



Memorandum

To: Honorable Mayor and Members of the City Council
Administration and Public Works Committee

From: David Stoneback, Public Works Agency Director
Lara Biggs, P.E., Bureau Chief – Capital Planning / City Engineer
Paul Moyano, P.E., Senior Project Manager

Subject: Treated Water Storage Replacement Project
Engineering Services (15-55)
Approval of Change Order No. 2

Date: June 15, 2017

Recommended Action:

Staff recommends that City Council authorize the City Manager to execute Change Order No. 2 to the agreement for the Treated Water Storage Replacement Project Engineering Services to CDM Smith (125 South Wacker Drive, Suite 600, Chicago, IL) in the amount of \$58,932.00. This will increase the total contract amount from the current contract price of \$1,269,798.00 to \$1,328,730.00. There is no time extension associated with this change order.

Funding Source:

Funding will be from the Water Fund, Capital Improvement Account 513.71.7330.62145-733107, which has an FY 2017 budget allocation of \$3,920,000.

Staff is in the process of applying for a low-interest loan from the Illinois Environmental Protection Agency (IEPA). The loan offer is only given after the design has been finalized and the contractor has been selected for construction. If the City is successful in obtaining the loan, eligible engineering fees will be funded by the loan.

Livability Benefits:

Built Environment: Manage water resources responsibly

Reduce Environmental Impact: Improve energy and water efficiency

Health and Safety: Enhance resiliency to natural and human hazards

Background:

On January 11, 2016, the City Council awarded the engineering services for the treated water storage replacement to CDM Smith. Currently, CDM Smith is working on concept planning and preliminary design. The existing treated water storage tank is located beneath a Northwestern University (NU) parking lot at the southwest corner of Lincoln Street and Campus Drive. The City has been coordinating closely with NU as the university continues construction of a new 5-story dormitory in the adjacent lot west of the reservoir.

On January 23, 2017, the City Council approved the first change order to the CDM contract for additional engineering to mitigate the impact of the proposed storage tank construction to existing adjacent University buildings.

Analysis:

A significant component of the reservoir is the addition of a new booster pump which will increase the usable storage from the reservoir by 1.2 million gallons (or 31% of the existing usable capacity). The new pump will also improve the overall efficiency of the water distribution system by better controlling variation in system pressure.

The electrical equipment needed to run the pump was anticipated to be modest and housed within an existing storage closet at the water plant. However, final equipment selection was larger than anticipated and exceeds the space available in the existing closet. On March 9, City staff met with CDM engineers from various disciplines to identify a new space for the equipment at the water plant. The most efficient location identified was the front section of an existing garage along Lincoln Street. However, additional work is needed to convert the space into a safe electrical room that was not anticipated in the original concept. Specifically:

- Architectural improvements, including modifications to the public facade of the building which will need to be coordinated with the Evanston Historic Preservation department.
- Structural improvements, including and repairs to the existing floor slab and a new wall.
- Plumbing, including relocation of existing plumbing currently passing through the space.
- HVAC, including more extensive climate control required for size of the equipment and space.
- Construction Phase Services, including participation of additional disciplines for review of shop drawings and construction inspection.

A summary of the project funding is as follows:

Item	Amount
Original Contract Amount (Awarded by City Council on January 11, 2016)	\$1,174,685.00
Current Contract Amount	\$1,269,798.00
Change Order No. 2 (Under Consideration)	\$58,932.00
Revised Total Contract Amount	\$1,328,730.00
FY2017 Budget Allocation	\$3,920,000.00

Legislative History:

City Council awarded the contract to CDM Smith on January 11, 2016.
City Council authorized Change Order #1 on January 23, 2017.

Attachments:

Change Order No. 2
Change Order Proposal from CDM Smith

**CITY OF EVANSTON
CHANGE ORDER**

Order No. 002
Date: April 10, 2017
Agreement Date: January 14, 2016

PROJECT: Treated Water Storage Replacement
OWNER: City of Evanston
CONTRACTOR: CDM Smith

The following changes are hereby made to the **AGREEMENT**:

Additional engineering related to the design and construction of a new electrical room to house the drive for the emergency pump to be installed in the proposed clearwell. Services are described in the attached Proposal for Design of New Electrical Room Modifications letter by CDM dated April 10, 2017.

