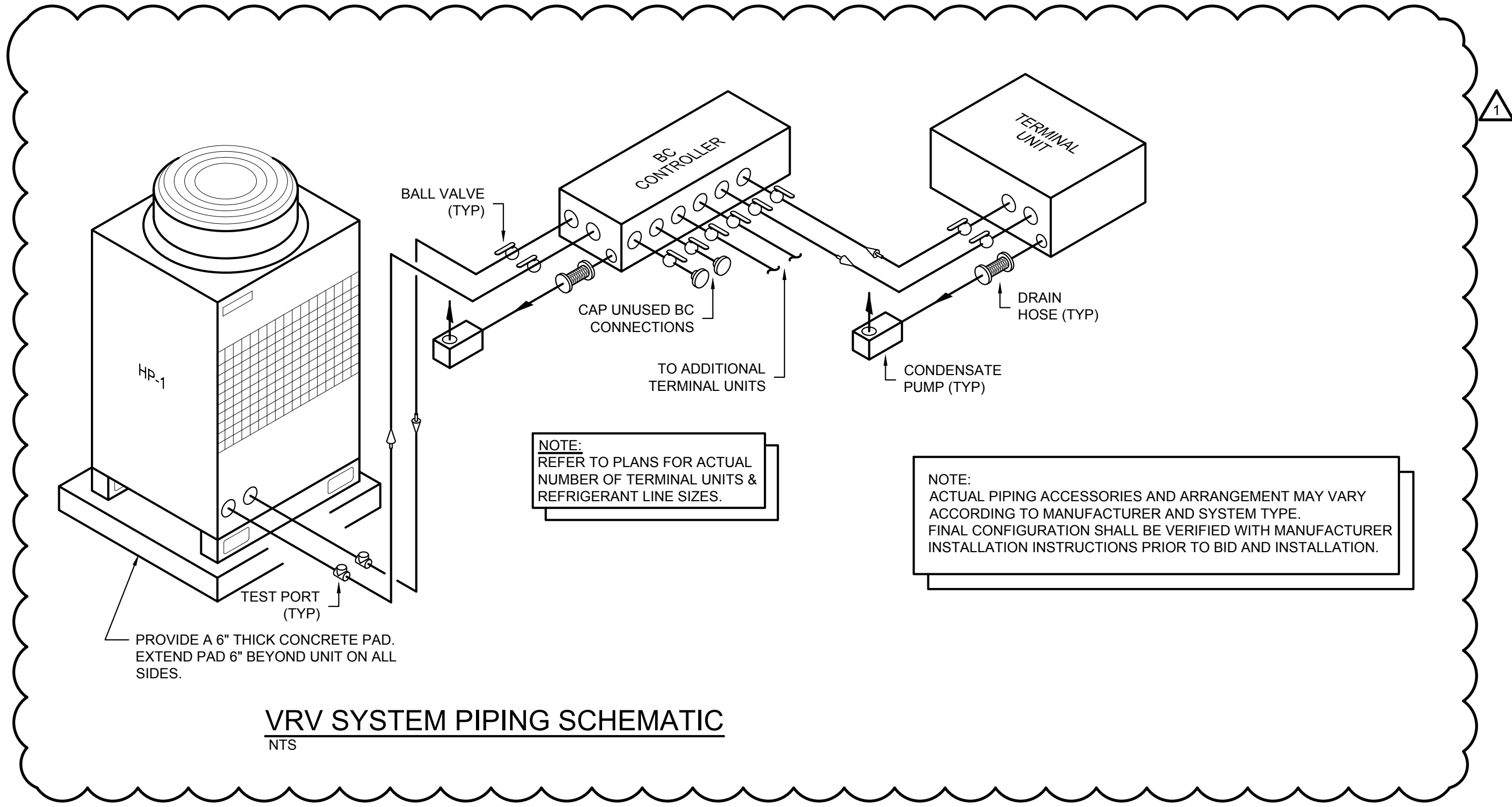
ENGINEERING DESIGN SERVICES
INCORPORATED
141 ROUTE 155, SUITE 100
PROVIDENCE, RI 02904

SHEET CONTENTS:

MECHANICAL
SCHEDULES

PROJECT # 4222

This drawing is copyrighted. Unauthorized use is prohibited.



ISSUED FOR BIDDING

Proposed Design for:
Woonsocket Water Division
New Garage and Offices
Roy Ave
Woonsocket, RI 02895

ed ENGINEERING DESIGN SERVICES
INCORPORATED
141 ROUTE 152, Woonsocket, RI 02895
TEL: 401.762.5200 FAX: 401.762.5204

SHEET CONTENTS:

**MECHANICAL
DETAILS**

PROJECT # 4222
DATE: 08/01/2023
REVISED DATE:
08/30/2023

M5.2

Ed Wojcik *architect, ltd*
One Richmond Square
Providence, RI 02906
401-861-7139
Fax: 401-861-7165