

Department of Public Works – Engineering Division

MEMO

TO: Utilities Committee

FROM: Paula Vandehey, Director of Public Works
Sue Olson, Staff Engineer
Pete Neuberger, Staff Engineer

DATE: August 7, 2013

RE: Amend (Amendment #4) 2011G Stormwater Consulting Services contract with GRAEF for the Appleton East Stormwater Storage project by an amount not to exceed \$33,744.

The Department of Public Works staff requests approval to amend the referenced contract by an amount not to exceed \$33,744. This will increase the contract amount from \$223,194 to \$256,938.

The Phase 1 construction of the Appleton East Stormwater Storage project has presented several unexpected challenges. One of the challenges is cracking of the concrete StormTrap pieces. There are seven categories of cracks that are being addressed. While an inspection by GRAEF's structural engineer yielded no concerns of catastrophic failure or the need to replace any units, some cracks could affect the longevity of the structure and the performance of the waterproofing. Some of the cracks will require repairs in order for StormTrap to provide the lifetime structural warranty identified in their contract. GRAEF will provide review by their structural engineer to verify the repair procedures proposed by StormTrap.

It is unclear when the cracks occurred and what caused them. GRAEF, StormTrap, and Radtke Construction are continuing discussions to determine this. Part of the discussion is modifying the backfill operation for Phase 2.

Another challenge was installation of the water proofing system. Upon installation, it was determined that the Stormtrap unit joints did not fit together as was anticipated by the waterproofing supplier, CETCO, and the waterproofing installer, Midwest Industrial Coatings (MIC). Alternate CETCO products were evaluated and put in place in order to maintain the CETCO and MIC warranty. Design changes in the manufacturing of the StormTrap units are proposed to better accommodate the water proofing system for Phase 2. The changes will need to be coordinated with MIC to verify that the waterproofing method will not invalidate the 30-year waterproofing warranty being transferred to the city. The warranty is contingent upon an agreement with MIC to regularly inspect the waterproofing throughout the life of the system.

Additional problems that occurred during the StormTrap installation included not receiving the correct pieces at the correct time from the StormTrap or MIC plants, requiring double or triple handling of the pieces by Radtke, and leakage through the water proofing of the seams between the units, requiring leak repairs. GRAEF is assisting in evaluating responsibility for these types of issues during Phase 1 and appropriate changes needed for Phase 2 to reduce these problems.

The City holds separate contracts with StormTrap and MIC to obtain savings in sales tax, which would have been

paid had the vendors been subcontracted by Radtke. A result of this multi-contract arrangement is increased management and oversight required by the city and GRAEF.

The relocation of the sanitary lateral to the school, as approved by change order in June 2013, and the Phase 1 parking lot layout, requires a design modification of the connection point between Phase I and Phase 2 of the StormTrap units and the public storm sewer due to soil condition and actual location of the sanitary lateral.

To date, GRAEF staff has provided Construction Related Services under the original 2011G contract. GRAEF has assisted City staff and the various contractors in working through these challenges. In order to continue their support to complete Phase 1 of the project and authorize StormTrap production of the Phase 2 units, the following additional scope of services is proposed:

Phase 1 Construction Related Services (\$14,760)

GRAEF will provide the following additional services, on an as-needed basis, for completion of the Phase 1 construction:

- Provide additional project support
- Perform up to five additional construction site visits and/or attend additional meetings
- Provide review and recommendations related to structural repairs
- Provide on-going assistance in evaluating Phase I construction issues identified above
- Provide assistance for Phase 1 final payments and project closeout

Phase 2 (John Street parking lot) design modifications (\$18,984)

- Review proposed StormTrap plan revisions
- Review proposed waterproofing revisions from Midwest Industrial Coatings (MIC)
- Review proposed modifications to backfilling procedures
- Modify design of storm sewer connection due to sanitary lateral
- Prepare specification revisions for Radtke Construction related to above items
- Review proposed change orders related to design modifications
- Revised modeling and report per Phase 2 plan revisions
- Attend up to four meetings with City staff, StormTrap, Radtke, and MIC related to design changes

This request is consistent with the approved 2013 stormwater consulting budget for Construction Related Services and Modeling for Construction projects. A separate contract for Construction Related Services is planned for 2014 and included in the 2014 budget request. That contract will be brought forward for approval at a later date.

Therefore, the Department of Public Works requests that the Utilities Committee approve amending the 2011G Stormwater Consulting Services contract with GRAEF for the Appleton East Stormwater Storage project by an amount not to exceed \$33,744.