Original CONTRACT PRICE :	\$	<u>1,174,685.00</u>
Current CONTRACT PRICE adjusted by previous CHANGE ORDERS	\$	<u>1,269,798.00</u>
Total change in CONTRACT PRICE for this CHANGE ORDER <u>002</u>	\$	<u>58,932.00</u>
The CONTRACT PRICE including this CHANGE ORDER will be	\$	<u>1,328,730.00</u>

Original COMPLETION DATE	<u>May 31, 2018</u>
Current COMPLETION DATE adjusted by previous CHANGE ORDERS	<u>May 31, 2018</u>
Total Change in CONTRACT TIME for this CHANGE ORDER	<u>none</u>
The COMPLETION DATE including this CHANGE ORDER will be	<u>May 31, 2018</u>

Accepted by
(Contractor):



CDM Smith

6/15/17

Date

Approved by
(Owner):

City of Evanston

Date



April 10, 2017

Paul Moyano, P.E., PMP
Senior Project Manager – Water and Sewer
City of Evanston, Public Works Agency
Lorraine H. Morton Civic Center
2100 Ridge Avenue
Evanston, Illinois 60201

Subject: Treated Water Storage Replacement Project (RFP 15-55) Proposal for Design of New Electrical Room Modifications

Dear Mr. Moyano:

In response to your request, and for your consideration, CDM Smith is pleased to provide this proposal for services related to the design and construction phase services for the development of a new electrical room at the Evanston Water Treatment Plant (WTP).

Scope of Services

CDM Smith understands that the City of Evanston (City) wishes to create a new electrical room to house the new Clearwell 9 emergency pump variable frequency drive (VFD). This new electrical room would be retrofit into a portion of an existing garage structure and would be constructed as part of the Clearwell 9 replacement project. Previous evaluations had assumed that the electrical equipment associated with this new emergency pump would be retrofit into the existing pump station facilities at the Evanston WTP. We understand that the proposed new electrical room improvements would include a new masonry separation wall, modifications to the existing door and window openings, structural improvements to the base slab, modifications to existing plumbing, new HVAC systems, and new VFD. The proposed scope of services modifications includes the following:

- **Detailed Design Engineering Services for New Electrical Room Modifications**

Architectural:

Architectural design drawings are anticipated to include: plan view; elevation views; room schedules; and details. Architectural specifications for the improvements are anticipated to include: masonry; sealants; hollow metal doors and frames; hardware; and painting. In addition, CDM Smith assumes two coordination meetings will be required with the Evanston Historic Preservation department to discuss the proposed doorway and window modifications.



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Structural:

Structural design drawings are anticipated to include: floor modifications required to address the spalling concrete of the existing floor slab; details for the new masonry separation wall; demolition details; and details for the window/door modifications. No additional structural specifications are anticipated to be required from the original project scope.

Plumbing (Mechanical):

Plumbing design drawings are anticipated to include: relocation of water piping and accessories; rerouting of roof drain piping; rerouting of service sink vent piping; and demolition of compressed air outlet. Plumbing specifications are anticipated to consist of piping requirements for the modifications. This scope of work does not include modifications to the existing fire protection system.

HVAC (Mechanical):

HVAC design drawings are anticipated to include: plan, section, and detail drawings for the addition of new intake louver, wall-mounted exhaust fan (within existing window location), split system air conditioning unit, and steam unit heaters. HVAC specifications are anticipated to consist of HVAC equipment and appurtenances.

- **Construction Phase Services for New Electrical Room Modifications**

This scope includes the review of contractor's shop drawing submissions and request for information (RFI's) related to the scope of the new electrical room as described herein. CDM Smith designers will inspect the finished installations and contribute to punch list development.

Proposed Project Fee

In consideration of the aforementioned proposed scope of services, CDM Smith proposes to perform the defined Tasks for the not to exceed fees shown below:

- Detailed Design Engineering Services for New Electrical Room - **\$47,151**
- Construction Phase Services for New Electrical Room - **\$11,781**

Compensation will be on an hourly basis, in accordance with the attached hourly billing rate schedule, and will include reimbursement for travel, work product reproduction, and express mail. An estimate of labor effort breakdown is included as an attachment.



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Please call either Mark or myself directly should you have any questions or request any additional information regarding our proposal revision. We thank you in advance for your consideration.

Very truly yours,

A handwritten signature in blue ink that reads "Chris Martel".

Chris M. Martel, P.E., BCEE, LEED AP
Vice President
CDM Smith Inc.
Attachment

A handwritten signature in blue ink that reads "Mark White".

Mark C. White, P.E., BCEE
Project Manager
CDM Smith Inc.

City of Evanston

Treated Water Storage Replacement Project - Design of New Electrical Room Modifications

April 10, 2017

Proposed Project Tasks and Fee

Task	Description	Structural Engineers	Architects	Mechanical Engineers	Labor Hours	Labor Dollars	Other Direct Costs
3	Design Engineering						
	Subtotal Hours	46	140	164	350		
	Subtotal Dollars	\$6,845	\$17,794	\$22,512		\$47,151	\$0
6	Construction Administration						
	Subtotal Hours	0	44	41	85		
	Subtotal Dollars	\$0	\$5,872	\$5,909		\$11,781	\$0
	Totals Hours	46	184	205	435		
	Totals Dollars	\$6,845	\$23,666	\$28,421		\$58,932	\$0
	TOTAL ENGINEERING FEE					\$58,932	

Notes:

- 1 Includes credit for structural work that would have been associated with installing the VFD within the existing pump station.
- 2 Includes credit for HVAC calculations that would have been associated with installing the VFD within the existing pump station.