

Resolution 15-080

**RESOLUTION OF THE ROCKAWAY VALLEY REGIONAL SEWERAGE AUTHORITY AUTHORIZING EXECUTION OF A PROFESSIONAL ENGINEERING SERVICE CONTRACT FOR DESIGN SERVICES FOR REPLACEMENT OF CLARIFIER MECHANISMS AND ASSOCIATED MODIFICATIONS**

**WHEREAS**, a need exists for the procurement of professional engineering services in order to design the replacement of the RVRSA Clarifier Mechanisms and associated modifications to the Clarifiers; and

**WHEREAS**, the Rockaway Valley Regional Sewerage Authority (the "Authority") has received two quotations for the performance of these services. A proposal dated September 2, 2015, for professional engineering services from Timothy D. Bradley, P.E., Kleinfelder LLC, having an office at 321 Wall Street, Princeton, New Jersey ("Kleinfelder"), which is marked "Schedule A" and attached hereto and made a part hereof, for the performance of design services for the replacement of the clarifier mechanism and associated modifications, and a second proposal from Jerry Note, P.E., CH2M, having an office at 119 Cherry Hill Road, Suite 300, Parsippany, NJ 07054-1102, in the amount of \$300,000 +/- 10%.; and

**WHEREAS**, the RVRSA desires to authorize Kleinfelder, Inc. to undertake such services as set forth in the proposal for the same dated September 2, 2015, attached hereto and made a part hereof, in an amount not to exceed \$99,260 without prior authorization; and

**WHEREAS**, the Local Public Contracts Law (N.J.S.A. 40:11-1 et seq.) authorizes contracts for the provision of "Professional Services," which may be awarded without public advertising and competitive bidding, provided a brief notice of the nature, duration, service and amount of contract is published, and that the Resolution and contract are kept on file and available for public inspection.

**WHEREAS**, funds are available for these purposes at line item 14-553-001 Clarifier Repairs and Equipment; and

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

1. The Rockaway Valley Regional Sewerage Authority recognizes that Kleinfelder has an established reputation in the field of engineering matters related to the services set forth in the letter proposal attached hereto at Schedule A from Timothy D. Bradley, P.E., Kleinfelder to JoAnn Mondisini, Executive Director, RVRSA dated September 2, 2015, and recognizes that they possess specialized

abilities and resources to provide the expert engineering services necessary to meet the Authority's needs.

2. The Executive Director of the Rockaway Valley Regional Sewerage Authority is hereby authorized and directed to execute a contract for professional services, in a form acceptable to the Executive Director and Counsel, between the Rockaway Valley Regional Sewerage Authority and the firm of Kleinfelder, having an office at 321 Wall Street, Princeton, New Jersey, for Professional Engineering Design Services for the Clarifier Mechanism Replacement and Associated Modifications, at a cost not to exceed \$99,260, to be calculated on a reimbursable basis in accordance with the letter proposal dated September 2, 2015, attached hereto at Schedule A, and conditioned upon the submission by Kleinfelder of its New Jersey Business Registration Certificate and Business Entity Disclosure Certification.
3. This contract is awarded without competitive bidding as a "Professional Service" under the provisions of the Local Public Contracts Law, N.J.S.A. 40A:11-5.
4. A notice of contract award shall be published in the official newspaper, a brief notice stating the nature, duration, service and amount of the contract, and that the Resolution and contract are on file and available for public inspection at the Authority and the clerk's office of the municipalities creating the Authority.
5. This Resolution shall take effect as provided by law.

