

**Resolution 19-036**

**RESOLUTION TO AUTHORIZE THE EXECUTION OF CHANGE ORDER 1 TO CONTRACT NUMBER 40, FINAL CLARIFIERS REPAIR PROJECT**

**WHEREAS**, the Rockaway Valley Regional Sewerage Authority (hereinafter the "Authority") entered into Contract 40 for the Final Clarifiers Repair Project with Tomar Construction Services, Inc., 6 Spruce Meadows Drive, Monroe, New Jersey (hereinafter the "Contractor"); and

**WHEREAS**, certain additions to the contract tasks are required to be made, namely, clarifier draft tube modifications and local control panel modifications, as more specifically set forth in the attached correspondence, dated March 6, 2019 from Mark A. Bean, P.E., CGP, LEED AP, FIGP, Principal Engineer, (Kleinfelder) to the Authority's Executive Director, JoAnn Mondsin; and

**WHEREAS**, the changes referred to in the above referenced correspondence are formalized in the Contract Change Order No. 1, dated March 06, 2019, and reflect a total increase in contract value of \$56,882.67 or approximately 1.02% of the original contract award as follows, and a non-compensable increase the contract time by 7 days for a revised contract time of 637 days; and

<b>Item #</b>	<b>Description</b>	<b>Cost</b>
1	Clarifier Draft Tube Modifications	\$21,062.80
2	Local Control Panel Modifications	\$35,819.87
	<b>Total Change Order Cost</b>	<b>\$56,882.67</b>

**WHEREAS**, the Authority has reviewed the Contract Change Order attached hereto and made a part hereof, and is satisfied that it meets the requirements of N.J.A.C. 5:30-11.3, and

**WHEREAS**, funds are available therefore from line item EIT 40.

**NOW, THEREFORE, BE IT RESOLVED** by the Rockaway Valley Regional Sewerage Authority as follows:

1. Subject to receipt of New Jersey Department of Environmental Protection approval, the Authority hereby approves Change Order No. 1 in the amount of \$56,882.67.
2. Upon receipt of New Jersey Department of Environmental Protection approval, the Executive Director is hereby authorized and directed to execute a Contract Change Order substantially in the form as that attached hereto, in the foregoing amount.
3. This Resolution shall take effect as provided by law.

## CERTIFICATION

I hereby certify that this Resolution was adopted at a meeting of the Rockaway Valley Regional Sewerage Authority held on March 14, 2019.

On motion of Glenn Corbett

Second by Michael Guadagno

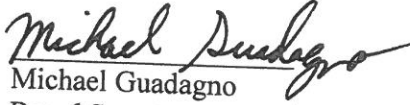
And a Roll Call Vote as Follows:

Yeas: ((8) Cegelka, Corbett, Guadagno, Isselin, Lowell, Recchia, Rossi, Schorno

Nays: (0) None

Abstain: (0) None

Absent: (2) Andes and Zuppa

  
Michael Guadagno  
Board Secretary



March 6, 2019

Via Email & Copy Via USPS

Ms. JoAnn Mondsinì  
Executive Director  
Rockaway Valley Regional Sewerage Authority  
RD #1, 99 Greenbank Road  
Boonton, New Jersey 07005-9602

**RE: FINAL CLARIFIERS REPAIR PROJECT  
RVRSA CONTRACT NO. 40; NJEIT LOAN PROJECT S340821-07  
CHANGE ORDER RECOMMENDATION –  
CO #1 – CLARIFIER DRAFT TUBE MODIFICATIONS & LOCAL CONTROL PANEL  
MODIFICATIONS**

Dear Ms. Mondsinì:

Pursuant to our inspections and consequent negotiations with the Contractor, Tomar Construction Services, Inc. (Tomar), Kleinfelder is recommending that the Authority approve Change Order #1 to effect modifications to the construction of the new final clarifiers, as subsequently described. This Change Order #1 would **INCREASE** Contract cost by the amount of **\$56,882.67** and **INCREASE** Contract Time by **7 days**. Background and other pertinent information related to this Additional Work, to share with your Infrastructure Committee and your larger Board of Commissioners, is presented below.

### Item 1 – Clarifier Draft Tube Modifications

#### ***Background***

The suction-lift style clarifiers that are specified “draft” or lift settled sludge from the bottom of the clarifier to be either returned to the process or wasted. Often, the various draft tubes that remove the sludge (8 per clarifier) require some measure of throttling or adjustment both to respond to changes in loading conditions and work to maintain a sludge blanket of uniform thickness. A means of throttling the sludge withdrawal is required.

#### ***Contract Requirements***

The Contract requirements are based upon the standard way in which the specified equipment manufacturer provides for throttling of the draft tubes. The Contract requires that the manufacturer provide a “choke tube” that throttles flow from the draft tube to 50% and that four (4) choke tubes be provided per clarifier. The one key requirement is that

the means of throttling be accomplished from the clarifier bridge while the unit is in operation.

