

## **ADDENDUM NO. 1**

To the Technical Specifications for:

### **Fire Station 29 HVAC Replacement**

City of Seminole

1. **BID DATE: NO CHANGE**

**Thursday, March 02, 2023 @ 11:30 A.M.**

2. **RESPONSE TO QUESTIONS**

- Contractor to replace one (1) Exhaust Fan – for AHU on second floor.
- VFDs will not be replaced.
- Mechanical Sheet for existing units attached. First floor Louver should be sized accordingly.
- Portable A/C Units to be provided by contractor during transition. There were ten (10) units on the first floor during the previous HVAC project in 2013. No portable units needed for the second floor
- Portable A/C Units to be vented outside.
- Refrigerant Lines – First Floor – Retain existing refrigerant lines in Mechanical Room. Demo all exterior refrigerant lines along sidewalk.
- Refrigerant Lines – Second Floor – Retain existing lines.
- Duct Cleaning – not required

The City of Seminole will provide concrete pad and electrical for the relocation of the two (2) small condensing units that service the First Floor.

City will bring electric to the units, contractor will tie in.

No manufacturer is specified in the bid, however, must be compatible with Johnson Controls software, and existing VFD drives.

CITY OF SEMINOLE

February 08, 2023

**VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE  
(OWNER DIRECT PURCHASE CONTRACTOR INSTALLED)**

Tag	Mfg.	Model	UNIT							ELECTRIC HEAT							SOUND			ATTN. METHOD
			Size	Max Primary CFM	Min Primary CFM	Inlet SP in wg	Min. SPD in wg	Down SPD in wg	Arrangement	Heat/Fan CFM	EAT F	LAT F	EH Cap kW	Heater Amps	Htr Volt	Phase	Steps	Rod NC	Dis NC	
VAV-1.1	ETI	SDR	08	450	225	1	0.08	0.25	CONFIRM	225	55.0	83.1	2.0	9.62	208	1	1	--	--	AHRI-885E
VAV-1.2	ETI	SDR	10	925	460	1	0.09	0.25	CONFIRM	460	55.0	85.9	4.5	21.63	208	1	1	--	--	AHRI-885E
VAV-1.3	ETI	SDR	06	300	150	1	0.22	0.25	CONFIRM	150	55.0	86.6	1.5	7.21	208	1	1	--	--	AHRI-885E
VAV-1.4	ETI	SDR	06	200	100	1	0.10	0.25	CONFIRM	100	55.0	86.6	1.0	4.81	208	1	1	--	--	AHRI-885E
VAV-1.5	ETI	SDR	06	250	125	1	0.16	0.25	CONFIRM	125	55.0	80.3	1.0	4.81	208	1	1	--	--	AHRI-885E
VAV-1.6	ETI	SDR	06	250	125	1	0.16	0.25	CONFIRM	125	55.0	80.3	1.0	4.81	208	1	1	--	--	AHRI-885E
VAV-1.7	ETI	SDR	06	300	150	1	0.22	0.25	CONFIRM	150	55.0	86.6	1.5	7.21	208	1	1	--	--	AHRI-885E
VAV-1.8	ETI	SDR	10	825	410	1	0.07	0.25	CONFIRM	410	55.0	85.8	4.0	19.23	208	1	1	--	--	AHRI-885E
VAV-1.9	ETI	SDR	06	300	150	1	0.22	0.25	CONFIRM	150	55.0	86.6	1.5	7.21	208	1	1	--	--	AHRI-885E
VAV-1.10	ETI	SDR	10	850	425	1	0.08	0.25	CONFIRM	425	55.0	84.7	4.0	19.23	208	1	1	--	--	AHRI-885E
VAV-1.11	ETI	SDR	08	600	300	1	0.14	0.25	CONFIRM	300	55.0	86.6	3.0	14.42	208	1	1	15	--	AHRI-885E
VAV-2.1 (EXISTING)		SDR	06	475	235					235					208	1	1			
VAV-2.2 (EXISTING)		SDR	08	675	335					335			2.0		208	1	1			
VAV-2.3 (EXISTING)		SDR	10	1,600	800					800			4.5		208	1	1			
VAV-2.4 (EXISTING)		SDR	10	900	450					450			3.5		208	1	1			
VAV-2.5 (EXISTING)		SDR	06	300	150					150			1.5		208	1	1			
VAV-2.6	ETI	SDR	06	200	100	1	0.10	0.25	CONFIRM	100	55.0	86.6	1.0	4.81	208	1	1	--	--	AHRI-885E

