COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

June 14, 2017

Trinchera Irrigation Company
Attn: Wayne Schwab, Superintendent
610 Main Street
P.O. Box 41
Blanca, CO 81123

RE: Notice to Proceed – WSRF Grant - POGG1 2017-1040 Phase 2 – Engineering Services
Mountain Home Reservoir Dam Outlet Works Upgrade in the Rio Grande River Basin

Dear Wayne,

This letter is to inform you that the purchase order to assist in the above WSRF grant project has been approved. The documents attached to the email correspondence serve as your original contract documents.

With the executed agreement, you are now able to proceed with the project and invoice the State of Colorado for costs incurred through September 30, 2018. Please provide the project name, POGG1 number, and basin when corresponding with or invoicing for your project along with back-up documentation of cost incurred for the WSRF portion of the grant according to the original scope of work tasks. Upon receipt of your invoice(s), the State of Colorado will provide payment no later than 30 days after review and signed approval of the project manager.

Please refer to the WSRF Criteria & Guidelines on our website for the six month progress report and final deliverable requirements in order to avoid a delay in payment. A 30-day advance notice is required in the event you are seeking an amendment to the term of this agreement. An official letter of request to the CWCB project manager briefly describing the need for the extension, updated insurance certificates and updated schedule reflecting the specific tasks that require additional time to complete the project is required.

If you have any questions or concerns regarding the project, please contact Megan Holcomb, Project Manager at 303-866-3441 3222 or at Megan.holcomb@state.co.us. When submitting invoices and progress reports, please cc both the PM and myself at Dori.vigil@state.co.us. You can contact me at 303-866-3441 ext. 3250 for additional invoicing and payment disbursement questions.

Thank you.

Sincerely,

//s//

Doriann Vigil
Program Assistant II
O 303-866-3441 ext. 3250
1313 Sherman Street, Rm. 719, Denver, CO 80203
Dori.vigil@state.co.us / cwcb.state.co.com

Attachments

STATE OF COLORADO
Department of Natural Resources

ORDER
Number: POGG1 PDAA 201700001040
Date: 06/14/17
Description:
PDAA 2500 WSRF TRINCHERA IRRIGATION_ENGINEERING SERVCIES
Effective Date: 06/14/17 Expiration Date: 09/30/18

BUYER
Buyer:
Email:

VENDOR
TRINCHERA IRRIGATION COMPANY
PO BOX 41
BLANCA, CO 81123-0041

Contact: Tracy Kester, President
Phone: (719) 379-3467

**** IMPORTANT ****
The order number and line number must appear on all invoices, packing slips, cartons and correspondence

BILL TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

SHIP TO
COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

SHIPPING INSTRUCTIONS
Delivery/Install Date:
F.O.B:
VENDOR INSTRUCTIONS:

Line Item	Commodity/Item Code	UOM	QTY	Unit Cost	Total Cost	MSDS Req.
1	G1000		0	0.00	$70,000.00	☐

Description: PDAA 2500 WSRF TRINCHERA IRRIGATION_ENGINEERING SERVCIES

Service From: 06/14/17 Service To: 09/30/18

TERMS AND CONDITIONS
https://www.colorado.gov/osc/purchase-order-terms-conditions

DOCUMENT TOTAL = $70,000.00

EXHIBIT A

Statement of Work, Budget and Schedule
March 14, 2017

STATEMENT OF WORK

WATER ACTIVITY NAME
Phase II – Engineering Services for Mountain Home Reservoir Dam Outlet Works Upgrade

GRANT RECIPIENT – Trinchera Irrigation Company

FUNDING SOURCE – Water Supply Reserve Account - $70,000 Basin Account

INTRODUCTION AND BACKGROUND - Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