#### CERTIFICATION

I do hereby certify that this Resolution was adopted at a regular meeting of the Rockaway Valley Regional Sewerage Authority held on September 10, 2015

on motion of: Glenn Corbett

second by: Robert Schaefer

ROLL CALL VOTE:

YEAS: (9) Andes, Cegelka, Corbett, Guadagno, Lowell, Recchia, Schaefer, Schorno and Secco

NAYS: (0) None

ABSTAIN: (0) None

ABSENT: (1) Vincitore



*Michael Guadagno*

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Michael Guadagno  
Board Secretary

Resolution 15-081

RESOLUTION TO AUTHORIZE PAYMENT OF VOUCHERS

Be it resolved by the Rockaway Valley Regional Sewerage Authority that vouchers totaling \$ 647,937.65 being approved for payment on the accounts below:

Total:           \$ 647,937.65

This Resolution was adopted at the regular meeting of the Rockaway Valley Regional Sewerage Authority held on September 10, 2015

On the motion of Glenn Corbett

Second by: Michael Guadagno

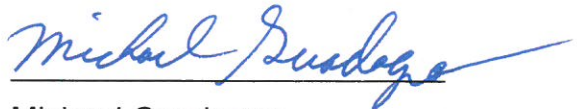
And a Roll Call Vote as follows:

Yeas: (9) Andes, Cegelka, Corbett, Guadagno, Lowell, Recchia, Schaefer, Schorno and Secco

Nays: (0) None

Abstain: (0) None

Absent: (1) Vincitore



Michael Guadagno  
Board Secretary



September 2, 2015

VIA EMAIL

JoAnn Mondsini  
Executive Director  
Rockaway Valley Regional SA  
RD #1, 99 Green Bank Road  
Boonton, NJ 07005

**RE: PROPOSAL FOR DESIGN OF CONTRACT 40 FINAL CLARIFIER UPGRADE PROJECT**

Dear Ms. Mondsini:

As requested by Carrie Feuer, I have prepared this proposal for Kleinfelder East, Inc., together with AECOM, to provide design and financing assistance services for the Contract 40 Final Clarifier Upgrade Project. AECOM will serve as a subconsultant to Kleinfelder for the structural and electrical design of improvements. Background information related to this project is presented below followed by our proposed Scope of Work, Schedule and Cost Proposal.

**BACKGROUND**

RVRSRA desires to upgrade the existing final clarifiers due to the age and deteriorated condition of the collector mechanisms and other clarifier components, and to optimize final clarifier performance to enhance TSS removal and minimize the extent of future chemical addition required for supplemental chemical precipitation of phosphorus.

The circular collector mechanisms in the four (4) existing square concrete final clarifier tanks are Dorr-Oliver SZ/ RSR-9 III Squarax units that have been in operation since 1985. Recent inspections of the clarifier steel supporting structure and other components have documented extensive corrosion. In summary, there is a pressing need to replace the four clarifier mechanisms, and to implement other improvements including the following:

1. Convert the square basins to circular tanks by either casting a new circular wall within the existing square structures or filling in the corners of the square basins.
2. Add a density current baffle to each final clarifier.
3. Replace weirs and baffles utilizing corrosion resistant materials.
4. Replace walkways and handrails utilizing corrosion-resistant materials. Also continue the walkway from the center column of FC1 to the center column of FC2; same for FC3 & FC4. Walkways to be non-skid utilize FRP grating.
5. Replace aluminum ladders with corrosion-resistant metal stairs with non-skid open tread (2 total, one at either end).
6. Replace electrical components including conduit, wiring, receptacles and walkway-mounted lighting. It is assumed that the MCC will not be replaced as part of this project.
7. Replace scum tank drain valves.
8. Possible coating of concrete surfaces to maximize service life.

As the first step in obtaining funding for Contract 40 through the New Jersey Environmental Infrastructure Financing Program (NJEIFP), RVRSA, with Kleinfelder's assistance, submitted a Letter of Intent and Planning Documents to the NJDEP and NJEIT. These documents indicated an estimated construction cost of approximately \$3,000,000 for this project and a total loan amount of approximately \$4.1 million. The total loan amount included an Allowance for Planning and Design of \$490,000 which was calculated based on the standard NJEIFP formula.

The key objectives of the services now being requested by RVRSA are to prepare bid-ready drawings and specifications for Contract 40, and to further assist RVRSA in obtaining funding for this project through the NJEIFP. Kleinfelder's scope of work is structured to achieve these objectives.

