# Ivins City Staff Report
# City Council Meeting 8/15/2019

Agenda Item: Discuss and Consider Approval of Tortoise Monitoring, Materials Testing, and Additional Engineering Design Services for the Red Mountain Dams Rehabilitation Project.

Submitted by: Thomas Jorgensen, P.E., Assistant Public Works Director

**Recommended City Council Action:**
**Approve expenditure of $91,971 for Tortoise Monitoring, Materials testing, and Additional Engineering Design Services for the Red Mountain Dams Rehabilitation Project.**

**BACKGROUND:**
As the Council may be aware, the City recently completed the Red Mountain Dam Rehabilitation project. This project included bringing the six dams along the base of the Red Mountain into compliance with the most recent safety regulations and current engineering standards for a high hazard class dam.

Bowen, Collins & Associates (BCA) was the design and construction management engineer for the project. As part of the project, BCA passed through subcontract costs for tortoise monitoring and materials testing services. The City will be fully reimbursed at 100% by the NRCS for both these items.

BCA also had additional design work on the two reinforced concrete spillway structures for Basins #4 and #6 during the design phase of the project. These two spillways were originally anticipated to be grouted riprap, but both designs were changed based on recommendations from Dam Safety and the NRCS. The NCRS has approved the additional work. Again, the City will be fully reimbursed at 100% by the NRCS.

The Contract Modification Form, submitted by BCA, has been included.

**FINDINGS AND ANALYSIS:**
The amounts for each of these items are summarized below:

Tortoise Monitoring - $34,988
Materials Testing - $26,988
Additional Design for Spillway Structures - $29,995

Staff recommends council approve the expenditure of $91,971.

**SUPPORT MATERIALS:**
- BCA Contract Modification Form

**FINANCIAL IMPACT:**
The expense has been budgeted.
GL 53-42-878: $91,971 (100% of this expense to be reimbursed by NRCS funding)

Respectfully Submitted: _____
Thomas Jorgensen, P.E., Assistant Public Works Director

Content Review: _____
Dale Coulam, City Manager

BOWEN COLLINS & ASSOCIATES

# CONTRACT MODIFICATION FORM

CONTRACT MODIFICATION 01

TO CONSULTANT: Bowen, Collins & Associates

PROJECT: Ivins Debris Basins 1-6 Rehabilitation Project PROJECT NO: 235-17-01

OWNER: Ivins City

**The following modification(s) to the Contract are hereby ordered (use additional pages if required):**
Design concrete spillway structures for the Debris Basin project.

Subcontract and manage testing services and tortoise monitoring services during construction.

**Reason for modification(s):**
BC&A was retained by the City to design and construct the Ivins Debris Basins 1-6 Rehabilitation Project. Based on feedback from the NRCS and Utah State Dam Safety, two spillways needed to be designed as concrete structures. Originally these spillways were expected to be grouted riprap. This change in spillway material required additional design effort. Additionally, the City has requested that BC&A subcontracts with and manages the material testing and tortoise monitoring services for the project.

**Attachments (list supporting documents):**
Additional Design and Construction Period Services SOW and Fee

| Contract Amount or Price | |
|---|---|
| Original | $219,753.00 |
| Previous Change Order(s) (Add/Deduct) | $0 |
| This Contract Modification (Add) | $91,971.00 |
| Revised Contract Amount | $311,724.00 |

| Ivins City | | Bowen, Collins & Associates | |
|---|---|---|---|
| By: | | By: | |
| Date: | | Date: | |

Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

20 NORTH MAIN, SUITE 107 • ST. GEORGE, UTAH 84770
TEL: 435.656.3299 • FAX: 435.656.2190

May 29, 2019

Tom Jorgensen, P.E.
Assistant Public Works Director
55 North Main
Ivins, Utah 84738

**Subject: Scope of Services for Additional CMS for the NRCS Debris Basin Rehabilitation Project**

Dear Tom:

During the construction of the NRCS Debris Basin Rehabilitation Project, some additional monitoring tasks were requested. These tasks include material testing, tortoise monitoring, and additional construction observation. The bulk of the work associated with these additional tasks will be performed by subconsultants.

## PROPOSED SCOPE OF SERVICES

The tasks we propose to complete and any limiting work or budgetary assumptions are summarized below.

**Task A: Tortoise Monitoring.** Bowen Collins and Associates (BC&A) will contract with Platt Environmental to perform tortoise monitoring in Basins 5 or 6. Platt Environmental will coordinate with BC&A personnel and with the contractor regarding the monitoring schedule. Monitoring includes sweeping through the project site to identify potential burrows for tortoises and to locate active tortoises. If a tortoise is found, Platt Environmental will notify the NRCS and will monitor the tortoise to ensure that it navigates through the construction site unharmed. Platt Environmental will also prepare a final report at the conclusion of the project documenting the monitoring effort.