**NOTES**

- 1 BASIS OF DESIGN FOR VAV TERMINAL UNITS IS ENVIRO-TEC.
- 2 DDC CONTROLS TO BE PROVIDED TO VAV BOX MANUFACTURER FOR FACTORY MOUNTING.
- 3 PROVIDE 3/4-INCH FOIL FACED INSULATION.
- 4 PROVIDE HEATER WITH AUTO RESET PRIMARY TEMPERATURE LIMIT, SECONDARY HIGH LIMITS, AIRFLOW SWITCH, 80/20 NICKEL-CHROMIUM ELEMENTS, AND FUSING PER UL AND NEC.
- 5 PROVIDE MANUAL RESET SECONDARY LIMIT
- 6 PROVIDE FUSED DOOR INTERLOCKING DISCONNECT.
- 7 PROVIDE SINGLE POINT POWER CONNECTION.
- 8 NOISE CRITERIA RATED IN ACCORDANCE WITH ARI STANDARD 880 AT 1.0" STATIC PRESSURE AT TERMINAL INLET.
- 9 "--" SIGNIFIES A NC VALUE (RADIATED OR DISCHARGE) THAT IS LESS THAN 15. ACTUAL COIL APD SHOWN IS AT MAX AIRFLOW, NOT HEATING AIRFLOW.

**VARIABLE FREQUENCY DRIVE SCHEDULE**

MARK	SERVING	MANUFACTURER	MODEL	H.P.	MAX DRIVE OUTPUT CURRENT	VOLTS/PH/Hz	3 CONTACTOR BY-PASS	FUSED DISCONNECT	DIMENSIONS WxDxH	WEIGHT (LBS)	NOTES
VFD-1	AHU-1	DANFOSS	VLT-HVAC	7-1/2	-	208/3/60	YES	YES	19.09 x 10.84 x 21.48	105.0	1-10

**NOTES:**

- 1 PROVIDE A NEMA 1 ENCLOSURE.
- 2 PROVIDE DAN FOSS VLT-HVAC SIDE-BY-SIDE CABINET CONSTANT SPEED 3 CONTACTOR BYPASS WITH DRIVE/OFF/LINE/TEST SWITCH.
- 3 PROVIDE INTEGRATED TWO SETPOINT PID CONTROLLER, AUTOMATIC ENERGY OPTIMIZATION, AUTOMATIC MOTOR ADAPTATION, AUTOMATIC SWITCHING FREQUENCY MODULATION, DIGITAL VOLTAGE VECTOR CONTROL, AND A RUN PERMISSION CONTACT.
- 4 PROVIDE FUSED MAIN DISCONNECT
- 5 PROVIDE UNDERVOLTAGE PROTECTION FOR BYPASS OPERATION.
- 6 PROVIDE 100,000 SCCR RATED DRIVE AND BY-PASS ENCLOSURE.
- 7 VFD SHALL BE ABLE TO OPERATE THE MOTOR AT A REDUCED LOAD WITH THE LOSS OF ANY ONE OF THE THREE PHASES OF POWER. CONTACTORS SHALL REMAIN CLOSED REGARDLESS OF WHICH PHASE IS LOST. THIS WILL ENSURE VFD OPERATION ON SINGLE-PHASE CONDITIONS THAT WOULD OTHERWISE BE INTERRUPTED DUE TO CONTACTOR DROPOUT.
- 8 PROVIDE BACKNET IP COMMUNICATION INTERFACE
- 9 PROVIDE START-UP SERVICE BY MANUFACTURERS REPRESENTATIVE.
- 10 PROVIDE 3 YEAR PARTS AND LABOR WARRANTY.

