Poughkeepsies' Water Treatment Facility

MEMORANDUM

May 5, 2014

To: Joint Water Project Board
From: Randy Alstadt, Water Plant Administrator

Subject: **SCADA Proposal**

Over the past 12-months we have had repeated failures with our plant computer supervisory control and data acquisition (SCADA) system. The system was installed in 2004.

I requested CH2M Hill review our system during the current design and identify the extent of current risk and what actions should be taken to eliminate that risk. Simultaneously, I requested a proposal from our SCADA Engineer/Technician, Armani Engr Corp. The problems we are having include periodic shutdown, which results in loss of data, and now we are finding repair/replacement parts are not available. Many of the system components are no longer available and the system is based upon less secure and reliable equipment that is available today.

CH2M Hill identified that the software is out of data and needs to be upgraded. The costs to upgrade our software will be included in upgrade at a cost of $100,000+.

CH2M Hill and Armani Engr Corp proposals are presented in the attached table. It is recommended that the Board move forward with contract for Armani Engr Corp to design upgrade including preparation of bid package specifications and drawings for Material and Supplies and to provide installation/programming services.

Alternative Implementation

It is recommended that one of the following alternatives be acted upon. The alternatives are listed in order of preference.

1. The combined project could be included within the capital budget currently underway. It is recommended that this direction be considered after the project is bid and awarded and only if budget is sufficient.
2. Request budget increase from Town and City for $125,000 to implement equipment at greatest risk or $250,000 for complete project.
3. Include $250,000 in 2015 budget.
4. Include $125,000 in 2015 budget and $125,000 in 2016 budget.

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SCADA Proposal

Cost Item	Quantity	Unit Price	Item Price
Development Costs			
Development License	1	$0.00	$0.00
Redundant/Failover Master Control Node (@ Public Works)	2	$9,093.50	$18,187.00
Remote Control Nodes (WAT, EAT, W32, W34, EST)	5	$2,593.50	$12,967.50
View-only Nodes (managers, fire station, others)	10	$0.00	$0.00
Historian (Data Repository, SQL)	1	$1,300.00	$1,300.00
Custom Trends (configurable from any node)	15	$0.00	$0.00
Custom Reports (configurable from any node)	1	$0.00	$0.00
HMI Preparation, Development, Installation, and Deployment.	90	$680.00	$61,200.00
Total Development Costs			**$93,654.50**
Material And Supplies			
ServerDual processors, 8GB memory, 146GB 15k Hard Drive and 3 year Pro	2	$3,800.00	$7,600.00
Industrial Computer for Chemical Room (Monitoring)	1	$2,301.00	$2,301.00
Industrial Computer for Sludge Pump	1	$2,301.00	$2,301.00
ViewSonic VX2770Smh-LED Black 27" 7ms (GTG) IPS-Panel HDMI Widescreen LED	6	$349.00	$2,094.00
Fiber Tool Kit and Terminals and industrial network connections	4	$2,875.00	$11,500.00
Panasonic TH 65PF30U - 64.7 in Plasma panel - 1080p (Full HD)	2	$2,340.00	$4,680.00
Total Material and Supplies			**$30,476.00**
Total Current Costs			**$124,130.50**

The above is required as soon as possible to limit risk. An additional $125,000 in materials will be required to switch over remaining Programable Logic Controls (PLC). Complete cost $250,000. CH2M Hill proposal includes $50,000 to $75,000 study followed by $150,000 design and $1,000,000 to $1,200,000. CH2M Hill combined estimate = $1,200,000 to $1,400,000.

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