### ***Modifications Requested (& Partially Implemented)***

The specified requirements afford for throttling of only half of the draft tubes in the clarifier and, further, providing for only 2 points of throttling, either full open (100%) or choked (50%). The choke tubes are placed by hand into position in the sludge trough while it is operating by leaning through the bridge rails and inserting the tube, so, technically, this manner of adjustment is performed from the bridge while the clarifier is in operation. While this is the manner in which the specified manufacturer achieves throttling, it is clearly not ideal from an operational (process) perspective nor from a safety perspective.

The supplied equipment manufacturer provided their "standard" means of throttling which met (or actually improved upon) the letter of the specifications but not necessarily the intent of the specifications. The supplied manufacturer provided a slide (or orifice) plate at every draft tube, which afforded full throttling (0% - 100%) on all 8 draft tubes. The plates are able to be adjusted using a long t-handle wrench from the clarifier bridge. Unfortunately, the slide plates are on the bottom of an active sludge trough, which precludes direct viewing of the mechanism while the clarifier is in operation.

RVRSA tasked the supplied manufacturer to provide a solution that maintained full throttling on all 8 draft tubes but afforded true operability from the bridge while the clarifier was in operation. The manufacturer responded with a very viable solution that met with RVRSA's approval. This information is included in the supporting materials. The solution entails replacing the provided slide plates in favor of a rotating plate assembly that provides for operation from the bridge as well as viewing of a gauge indicating the percentage open of the tube from the bridge.

In an effort to not further stress an already-compromised project schedule, the manufacturer expedited the design and fabrication of these modifications. The draft tube "valves" for the first clarifier were manufactured and shipped for immediate replacement so the unit could be placed into operation without the need to take it down later for modification. Future sets of valves for the remaining clarifiers will be received so that they may be installed in lieu of the standard, provided slide plates during the construction of the clarifier.

The design, engineering, fabrication, and installation of the first 8 valves (for the first clarifier that is already constructed and awaiting startup/turnover to RVRSA) were diligently performed by the Contractor in Good Faith, as directed in the field by the Resident Project Representative (RPR) and as was necessary to mitigate disruption to the Work. The remaining 24 valves (for the remaining 3 clarifiers) will be fabricated and shipped in the coming weeks for installation during the normal course of construction.

***Cost & Contract Time***

After a series of negotiations, the manufacturer agreed to write off a significant portion of their costs involved in this modification. Only a minor amount of engineering and fabrication costs were included, with the majority of cost passed through only for materials and shipping. Labor is only a minor component of the overall cost, which includes swapping the mechanisms on the currently-constructed clarifier and only a minor differential in labor cost for installation of the new valves in lieu of the standard mechanisms for future clarifiers. The costs are detailed in the supporting materials.

The final negotiated cost of all Additional Work associated with these modifications is **\$21,062.80** (\$5,265.70 per clarifier, including OH&P). The costs include all material, equipment, and labor as well as Contract-allowable percentages for overhead and profit (OH&P).

Pursuant to extended negotiations with the Contractor, Kleinfelder recommends a non-compensable adjustment to the Contract Time of **7 calendar days** for the disruption associated with this (elective) Additional Work, which KLF finds reasonable and appropriate based upon the chronology of events, re-design time, procurement of materials, and the time required to actually perform the Work. There is **NO** monetary cost associated with this time adjustment.

As a point of note, this item has not been previously included in the running Change Order log for this project, as it presented itself after the last iteration of the log.

**Item 2 – Local Control Panel Modifications*****Background***

The new clarifiers are specified to include a new control panel at the control chamber for local control/operation of each clarifier (and appurtenant systems, e.g. scum pumps, drain pumps, etc.).

***Contract Requirements***

The local control panels (LCP's) are specified to be provided by the clarifier equipment manufacturer to effect both starting and control of the clarifier equipment. The specification requires both 480V starting equipment as well as low voltage (120V) controls to be present in the local panel and to perform specific functions as detailed in the specifications. The specifications are for the manufacturer's "standard" control panel plus a small number of additional controls as detailed. Further, the panel was to include some extra dedicated space for future controls to be added by RVRSA at a later date (namely miniCAS relays (pump failure relays) for existing scum pumps).

### ***Modifications Requested***

Originally, RVRSA was reluctant to modify the standard specifications of the specified manufacturer in the hopes that it increased their chance of the Contractor submitting the specified equipment. As is known, an “or equal” manufacturer was submitted. Accordingly, RVRSA then sought to make beneficial modifications to the LCP’s via a vis removing all 480V (high voltage) starting gear and moving it to the new MCC-12, where it reasonably belongs. These changes were made with Tomar, with all credit for equipment removed allocated to the commensurate increase in cost of the MCC-12, resulting in a net-zero change in cost to the Contract.

However, during the process of orchestrating the relocation of the 480V equipment, various other operational and controls concerns presented themselves, and these items were not previously identified during the design phase of the project.

Accordingly, KLF’s electrical engineer worked directly with RVRSA to identify appropriate, cost-effective, beneficial changes to the LCP’s, inclusive of incorporating the “future” controls that were to be added by RVRSA at a later date. KLF then conveyed the requested changes to Tomar and negotiated with Tomar with regard to cost, time, etc. The attached supporting documentation details the changes requested, which will result in LCP’s that more appropriately provide for RVRSA’s full and proper operation and control of the new clarifiers and their appurtenant systems. The new LCP’s will also provide an added measure of safety with regard to reduced arc-flash requirements as a result of removing the 480V components from the panels.