**SPLIT SYSTEM AIR HANDLER UNIT SCHEDULE  
(OWNER DIRECT PURCHASE CONTRACTOR INSTALLED)**

AIR HANDLER NO.	AHU-1	AHU-2 EXISTING
AREA SERVED	1ST FLOOR	2ND FLOOR
ARRANGEMENT	HORIZONTAL DUAL PATH	HORIZONTAL SINGLE PATH
AIRFLOW	CFM 4000	4000
OUTSIDE AIR	CFM 1350	700
RETURN AIR COIL		
AIRFLOW	CFM 2650	4000
TOTAL CAPACITY	MBH 114.35	164.14
SENSIBLE CAPACITY	MBH 96.51	113.88
ENT. AIR TEMP.	DB/WB 75.0/79.0	78.1/65.8
LVG. AIR TEMP.	DB/WB 53.0/52.7	52.1/52.0
COIL ROWS/FINS PER FOOT	6/119	8/126
OUTDOOR AIR COIL		
AIRFLOW	CFM 1350	--
TOTAL CAPACITY	MBH 117.1	--
SENSIBLE CAPACITY	MBH 56.32	--
ENT. AIR TEMP.	DB/WB 93.0/79.0	--
LVG. AIR TEMP.	DB/WB 55.0/54.9	--
ROWS/FINS	8/144	--
FAN		
EXT. STATIC PRESSURE	IN. H <sub>2</sub> O 2.0	2.5
FAN MOTOR	BHP/HP 5.7/7.5	7.4/7.5
FAN MOTOR	FLA --	--
ELECTRIC	V/PH/Hz 208/3/60	208/3/60
MCA	AMPS --	--
MCCP	AMPS --	--
MANUFACTURER	TRANE	TRANE
MODEL NO.	PCC 08	--
WEIGHT	LBS. 1704	--
NOTES	1-4	5

- NOTES:**
1. PROVIDE SINGLE POINT POWER CONNECTION.
  2. CONTRACTOR SHALL INCLUDE COST OF EQUIPMENT AND SALES TAX IN THEIR BID. OWNER WILL RECEIVE A DEDUCTIVE CHANGE ORDER UPON PURCHASE OF EQUIPMENT.
  3. FAN MOTOR SHALL BE PREMIUM EFFICIENCY, INVERTER DUTY RATED.
  4. PROVIDE IAQ DAMPER FOR THE OUTDOOR AIRSTREAM.
  5. PROVIDE NEW FAN/MOTOR SHEAVES AND BELTS AS REQUIRED TO OBTAIN SCHEDULED AIRFLOW.

**DESIGN CONDITIONS**

SUMMER:	OUTDOORS	93 DB, 79 WB
	INDOORS	75 DB, 50 %RH
WINTER:	OUTDOORS	43 DB
	INDOORS	70 DB

**AIR DEVICE SCHEDULE**

MARK	TYPE	MATERIAL	FINISH	MANUF.	MODEL NO.	NOTES
AD-1	SUPPLY AIR DIFFUSER, 24X24 LAY-IN PANEL, LOUVERED FACE	ALUM.	WHITE	PRICE	AMD	1, 2, 3, 4, 5
AD-2	RETURN AIR GRILLE, 24X24 LAY-IN PANEL, LOUVERED FACE	ALUM.	WHITE	PRICE	630	1, 2, 3, 5

- NOTES:**
1. NOISE CRITERIA NOT TO EXCEED 25.
  2. CONTRACTOR TO COORDINATE BORDER WITH CEILING SYSTEM
  3. REFER TO FLOOR PLAN FOR CFM.
  4. ALL AIR DEVICES ARE 4 WAY THROW, UNLESS NOTED OTHERWISE ON DRAWING.
  5. ALL AIR DEVICES TO BE SUPPLIED WITH O.B.D.