Trinchera Irrigation Company (TIC) will complete the Phase II engineering studies prior to undertaking the state-mandated repair and/or replacement of two and possibly all three gates at Mountain Home Reservoir. Gate #1 operates poorly and the other two have not been opened in several decades. TIC has a long-standing Agreement with Colorado Parks and Wildlife (CPW), the terms of which require TIC to make every effort to avoid emptying the reservoir or reducing its level lower than the survivor pool of 653 AF. TIC intends to preserve the conservation pool during construction. Mountain Home Lake is also part of a Colorado State Wildlife Area, providing valuable recreational and environmental assets in Costilla County, in which only 2% of the land is public. TIC is requesting $70,000 for the engineering studies required to move into Phase III implementation of the upgrade. Once the engineering is done, TIC will request Phase III funding for implementation. Deliverables include 1) Dam safety with reliable water level elevation management of the reservoir; 2) Improved water storage management and reduced storage loss; and 3) Protection of the CPW conservation pool to protect environmental, recreational and wildlife habitat assets.

OBJECTIVES
List the objectives of the project

1. To provide design and professional engineering services to the Trinchera Irrigation Company (TIC) for the Rehabilitation of the Mountain Home Dam Outlet Works.

2. To provide construction-cost estimates and evaluation of constructability.

3. To gather data and establish a plan to repair, upgrade or replace the gates at Mountain Home Reservoir in order to accomplish optimal operability of the outlet works of the reservoir.

4. To support TIC's objectives, in collaboration with CPW, TU, and other entities, to protect the recreation, environmental and wildlife habitat assets at the reservoir.

TASKS

TASK 1 – Feasibility Study

Task 1.1 Description of Task - Evaluation of Alternatives

Method/Procedure – Develop recommendations based on three alternatives discussed at TIC's Board meeting with EAI on October 4, 2016:

- Perform minor repairs to continue using the existing valves (do nothing alternative)
- Replace the three existing valves with 2 mechanically controlled valves
- Replace the three existing valves with two or three hydraulically operated valves

Review figures 1 and 2 (attached)
Review results of prior project reports and drawings
Review stability and seepage analyses

Deliverable – Develop recommendations for the following items

a) Current condition of the outlet works
b) Replacement of the existing valves with mechanically or hydraulically operated valves
c) Recommendation for the safe storage of water in the dam
d) Long term (5 year) improvements to valve chamber and low level outlet works

Task 1.2 Description of Task – Construction Cost Estimating

Method/Procedure - Develop a preliminary construction cost estimate for the selected improvements to the low level outlet works.

The cost estimate will be consistent with a Class 4 estimate as defined by the Association for the Advancement of Cost Estimating (AACE) Cost Estimating Classification System.

The cost estimate will provides a level of estimate consistent with the definition provided by the 10 percent design prepared by the Engineering Analytics' team.

Based on the guidance provided by the ACCE for Class 4 estimates, the overall reliability of the cost estimate is estimated to be between minus 25 percent and plus 50 percent.

EAI will work with Moltz Construction to identify constructability issues that will impact project feasibility and cost.

Deliverable - The cost estimate will be prepared using induvial line items that correspond to the specification numbering system used in the 16 Division format of the Specifications Institute (CSI).

Task 1.3: Description of Task - Loan Feasibility Study Report and CWCB Loan Application

Method/Procedure - EAI will prepare a draft report that summarizes the results of the above tasks. The report will include the results of the seepage and stability analyses, including recommendations to the State Engineer's Office for the safe storage of water for the existing outlet works and dam condition.

EAI will submit the draft report for review and comment and will incorporate edits and comments into a final report.

The final loan feasibility study report will be used to support preparation of a CWCB Water Project Loan Program application.

TASK 2 – Preliminary and Final Design

Task 2.1: Description of Task - Field Investigation

Method/Procedure - The EA team will conduct a site reconnaissance to obtain first-hand knowledge of the site conditions.

Deliverable - The site reconnaissance will build on the preliminary field investigation conducted by RJH Consultants.

Task 2.2: Description of Task - Preliminary Design

Method/Procedure - The design will be based on maintaining the reservoir level. This will require underwater bulkheading of the intakes.

The design will be prepared without entering the valve chamber, since there is continual flow from the existing valves.