### **SCOPE OF WORK**

Kleinfelder's proposed Scope of Work consists of the following tasks:

1. Preliminary Design
2. Final Design
3. Financing Assistance
4. Meetings and Site Visits
5. Project Administration and QA/QC

The specific work activities associated with each task are described in detail below.

#### **Task 1 – Preliminary Design**

The objective of preliminary design is to advance the design concept for improvements described in the Background section of this proposal to the point of establishing the detailed basis of design for each engineering discipline (i.e. process/mechanical, structural and electrical) including the development of preliminary drawings. Preliminary design will consist of the following activities.

##### ***Process/Mechanical***

- Prepare technical justification for utilizing the proprietary Ovivo Rapid Sludge Removal clarifier equipment. The technical justification will be in the form of a memo and will be used to support an RVRSA resolution approving the issuance of a proprietary specification.
- Evaluate cost versus benefit of optional stainless steel materials for the clarifier sludge removal equipment.
- Evaluate and recommend sizing, location and design-basis manufacturer for the density current baffles.
- Evaluate alternative materials of construction for the replacement weirs, baffles and handrails, and develop recommended options.
- Evaluate need for and options for replacing the scum tank drain valves.
- Prepared preliminary demolition drawings.
- Prepare preliminary site plan and process/mechanical drawings.

- Prepare preliminary construction cost estimate.
- Prepare draft and final Design Report.

### **Structural**

- Evaluate the two options for converting the square structure to circular tanks, i.e. casting a new circular tank within the square basins or filling-in the corners of the square basins such that the exposed face will serve as the inside face of the tank wall. The evaluation will consider the adequacy of the existing base slab to support the additional loads, impact on pressure relieve valves and hydrostatic uplift, etc. Under the first option, two alternatives will be evaluated for the void space remaining in the corners – fill with lightweight material or leave empty with a new slab on top.
- Evaluate options for integrating new laundries with the existing laundries.
- Evaluate the cost versus benefit of utilizing Sika or other coatings on the interior concrete surfaces.
- Prepare preliminary structural drawings.
- Prepare structural section of draft and final Design Report.

### **Electrical**

- Prepare preliminary electrical drawings.
- Prepare preliminary electrical construction cost estimate.
- Prepare electrical section of the draft and final Design Report.

The draft Design Report will be discussed with RVRSA during a Task 4 meeting. The Design Report will be finalized following the meeting and will serve as the basis for preparing the contract drawings and specifications. The final Design Report will also serve as the Engineer's Report for submission to the NJDEP and NJDEP as part of the NJEIFP Design Document Submission.

## **Task 2 – Final Design**

The objective of final design is to produce bid-ready contract drawings and specifications utilizing the basis for design established in the final Design Report. Final design will consist of the following subtasks.

### **2.1 Prepare Draft Drawings**

Kleinfelder will prepare approximately 90% complete contract drawings for RVRSA's review. It is anticipated that the following drawings will be prepared:

<b>Drawing</b>	<b>Description</b>
G-1	COVER SHEET WITH LOCATION MAP AND DRAWING LIST
C-1	WWTP SITE PLAN
M-1	MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES
M-2	PROCESS FLOW DIAGRAM AND HYDRAULIC PROFILE
M-3	DEMOLITION PLAN

M-4	DEMOLITION SECTION AND DETAILS
M-5	FINAL CLARIFIER PLAN
M-6	FINAL CLARIFIER SECTIONS
M-7	FINAL CLARIFIER DETAILS
M-8	MISCELLANEOUS DETAILS
S-1	STRUCTURAL NOTES AND ABBREVIATIONS
S-2	DEMOLITION PLAN AND DETAILS
S-3	FINAL CLARIFIER PLAN
S-4	FINAL CLARIFIER SECTIONS AND DETAILS I
S-5	FINAL CLARIFIER SECTIONS AND DETAILS II
S-6	STRUCTURAL STANDARD DETAILS I
S-7	STRUCTURAL STANDARD DETAILS II
E-1	ELECTRICAL SYMBOLS & GENERAL NOTES
E-2	FINAL CLARIFIER PLAN – EXISTING AND DEMOLITION
E-3	FINAL CLARIFIER PLAN – NEW WORK
E-4	ONE-LINE DIAGRAMS AND MCC
E-5	CONTROL SCHEMATICS AND SCHEDULES
E-6	ELECTRICAL DETAILS

Four (4) sets of draft drawings and the corresponding electronic files will be provided to RVRSA for review.

