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DATE: JANUARY 3, 2019

ADDENDUM NO.: 1

BID NO.: FWC 18/19-57C

BID TITLE: ST. PETERSBURG FUME HOOD UPGRADE - REBID

UPDATE: QUESTIONS AND ANSWERS (ITEM #1)

The enclosed addendum has been issued for consideration in the preparation of your response to the Florida Fish and Wildlife Conservation Commission's (FWC) Solicitation No. FWC 18/19-57C, St. Petersburg Fume Hood Upgrade - Rebid.

**All responses to the subject solicitation must be received no later than 3:00 PM (EST) on Friday, January 11, 2019.**

A response received after the exact time specified will not be considered. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes (F.S.), or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes. Written notices, formal requests and proceedings must conform with the requirements set forth in Chapter 28-110, Florida Administrative Code (F.A.C.). Protests must be filed with the Purchasing Office, Fish and Wildlife Conservation Commission, 2590 Executive Center Circle, Tallahassee, Florida 32301 within the time prescribed in Section 120.57(3), F.S. and Chapter 28-110, F.A.C.

Sincerely,

*Bryan Tucker*

**Bryan Tucker**  
FWC Procurement Manager

## **BEGIN ADDENDUM**

### **QUESTION #1**

I am writing this letter to petition that Phoenix Control Laboratory Control System be included as an approved vendor for the FWC St. Petersburg Fume Hood Upgrade – Rebid (FWC 18/19-57C) project in specification section 15900, page 2 under the Quality Assurance section.

Phoenix Controls has been doing laboratory control system since the 1980's. We have an extensive list of customers through the state of Florida that we would be happy to furnish as references. We have extensive experience working with the various TRANE office throughout the state and have been asked by them to request inclusion in the specification to allow us to bid.

### **ANSWER #1**

15900-2, Quality Assurance, First Paragraph, Phoenix Control may be included as another Lab Control Vendor. This Inclusion is based on the Vendor complying with the Intent of the Specifications and Drawings along with the performance requirements of the project. Also see, Section C-18 Substitutions, General Terms and Conditions.

### **QUESTION #2**

Reference 15900-17 & 39: Page 17: "Workstation / Service - Trane web based software or equivalent. Page 39: BAS Contractor - Contractor shall also modify all new controls...update graphics, etc., at all existing workstations... "The existing Trane System is not web based. It supports the RMI Building, Fish & Wildlife, and Chiller Plant. How much do we upgrade / make web based?"

### **ANSWER #2**

15900-17: Does not reference web-based software. (NOTE: The existing Trane BAS will be used to add points as indicated in contract documents. The existing system shall be extended as required to do so. The existing Trane BAS will also have points removed as indicated in the Contract Documents.) The reference 15900-39 "BAS Contractor shall update existing EMCS Graphics...." does not require web-based software. It does require graphics to represent added / removed points, etc. Also, see Answer #4.

### **QUESTION #3**

How long will each lab be shut down for renovations?

### **ANSWER #3**

Response by Owner: Estimated from 3 to 4 days per lab including weekends and 24-hour access if necessary. FWRI will work closely with the contractor and the lab occupants to have access as needed. The contractor will make sure they have proper materials and equipment on site and make sure it is properly scheduled.

**QUESTION #4**

Is Trane to split off the renovated space from the existing BASE, making the renovated spaces web based while leaving the remaining building on the BASE as is? (The two systems will not be able to share data.)

**ANSWER #4**

Refer to 15900-1, paragraphs 2 and 3 "FUTURE". The Lab Control System will be separate from the BAS system until funding is secured to fully integrate the systems. Also see Sheet M4.1, Typical Laboratory Control Diagram, 'Boxed' Notes.

**QUESTION #5**

Are the local displays located on fume hood labs only?

**ANSWER #5**

All labs.

**QUESTION #6**

Is the lab controls Contractor responsible for the installation of the auto sash adjuster or the fume hood manufacturer?

**ANSWER #6**

Coordinate with Lab Control Contractor - means and methods.

**QUESTION #7**

There is an add for two (2) CV Hoods. Will there be a requirement for an air pressure monitor or view screen?

**ANSWER #7**

The question is in reference to third floor (Bid Alternate #3) and Fans F-18/-19 (Bid Alternate #1). All of the work will be required for Bid Alternate #1 and/or Bid Alternate #3. If Bid Alternate #1 is not accepted, then the listed devices will function as constant volume rather than modulating (see Note #8, Laboratory Air Terminal Unit Schedules, Sheet M0.2).

**QUESTION #8**

I suppose this is not the proper way to do this but I feel that I need to expand on the questions I posed at the prebid meeting this morning. I did submit several questions with references to the controls specifications concerning the upgrade of the existing TRANE TRACER SUMMIT BAS. This existing SUMMIT system is not web based. It is an older dial-up system with probably a 9600 Baud supporting the system. Please consider this email as an addendum to my card questions submitted earlier.

The existing TRANE BAS system supports the chiller plant, main building and the RM1 Building. All are linked together via BACnet IP communications.

This version of BAS includes a 'Building Control Unit' (or BCU) as the main system controller. There are five BCUs on the TRACER SUMMIT network. Four of them are newer models that can be

combined with our latest product TRACER Ensemble, a web based server software. The BCU in the RM1 building is a much older version of the BCU and it is not supported by the Ensemble software (sorry, the RM1 BCU is a 'BMTS' version and it does not support an IP address; Our TRANE products last a long time, but technology keeps moving on). The other four BCUs support IP addressing and are supported by Ensemble and can carry thru as is.