EAI anticipates that some cost estimating will be necessary to evaluate alternatives that may be requested by TIC or the SEO. The design will address the following items:

- Repair of the primary outlet structure valve chamber and outlet tunnel
- Demolition of the existing valves
- Installation of new valves and controls on the dam crest
- Water control during construction

Deliverable - The following drawing and specifications submittals will be provided:

1) Preliminary design at 30% for review
2) List of specification
3) Construction schedule
4) Engineer's option of alternative construction costs

Task 2.3: Description of Task - Design Report

Method/Procedure - EAI will prepare a draft report for review by TIC and the SEO.

EAI will meet requirements of The Colorado SEO for preparation of a design report that identifies the site conditions and the design of proposed improvements.

Deliverable - EAI will finalize the report based on comments received.

Task 2.4: Description of Task - Final Design

Method/Procedure - The final design will incorporate the results of EAI's preliminary design of the low level outlet works.

EAI does not believe there is any part of the existing low level outlet works valves that can be reused or salvaged. EAI's concept for the low level outlet is shown on Figures 1 and 2.
The design will address the following items:

- Bulkhead of the intakes in the reservoir
- New low level outlet valves.
- Repairs to the walls and floor of the valve chamber.
- Repairs to the outlet tunnel walls and floor
- Manually operated mechanical or hydraulic controls at the dam crest

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using induvial line items that correspond to the specification numbering system used in the 16 Division format of the Specifications Institute (CSI).

Deliverable – EAI thus will provide a level of estimate consistent with the definition provided by the 50 percent design prepared by the Engineering Analytics' team.

Based on the guidance provided by the ACCE for Class 2 estimates, the overall reliability of the cost estimate is estimated to be between minus 10 percent and plus 15 percent.

EAI will provide the following drawings and specifications

1) Final Design completed to 80%
2) Technical Specifications in CSI format and Bid Schedule
3) Construction Schedule
4) Final Engineer's Opinion of Construction Costs

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

(Budget is in Excel format and is provided as a separate document)

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	BUDGET						
	TASK	Direct Expenses	Engineering Analytics Inc.	WSRA Basin Funds	Trinchera Blanca Foundation	TIC Matching Funds	Total Project Costs
Pre-NTP	TIC Administration	$4,588				$4,588	$4,588
Pre-NTP	Public Safety, Security, Contingency	$10,000			$10,000		$10,000
1	Feasibility Study (Pre-NTP)		$13,086			$13,086	$13,086
1.1	Evaluate Alternatives						
1.2	Construction Cost Estimates						
1.3	Loan Feasibility & Application						
2	Preliminary & Final Design		$72,326	$70,000	$2,326		$72,326
2.1	Field Investigation						
2.2	Preliminary Design						
2.3	Design Report						
2.4	Final Design						
	Totals	$14,588	$85,412	$70,000	$12,326	$17,674	
	Total Matching Funds				$30,000		$100,000

NTP 3rd Quarter 2017

SCHEDULE

Estimated Schedule – Phase II Engineering

(Phase III – Implementation)

		6 Months								Year 1					Year 2	
TASK			Jun-17	Week 1	Week 2	Week 3	Week 4	Month 2	Month 3	TIC Input	TIC Input	+ 2 weeks	+ 4 weeks	**Phase III – WSRA Grant & Secured Funding/Loan**	**Phase III CWCB Grant Proposal for Implementation & Funds/Loan Secured**	
	TIC Administration															
	Public Safety, Security, Contingency															
1	Feasibility Study (Pre-NTP)															
1.1	Evaluate Alternatives															
1.2	Construction Cost Estimates															
1.3	Loan Feasibility & Application															
2	Preliminary & Final Design															
2.1	Field Investigation															
2.2	Preliminary Design															
2.3	Design Report															
2.4	Final Design															
3	**Phase II Report by TIC to CWCB**															

FINAL BILLING AND REPORT TO CWCB - SEPTEMBER 30, 2018