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March 14, 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.:	05500-009
Date of Submittal:	February 3, 2012
Title:	Aeration Basin/Digester Stairs
Specification Section:	05500 – Metal Fabrications
Manufacturer:	CSM Industrial Constructors

The referenced submittal has been stamped "**No Exception Taken**", "**Make Corrections Noted**" and "**Revise and Resubmit**". Our comments are as follows:

1. We acknowledge the WCMI comments provided on page 2 of the shop submittal.
2. Sheet S-6: **No Exception Taken**
3. Sheet S-7: **Revise and Resubmit**
 - a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.
 - b. The fabricator has made note to the Engineer that there may be a potential code violation. Per the project specifications, the maximum rise per step is 7 inches. The concrete and placement of the stringer and C-channel must be modified accordingly to provide for a maximum rise per step to equal 7 inches maximum.
4. Sheet S-8: **Revise and Resubmit**
 - a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.

- b. Detail 2/AB-7 represents a typical stair section at two different stair locations. The top of concrete elevation shown in the elevation view may vary. The Contractor must verify the as-constructed elevations of all concrete surfaces at each location.
5. Sheet S-9: **No Exception Taken**
 6. Sheet S-10: **Revise and Resubmit**
 - a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.
 - b. As previously noted, Detail 2/AB-7 represents stairs at two stair locations. The top of concrete elevations must be verified at each location to confirm all elevations.
 - c. The bottom step has a rise of $7\frac{3}{16}$ inches, where 7 inches is the maximum. The Contractor must make all necessary modifications to adjust concrete, stair stringers, etc., to provide for a maximum of 7 inches of rise per the project specifications.
 7. Sheet S-11: **No Exception Taken**
 8. Sheet S-12: **Revise and Resubmit**
 - a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.
 9. Sheet S-13: **Revise and Resubmit**
 - a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.
 - b. The fabricator has questioned whether the 4-inch clearance is required for the top anchor. Per the Construction Drawings, the anchor should be placed 4 inches below the top of concrete elevation.
 - c. The concrete section shown below the landing and stairs is shown extending well beyond support column 17C1. We request this concrete section be shortened to extend approximately ½-foot beyond the last anchor for the column. The General Contractor should make note of this change.
 10. Sheet S-14: **No Exception Taken**
 11. Sheet S-15: **No Exception Taken**
 12. Sheet S-16: **No Exception Taken**

13. Sheet S-17: **No Exception Taken**

- a. Per the shop note provided on the drawing, the 1½-inch aluminum I-bar grating with non-slip surface should be fabricated to fit actual field conditions once the grating frame has been constructed.

14. Sheet S-18: **Revise and Resubmit**

- a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.

15. Sheet S-19: **Make Corrections Noted**

- a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.
- b. The fabricator has provided a note on the drawings indicating the Engineer to verify the downhill elevation of the stoop. We request the fabricator work with the General Contractor as the Contractor is ordering the stairs and placing the concrete. The General Contractor must provide all necessary as-constructed elevations needed by the fabricator.

16. Sheet S-20: **No Exception Taken**

17. Sheet S-21: **No Exception Taken**

18. Sheet S-22: **No Exception Taken**

19. Sheet S-23: **No Exception Taken**

20. Sheet S-24: **No Exception Taken**

21. Sheet S-25: **No Exception Taken**

22. Sheet S-26: **No Exception Taken**

23. Sheet S-27: **Revise and Resubmit**

- a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.

24. Sheet S-28: **Revise and Resubmit**

- a. The plan view of the stair indicates 1½-inch aluminum I-bar non-slip treads will be utilized. All stair treads must be serrated aluminum tread. This also applies to the elevation section view.

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- b. The concrete pad under the stairway and top landing is shown extending beyond the landing at the top of the stair. We request the Contractor modify the shop drawings and the details of the drawing shown on Sheet AB-9 to extend the concrete to 6 inches beyond the last anchor bolt.

25. Sheet S-29: **No Exception Taken**

26. Sheet S-30: **No Exception Taken**

27. Sheet S-31: **No Exception Taken**

28. Sheet S-32: **No Exception Taken**

29. Sheet S-33: **No Exception Taken**

30. Sheet S-34: **No Exception Taken**

31. Sheet S-35: **No Exception Taken**

32. Sheet S-36: **No Exception Taken**

- a. A note on the drawing requests the Engineer provide the stair elevation, design, etc. We recommend the fabricator contact the Contractor who is purchasing the equipment and request the Contractor provide the as-constructed conditions of the secondary clarifier walkway and concrete slab at the base.

33. Sheet S-37: **No Exception Taken**

Please call if you should have any questions.

Sincerely,



David R. Frisch, P.L.S.

DRF/kmw

ec (letter only):

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

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cc: Mr. Jerry Miller, Resident Project Representative, GMS, Inc.