**Task B: Materials Testing.** BC&A will contract with Landmark Testing and Engineering for material testing services during the construction of the project. Testing requirements are identified in the project specifications. Landmark Testing will coordinate with BC&A personnel and with the contractor regarding the testing schedule. Testing will consist of rebar inspection, obtaining concrete cylinders, testing concrete on-site, concrete placement observation, and soils compaction testing. Landmark Testing will prepare a report summarizing the testing results upon completion of the project.

**Task C: Overage of Design Budget.** BC&A went overbudget during the design phase of the project. The primary reason for going overbudget was the addition of two reinforced concrete spillway structures that were originally anticipated to be grouted riprap. Concrete structures were recommended due to NRCS and Utah Dam Safety concerns regarding grouted riprap and fuse plug spillway options. These concrete spillway structures required additional structural and geotechnical

design. There was also additional time spent responding to review comments related to these new concrete structures.

## COST SUMMARY

We propose to perform the scope of services on an hourly basis. We have tabulated estimated man-hours and costs to complete each task outlined in the scope of services defined above in Attachment 1.

We are willing to negotiate the scope of services, schedule, and fee if there is something in this proposal that does not meet your needs. We enjoy working with Ivins City and look forward to continuing to work with you on this project. Please call if you have any questions or need additional information.

Sincerely,
Bowen Collins & Associates, Inc.

Cody Moultrie, P.E.
Project Manager

Cc. Chuck Gillette, Ivins City
Lance Smith, NRCS
Todd Olsen, BC&A
Craig Bagley, BC&A

Attachments

**ATTACHMENT 1**

**NRCS Debris Basin Rehabiliation Project - Additional CMS**
**Ivins City**
**Engineering Man-hours and Fee Estimate**

Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

5/29/2019

| | | Office | | Techs | | Engineers | | | | | | | Subtotal Hours | Subtotal Labor | Subtotal Expenses | Expenses | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Labor Category | Account | Editor | Tech 3 | Tech 4 | Enviro. | CM | Struct. | Staff | PE | PM | PIC | | | | *Computer* | *Geotech* | *Enviro* | *Testing* | Total Cost |
| | Staff | Buhler | Hilbert | CAD | CAD | Tsandes | Williams | Cohen | Anderson | Moultrie | Olsen | Bagley | | | | | | | | |
| | Labor Rate | $72 | $89 | $107 | $112 | $146 | $140 | $155 | $119 | $119 | $152 | $182 | | | | | | | | |
| **Task** | **Task Description** | | | | | | | | | | | | | | | | | | | |
| **BID PERIOD/CONSTRUCTION** | | | | | | | | | | | | | | | | | | | | |
| | **Additional CMS Services** | **5** | **0** | **0** | **0** | **0** | **0** | **130** | **0** | **16** | **0** | **0** | **151** | **$ 22,414** | **$ 69,557** | **$ 1,057** | **$ 8,100** | **$ 34,200** | **$ 26,200** | **$ 91,971** |
| A | *Tortoise Monitoring* | *2* | | | | | | | | *5* | | | *7* | *$ 739* | *$ 34,249* | *$ 49* | | *$ 34,200* | | *$ 34,988* |
| B | *Materials Testing* | *2* | | | | | | | | *5* | | | *7* | *$ 739* | *$ 26,249* | *$ 49* | | | *$ 26,200* | *$ 26,988* |
| C | *Overage of Design Budget* | *1* | | | | | | *130* | | *6* | | | *137* | *$ 20,936* | *$ 9,059* | *$ 959* | *$ 8,100* | | | *$ 29,995* |
| | **Bid/Construction Sub-Total** | **5** | **0** | **0** | **0** | **0** | **0** | **130** | **0** | **16** | **0** | **0** | **151** | **22414** | **69557** | **1057** | **8100** | **34200** | **26200** | **$ 91,971** |
| | ***TOTAL HOURS*** | ***5*** | ***0*** | ***0*** | ***0*** | ***0*** | ***0*** | ***130*** | ***0*** | ***16*** | ***0*** | ***0*** | ***151*** | | | | | | | |
| | ***TOTAL COSTS*** | | | | | | | | | | | | | **$ 22,414** | **$ 69,557** | **$ 1,057** | **$ 8,100** | **$ 34,200** | **$ 26,200** | **$ 91,971** |

Expenses include:
Computer/Communications Charge at $7/labor hour
Mileage Charge at $0.75/mile
10% Markup on other project related expenses