The BCUs communicate via BACnet Ethernet to a typical desktop computer with TRANE TRACER SUMMIT software loaded on it. Trends and other data are stored in the BCUs and periodically uploaded to the desktop computer's hard drive for long term storage. The Summit software includes the system graphics and maintains the system back-up database, also stored on the hard drive. There is more than one desktop computer in this system and each desktop computer has its own copy of SUMMIT software including graphics. If the graphics in one desktop is changed the other computer does not automatically upgrade to match. A technician would have to visit the second computer and upload the new database and graphics to bring it up to date.

Trane's replacement for the BCU is the TRACER 'System Controller' or SC. The SC is a web based device with system access software (graphics) embedded in the device. For systems over 250 controllers, two or more SCs will be required. When this occurs Tracer Ensemble software and a server is required for the SCs to communicate to each other.

The RM1 BCU will require a new 'System Controller' or SC, along with a communications bridge that will convert the older network communications to BACnet for input to the SC. The SC will then communicate to the Ensemble software similar to a BCU.

Ensemble and the RM1 Building BCU replacement, puts the entire facility BAS on the web. Ensemble supports BACnet IP network communications so integration to the new Lab system will not be a problem.

All the controllers on all the BAS networks in all facilities will remain and be reused. All the programming in the BCUs will remain and be reused. The RM1 building BCU will have a new data base created in the SC, but the network and all local controllers will remain (controller programming also remains and is reused). (There is no software conversion that upgrades the older BCU database to SC, this will be new programming by one of our techs)

Unfortunately, as technology has moved along, the older TRACER SUMMIT software has become obsolete. This system cannot communicate directly to the new web based SC. Just for the record, the last version of SUMMIT was version 17, released perhaps two years ago. SUMMIT software was originally released 1988-89.

The only way an SC can communicate to a BCU is via Ensemble software.

The Ensemble software is a modern web based software that works with SQL server software. It is available for installation on a new TRANE provided dedicated server, or perhaps installed on the facility server (this has advantages as the IT department will have to keep the SQL software up to date, etc.), or in the cloud thru Trane / Ingersoll Rand. Ensemble can support multiple sites and multiple BAS product lines, providing seamless system access (all systems will look the same and

have the same override/ trending/ alarm functions). There are no limits to the number of persons that can access the site at once. With the proper IP network, Ensemble can allow access to pretty much anything on any connected campus from a modern phone, tablet or computer. As you would expect, Ensemble also includes modern security features to prevent unauthorized access.

#### Project Specifications Section 15900 Building Automation System

The specifications on page 15900-27, under 'Workstations /Controller Communications,' third paragraph states, "The existing workstation/server computer(s) shall utilize Trane web enabled software or equivalent. The web server shall use Microsoft's IIS server 4.0 with Windows NT4.....and support browser access via Microsoft Internet Explorer 5.0 (or higher)....."

On page 15900-39, under 'Training,' the fourth paragraph states, "BAS contractor shall update all existing EMCS graphics, floor plans with new room names, room numbers, new locations of existing devices / equipment, modifications to sequences, updating point lists and schematics, etc. BAS contractor shall also add/modify all new controls, schematics, sequences, floor plan locations, etc. for a fully complete operational system in compliance with all FWC EMCS requirements and full graphics. Update graphics, etc. at all existing campus EMCS workstations. Interface all new controls to existing Campus/Building workstations; update all existing hardware, firmware and software as required." (entire paragraph is underlined in spec page; red text by me).

As the existing system is to remain, but changes are required to the AHUs ( Duct static pressure control is added at two AHUs along with remote temperature and humidity sensors supporting the renovated spaces) and to the exhaust fans (by-pass dampers and duct static pressure are added). The controllers supporting the AHUs and exhaust fans are currently on the existing BCU / SUMMIT system.

From my site visit today, the exhaust fans are controlled by a series of PCM controllers located in the penthouse. These are older style controllers that cannot communicate to the new SC web based system without a network bridge (they can communicate to an SC thru the existing BCU and Ensemble software). The BCU supporting these PCM controllers is located in the chiller plant. These PCM controllers support numerous devices throughout the facility. There is 5 or 6 that support reheats, most likely for the upper two floors. I suspect that controllers in the chiller plant support reheats for the lower floors.

During the site visit this AM I requested to visit the RM1 building and chiller plant. I was told that these facilities were not part of the project nor was a system upgrade.

Based on the specifications above, we assumed that 'all existing campus EMCS workstations,' included the entire facility, including building RM1.

We have concerns as to how we are to make parts of the system web based while the remaining system stays SUMMIT. Controllers support numerous devices throughout the facility. A controller in the chiller plant may support chill water pumps and building reheat coils at the same time. The system wasn't originally engineered this way, but things change or are added over time and where

spare inputs and outputs are available they get used. Costs are reduced when existing 'spare' control points are used.

We plan to use 'spare' inputs and outputs (I/O) for the modifications to the exhaust fans, by-pass damper addition and static pressure control. Depending on what points are made available as the re-heats are removed, we may be able to reuse the controller inputs for the space temperature and humidity sensors required for the renovated areas. As one might expect, this data will be available on the TRACER SUMMIT desktop computers.

Sorry about the length of all this, but as you can see, it was a bit much for a 3X5 index card. I will copy one of our TRANE sales representatives, Brian Rybak (850-445-8397) as well. Brian calls on Pyramid Engineering regularly and should be able to answer any questions.

My question remains, how do we modify the system for the renovation and what part if any or all is to be accessed thru the web?

Please feel free to call me. I plan to be on vacation next week and thru the New Year, returning on Jan 2, 2019, but you are welcome to call me on my cell. Please leave a message and I will return the call as soon as I can.

If possible, depending on the outcome of my questions, I may wish to request a second site visit to visit the BCUs in RM1 and the chiller plant.

**ANSWER #8**

Refer to Answer #2 & Answer #4.

**END ADDENDUM**