As the LCP’s have become much more “custom” and specifically address RVRSA’s needs, Tomar (via their subcontractor Thomas Controls) will provide for the fabrication of the new LCP’s in lieu of having a “standard” panel from the clarifier manufacturer. Tomar performing this work themselves not just affords for the required level of customization, but also allows them to be much more timely in the design and fabrication of the panels. At this juncture of the project, the schedule is already stressed. With Tomar assuming fabrication of the panels, no additional delay is anticipated.

### ***Cost & Contract Time***

The total negotiated cost for this specific item of Additional Work is **\$35,819.87** (\$8,954.97 per clarifier, including OH&P), and this cost represents only the additional costs beyond what is required per the Contract Documents. The costs include all material, equipment, and labor as well as Contract-allowable percentages for overhead and profit (OH&P).

The Contractor is neither seeking adjustment to Contract Time nor compensable delay for this Work.

As a reference, this item has previously been included in our running Change Order Log, dating back to 02/05/2019. In the 02/05/19 log, \$50,000.00 was carried for this Work. Since that date, KLF has successfully negotiated an additional savings of over \$14,000.00, resulting in the final cost noted above.

### Total Change Order Cost

The negotiated cost for performance of all requested Additional Work, is as summarized below:

<i>Item #</i>	<i>Description</i>	<i>Cost</i>
1	Clarifier Draft Tube Modifications	\$21,062.80
2	Local Control Panel Modifications	\$35,819.87
<b>TOTAL COST</b>		<b>56,882.67</b>

Kleinfelder has reviewed the submitted costs and has found them both acceptable and, where applicable, in accordance with the Contractor's certified payrolls, invoiced materials amounts, actual labor expended, and Contract-allowable OH&P percentages. For some items, as may be previously discussed, the Contractor has diligently performed the Work on Good Faith, at RVRSA's request and as necessary to mitigate further disruption to the Work.

### Contract Time

To date, there have been no prior adjustments to the Contract Time. This Change Order #1, should it be approved, will **increase Contract Time by 7 days (all non-compensable)**. The Contract Time, pursuant to this Change Order #1 would provide for a revised total time of **637 days**.

The original date of Contract Completion was June 6, 2019. This date has not been previously adjusted. This Change Order #1, should it be approved, will adjust the date of Contract Completion to **June 13, 2019**.

### Funds Availability

As you are aware, the Project is funded through a loan by the New Jersey Environmental Infrastructure Trust. As such, your total loan amount includes a contingency in the amount of 5% of the total Contract cost. Your original Contract cost for this project is \$5,594,000.00. Based on this amount, your total loan amount included a contingency in the amount of \$279,700.00. To date, no prior Change Orders have been submitted. Accordingly, the contingency is sufficient to fund this Additional Work.

Based upon the progress of the project to date, remaining work to be completed, and the potential for future Change Order work to present itself, it is anticipated that sufficient contingency funds (**\$222,817.33**) will remain even after approval/execution of this Change Order.

March 6, 2019

The Work anticipated by this Change Order fits the purpose and description of Work typically allowable and acceptable by NJDEP under the contingency and projects funded through the NJEIT.

It is our understanding that this Change Order is due for more formal discussion at your upcoming Infrastructure Committee meeting on February 28. Kleinfelder will make itself available to facilitate discussion and assist you and the Directors at that time should you request such assistance. The costs provided by Tomar and other supporting information have also been attached for your use and reference.

It is our recommendation that the Authority draft and execute a resolution formally authorizing this Change Order and adjusting the Contract Amount from its current amount of \$5,594,000.00 to a new amount of **\$5,650,882.67** and the Contract Time from its current duration of 630 days to a new duration of **637** days. Kleinfelder will then forward all requisite paperwork, inclusive of NJDEP's "Contract Modification Proposal and Acceptance" form (4 partially-executed copies of which are enclosed for RVRSA execution), for processing by NJDEP.

It is our pleasure to be of continued service to the Authority in the administration of this important construction contract. Should you have any questions or require any further information, please do not hesitate to contact me directly via telephone at (609) 454-4570 or via email to [mbean@kleinfelder.com](mailto:mbean@kleinfelder.com).

Sincerely,



Mark A. Bean, P.E., CGP, LEED AP, FIGP  
Principal Engineer

Enclosures:

NJDEP Contract Modification Proposal and Acceptance Form CCS-002 (as partially executed by Tomar Construction Services, Inc., & Kleinfelder: 3 pages x 4 copies)  
Supporting documentation re: Change Order #1, Item #1  
Supporting documentation re: Change Order #1, Item #2  
Supporting documentation – RVRSA Contract #40 Change Order Log dated 03/06/2019

c: R. Bocchino - RVRSA  
S. Allen - RVRSA  
T. Bradley, w/o enclosures  
C. Ferguson, w/o enclosures  
2045U, w/enclosures