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December 10, 2012

Mr. Wes Weaver, President
Weaver Construction Management, Inc.
3679 South Huron Street, Suite 404
Englewood, CO 80110

*Via Email to: wes@weavercm.com
No Hard Copy to Follow*

Re: Harold D. Thompson Regional Water Reclamation Facility (HDTRWRF)
Lower Fountain Metropolitan Sewage Disposal District (LFMSDD)

Dear Wes:

Reference is made to your shop submittal identified as follows:

Submittal No.:	16700-002B
Date of Submittal:	December 4, 2012
Title:	SCADA System Design for Pumping and Disinfection Building
Specification Section:	16700
Equipment Component	
Manufacturers:	Various
Design/Fabricator/Integrator:	Browns Hill Engineering & Control (BHEC)

The referenced submittal has been stamped "**Make Corrections Noted**". Our comments are as follows:

1. We acknowledge the response letter from Browns Hill Engineering & Control (BHEC) included in this submittal. We take no exception to the majority of the responses, except for the following items.
 - a. Regarding Comment No. 3.i., the analog inputs requested for the speed indication of the three WAS pumps were not included in this resubmittal. The BHEC response indicating VFDs will not be controlling the WAS pumps is correct, but only for initial operation of the project. Future planning concepts specified in the Project Drawings include the ability to replace the WAS pump motor starters with VFD units. Therefore, when this future starter replacement occurs, the VFD speed indication will be required. Please add the three additional analog inputs for the WAS speed indication as previously requested for future use.
 - b. Comment No. 3.l.: We acknowledge the coordination for the control capabilities of the flow control valve actuators resulting in the use of a single analog output signal to control the modulation of the valves from 0% to 100%. Please verify this control scheme will still be flow rate based, and how the valve position will be calculated and/or related to flow through the valve.
 - c. Comment No. 3.bb.: It appears the Hypochlorite Room alarm beacon digital output has not been added to the I/O list. Please review and revise accordingly.
2. We take no exception to the Instrument List-Pumping and Disinfection Building provided in this submittal, including the revision of the NPW flow meter to a 3" magnetic flow meter.

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3. Please address the following items regarding the Pumping and Disinfection Building PLC I/O List:
 - a. Revise the pump number designation from No. 1 to No. 3 in the description column for the valve actuator position and valve actuator open items of RAS Pump No. 3.
 - b. Revise the description for the valve actuators in auto item of Recycle Pump Nos. 1 through 4 to indicate these items as future.
 - c. Add the Hypochlorite Room alarm beacon digital output under the instrumentation I/O subcategory per previous comment No. 1.b.
 - d. Revise the NPW flow meter description to delete the reference to a Badger meter. In addition, delete the note of possible high speed counter for this NPW flow meter so that it functions in the same fashion as all other magnetic flow meters.

4. Please revise the Control Wiring Diagram Drawings according to the following items:
 - a. The digital output indicated in the Pumping and Disinfection Building PLC I/O List for Secondary Clarifier No. 1 shutdown and Secondary Clarifier No. 2 shutdown do not appear to be accounted for in the wiring diagrams. Please revise accordingly.
 - b. Delete the NPW Water Pump No. 5 shut down command digital output shown on submittal drawing PD/7.
 - c. Revise the future Digester Decant Pump No. 3 current draw description shown on submittal drawing PD/10 to read Digester Decanter Pump No. 2.

Please call if you should have any questions.

Sincerely,



Mark A. Morton, P.E.

MAM/kmw

ec (letter only):

Mr. Jim Heckman, Manager, LFMSDD, lfmanager@lfmsdd.org

Ms. Cindy Murray, Office Manager, Fountain Sanitation District, fsdistrict@fsd901.org

Mr. Jeff Burst, Project Supt., Weaver Construction Management, Inc., jeff@weavercm.com

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cc (letter only): Mr. Jerry Miller, Resident Project Representative, GMS, Inc.