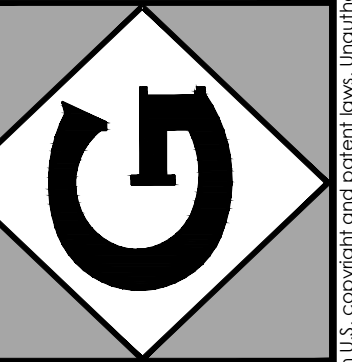
**SPLIT SYSTEM CONDENSING UNIT SCHEDULE  
(OWNER DIRECT PURCHASE CONTRACTOR INSTALLED)**

CONDENSING UNIT NO.	CU-1A	CU-1B	CU-2
NOMINAL TONNAGE	10	10	15
COMPRESSOR TYPE	SCROLL	SCROLL	SCROLL
AMBIENT TEMP.	DB DEG. F. 95	95	95
COMPRESSORS	NO. 2	2	2
STEPS OF CAPACITY	NO. 2	2	2
CIRCUITS	NO. 2	2	2
ELECTRIC	V/PH/Hz 208/3/60	208/3/60	208/3/60
COMPRESSOR AMPACITY	RLA 2@16.0 EA.	2@16.0 EA.	2@25.0 EA.
FAN MOTOR AMPACITY	FLA 5.0	5.0	2@5.0 EA.
MCA	AMPS 41.0	41.0	66.3
MCCP	AMPS 45	45	80
EFFICIENCY	EER 11.0	11.0	11.0
EFFICIENCY	PLV 11.2	11.2	11.2
REFRIGERANT	TYPE R410A	R410A	R410A
MANUFACTURER	TRANE	TRANE	TRANE
MODEL NO.	TTA120E	TTA120E	TTA180E
WEIGHT	LBS. --	--	--
NOTES	ALL	ALL	ALL

- NOTES:**
1. FURNISH WITH LOW AMBIENT OPTION.
  2. PROVIDE CORROSION RESISTANT CONDENSER COIL AND CABINET COATING, LUVATA OR APPROVED EQUAL.
  3. PROVIDE 5 YEAR EXTENDED WARRANTY FOR COMPRESSORS.
  4. CONTRACTOR SHALL INCLUDE COST OF EQUIPMENT AND SALES TAX IN THEIR BID. OWNER WILL RECEIVE A DEDUCTIVE CHANGE ORDER UPON PURCHASE OF EQUIPMENT.

PROFESSIONAL SEAL

**GRINER ENGINEERING, INC.**  
 1628 First Avenue North  
 St. Petersburg, Florida 33713  
 Phone: (727)-822-2335  
 Fax: (727)-821-3361  
 www.grinerengineering.net  
 Certificate of Authorization #3173



HVAC REPLACEMENT FOR:  
**SEMINOLE FIRE STATION #29**  
 11195 70TH AVENUE NORTH  
 SEMINOLE, FL 33772

CLIENT INFORMATION

DRAWN BY

JWY

REVIEWED BY

JHG

GB PROJECT NUMBER

12111

DATE

MAY 15, 2013

SHEET TITLE

MECHANICAL

SCHEDULES

NO.

DATE

SET ISSUED FOR:

SHEET NUMBER

**M5.1**

These documents, designs, notes, details, specifications and concepts are the sole property of Griner Engineering, Inc. and shall not be reproduced, re-used or copied for other projects, in whole or part, without the written consent of Griner Engineering, Inc. All rights reserved by the engineer in accordance with U.S. copyright law. Unauthorised reproduction will be prosecuted to the fullest extent of the law.