

City of San Antonio

ADDENDUM II

SUBJECT: Municipal Swimming Pool Energy Retrofits, Formal Invitation for Bid, (IFB 6100003839), Scheduled to Open: January 22, 2014; Date of Issue: December 20, 2013

FROM: Paul J. Calapa, Procurement Administrator

DATE: January 21, 2014

THIS NOTICE SHALL SERVE AS ADDENDUM NO. II - TO THE ABOVE REFERENCED FORMAL INVITATION FOR BID

THE ABOVE MENTIONED FORMAL INVITATION FOR BID IS HEREBY AMENDED AS FOLLOWS:

- 1. THE SUBMISSION DATE IS HEREBY EXTENDED TO JANUARY 24, 2014; 2:00PM LOCAL TIME.**
- 2. ADDED: Project Timeline rev. 1, 1-17-14 (Attachment L). Attached as a separate document.**

QUESTIONS SUBMITTED IN ACCORDANCE WITH SECTION 003, RESTRICTIONS ON COMMUNICATION:

Below is a list of questions that were submitted in accordance with Restrictions on Communication. The City's official response to questions asked is as follows:

Question 1: Will the opening date be extended for this bid?

Response: Yes; the bid will open on January 24, 2014.

Question 2: The majority of the installation sites don't meet the flow meters installation requirements thus will provide very inaccurate flow readings and will negatively affect the performance of the VFD greatly. How is this being addressed?

For example, the Signet 2537 flow meter installation manual provides recommended mounting locations. However, the photos of Cueller Pool present the following problems:

A) Not enough straight pipe for installation per manufacturer instructions

a. 6" Sch. 40 PVC ID = 6.031"

b. Flow Meter Installation per manufacturer = 20 X ID of pipe = 10' downstream of 90 Degree Elbow and 2.5' before the next PVC fitting. One of the pictures appears to show that we only have about 12" between 90 degree elbows.

c. The reason for this requirement is so that the water in the pipe has a chance to stabilize (removing the turbulents after a fitting).

B) Pipe is in a downward direction.

a. Per manufactures instructions a flow meter cannot be installed with pipe pointed in a downward direction.

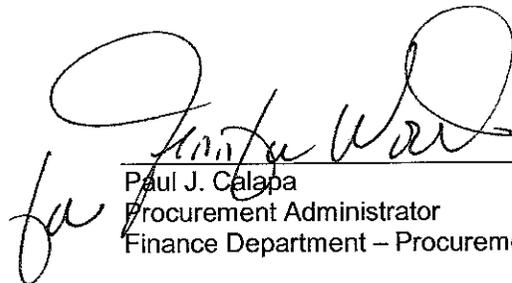
b. This is because the pipe may not be completely full of water thus giving very incorrect flow readings.

These situations are not uncommon in the pool industry and I would not be bringing it up if the flow meter was going to just provide a flow reading. However, the flow meter will not just be providing a reading it will part of a controls device so it is important that flow be monitored as accurately as possible so that the VFD can properly perform its task.

When the VFD is properly performing its task the proper turnover rate will be achieved at the same time providing energy savings. This is tough to do if the device doesn't have a good flow reading.

Response: As referenced in 004 - Specifications / Scope of Services, C. Installation, 10. "Install digital flow sensor in accordance with the manufacturer's instructions. In the event that there is no practical location to install the sensor within manufacturer's recommendations, the contractor shall document and notify the City prior to installation." This specification, along with the requested Price Schedule, is provided in acknowledgement that because of the scope of this project, it may be impractical for the contractor to identify all such obstacles prior to bid date. It is the City's intent that, upon notification the City will decide whether such flow sensor shall be installed or if an alternate programming method based on speed alone shall be recommended to the City, by the bidder.

While Cuellar and others locations may not have straight pipe lengths sufficient to meet flow meter manufacturers' recommendation, this does not mean flow meters cannot be used successfully to manage system flow rates. Turbulence introduced by nearby fittings and valves will impact flow reading accuracy, primarily by adding large fluctuations (pulses) in velocity, but as the contractor has noted, this is not at all uncommon, which is why flow averaging is part of the flow meter design. The VFDs will be controlled based on the average flow rate, which will be consistent throughout the filter loading cycle, thus not impacting the overall objective of keeping filtration rates in compliance with health and safety code. The downside of larger flow variations due to flow meter location is a slightly higher flow rate will need to be set to assure the actual flow remains below the 8-hour turnover rate, something that is scheduled to be part of the post-installation Quality Control check.



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PC/jg