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April 11, 2018

Ms. Monica Jarrett
City of Greensboro, Department of Water Resources
2602 South Elm-Eugene Street
Greensboro, NC 27406

Subject: TZO WRF Ash Clarifier Project – Change Order No. 1

Dear Ms. Jarrett:

We discussed additional engineering and construction phase services effort related to the T. Z. Osborne Water Reclamation Facility (TZO WRF) Clarifier Project with City Staff on April 6, 2018. Following that discussion, we are submitting this letter with the proposed scope and cost of additional professional services related to the February 23, 2017 Supplemental Agreement between the City of Greensboro (City) and CDM Smith Inc for your review and approval. The additional engineering effort is presented herein.

Scope of Services

CDM Smith Inc (Engineer) provided additional professional engineering, design and permitting services (Task 1, Task 2, and Task 3) as described in the Scope of Work for Engineering Services. The additional services provided are summarized below.

- **Existing ash press replacement with a new belt filter press (Amendment 1):** design and engineering calculation re-work to support the change from the basis of design rotary press to a new belt filter press. The preliminary engineering (basis of design) memorandum will be modified to reflect the changes. The Engineer will attend one coordination meeting with the City's belt filter press design consultant and will communicate otherwise with them by email and phone.
- **City TRC permitting and approval (Amendment 1):** The Engineer will prepare a set of construction plans for submittal to the City's TRC group. The Engineer will use the previously-approved TZO WRF Stormwater Management Plan as a basis for the submittal, including the Stormwater Management Plan prepared by Hazen and Sawyer and associated plan sheets submitted in 2014 for the improvements project. The Engineer will add the proposed ash clarifier work to the Stormwater Management Plan and will update the total calculations of built-upon area as needed. It is assumed that the Engineer will respond to one set of comments from the City's TRC group, and that only one revision will be needed.



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- **Incinerator Facility Operation and Flows Entering Clarifiers (Amendment 2):** design and engineering calculation re-work to support the change from the basis of design to provide additional clarifier overflow drain capacity to handle two incinerators burning ash simultaneously. It was assumed in the scope of work that there would be access to connect the clarifier drain to a manhole for the plant drain. A new manhole will be required to conform to the new design requirement. The drawings and specs will be modified accordingly.

The following changes will be made to the services during bidding and construction (Task 4) and the Resident Project Representative (RPR) services (Task 5).

- **Construction Administration:** Engineer will make 6 visits to the site, to attend meetings or observe progress, rather than the 9 visits that were in the original scope (credit for reduction by 3 site visits). Work on processing pay applications will be deleted from the Engineer's scope, while the Engineer's field representative (RPR) will provide input on progress, processing of the pay applications will be by others (credit for office engineering portion of pay applications). The construction duration in the original scope assumed a 9 month contractor schedule while the contract documents included a 12 month construction duration, so Engineer will provide project management for an additional 3 months of construction (adder).
- **Resident Construction Representative (RPR):** Engineer shall provide, through Engineer's Subcontractor, RPR services for an additional 3 months of construction (adder) for a total of 10 months budgeted at 20 hours per week.

Budget

The Engineer will perform the additional services described above for a lump sum cost of \$42,970 based on the cost breakdown below. This is inclusive of all labor and expenses associated with the Scope of Services described herein.

▪ Amendment 1 (Letter Submitted 10/19/2017)	\$14,800
▪ Amendment 2 (Letter Submitted 12/28/2017)	\$ 3,500
▪ Construction Administration	(\$3,600)
▪ <u>RPR Services</u>	<u>\$28,270</u>
TOTAL	\$42,970





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Method of Payment

For the services described herein, which are in addition to the original Contract (Task 2) services, the Engineer will invoice the City for the additional services as a not-to-exceed compensation amount of \$42,970.00. Partial payments shall be made to the Engineer by the City on a monthly basis in proportion to the percentage of work completed and the balance of payment made when the work is completed. The total contract amount will be increased to \$363,970.

Schedule

The time period for construction administration services will be 12 months.

Terms of Agreement

Terms and conditions for the work are as described in the February 23, 2017 Supplemental Agreement.

We appreciate the opportunity to submit this Scope of Services, and we look forward to continuing to work with the City on this project. Please contact me if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Butcher". The signature is stylized with a large initial "J" and a long horizontal stroke.

James Butcher, P.E.
Sr. Project Manager
CDM Smith Inc.

cc: Elijah Williams, City of Greensboro
Jay Guffey, City of Greensboro
Kevin Irby, CDM Smith