## 2.2 Prepare draft Specifications

Approximately 90% complete front-end, general and technical specifications will be prepared concurrent with the draft drawings.

Four (4) sets of 90% complete specifications and the corresponding electronic file will be provided to RVRSA for review.

RVRSA's comments on the draft drawings and specifications will be discussed during a Task 4 meeting.

## 2.3 Prepare final Construction Cost Estimate

A final construction cost estimate will be prepared based on material and quantity take-offs, vendor price quotes, hour estimates for various work activities and current prevailing wages. The target level of accuracy will be  $\pm 10\%$ .

## 2.4 – Prepare Bid-Ready Drawings and Specifications

The draft drawings and specifications will be finalized for bidding following a meeting with the RVRSA to discuss its comments on the draft drawings and specifications.

Kleinfelder will provide RVRSA with four (4) sets of the final contract documents and the corresponding electronic files. Additional sets for distribution to prospective bidders would be provided as part of a future Construction Administration Services agreement.



**Task 3 – Financing Assistance**

Kleinfelder will provide the following NJEIFP Assistance services:

- Prepare the loan application.
- Prepare the Project Sponsor SED Utilization Plan.
- Prepare and submit three (3) signed and sealed copies of the design documents and Engineer's Report to the NJDEP and upload electronic files to the NJEIT website.
- Interface with and respond to NJDEP review comments on the Planning Documents, Loan Application and Design Documents.
- Interface with RVRSA's Bond counsel.

**Task 4 – Meetings and Site Visits**

The following meetings and site visits are assumed.

- Meeting to discuss the draft Design Report followed by a site visit to confirm various as-built information pertinent to final design.
- Meeting to discuss the draft drawings and specifications.

**Task 5 - Project Administration and QA/QC**

In this task, Kleinfelder will provide general consultation with RVRSA regarding project status, technical issues, information needs, etc., and will perform internal QA/QC of deliverables.

**SCHEDULE**

Kleinfelder will execute our proposed Scope of Work such that bid-ready drawings and specifications are complete by February 16, 2016.

This schedule assumes that RVRA will review the draft Design Report within 2 weeks following receipt, and that it will review the draft drawings and specifications within 3 weeks following receipt.

**COST PROPOSAL**

Kleinfelder proposes to perform the scope of work described above on a time charged plus expense basis in accordance with the terms and conditions of our 2015 agreement for consulting services.

The estimated cost per task and total cost are presented in the table on the following page.

As shown in the table, the total estimated cost is \$99,260, which will not be exceeded without RVRSA's prior approval. This cost is substantially less than the NJEIFP calculated Allowance for Planning and Design of \$490,000 as described in the Background section of this proposal.

Task	Description	Cost
1	Preliminary Design	\$28,340
2	Final Design	
2.1	Prepare Draft Drawings	\$31,360
2.2	Prepare Draft Specifications	\$15,870
2.3	Prepare Final Construction Cost Estimate	\$3,740
2.4	Prepare Bid-Ready Documents	\$12,290
	<i>Task 2 Subtotal</i>	<i>\$63,260</i>
3	Financing Assistance	\$3,310
4	Meetings and Site Visits	\$2,320
5	Project Administration and QA/QC	\$2,030
	<b>Total</b>	<b>\$99,260</b>

We appreciate the opportunity to assist RVRSA with this important project. Please contact me at 609-454-4555, or by email at TBradley@Klienfelder.com, if you have any questions or need additional information.

Sincerely,



Timothy D. Bradley, P.E.  
Vice President

cc: C. Feuer