

CHANGE ORDER NO. 1

DATED: May 13, 2020

TO: Burns & McDonnell

PROJECT: Hydroelectric Facility

PROJECT NUMBER: P18-272

OWNER: Town of Erie, Colorado

You are hereby requested to comply with the following changes from the Agreement.

DESCRIPTION OF CHANGES	DECREASE	INCREASE
	<u>Contract Price</u>	<u>Contract Price</u>
1 Construction Administration Services. See attached Exhibit A for Scope of Services and Exhibit B for Professional Engineering Fees.		\$ 166,158.00
	<u>                    </u>	<u>                    </u>
<b>TOTALS</b>	\$ -	\$ 166,158.00

**NET CHANGE TO CONTRACT PRICE:**

Original Contract Price:	<u>\$ 134,726.00</u>
Current Contract Price adjusted by previous Change Order:	<u>\$ 134,726.00</u>
Amount of this Change Order	<u>\$ 166,158.00</u>
New Contract Price, including this Change Order, will be:	<u>\$ 300,884.00</u>

**APPROVALS:**

Project Manager: \_\_\_\_\_  
Consultant: \_\_\_\_\_  
Public Works Director \_\_\_\_\_

Date: \_\_\_\_\_  
Date: \_\_\_\_\_  
Date: \_\_\_\_\_

## **EXHIBIT A SCOPE OF SERVICES**

### Contractor's Duties

During the term of this Agreement, Contractor shall perform the following duties, as directed by the Town:

#### **400 Construction Phase Engineering Services**

Contractor shall provide for general administration of the construction contract with the Construction Manager At Risk (CMAR), Garney Construction. Specific tasks included within the administration of the construction contract include the following services:

- 401 Final Documents – Prepare issued for construction documents, based on input from the Town and CMAR following the 90% review meeting. Final documents will be suitable for Town building permit submittal.
- 402 Preconstruction Conference – Schedule and conduct preconstruction conference. Prepare minutes of the proceedings of the conference and distribute copies to Owner and those in attendance.
- 403 Bi-Weekly Progress Meetings & Site Visits – Attended by the project manager to consult with the Town and CMAR during the construction period relative to general administration of the construction. Conduct visit of job site progress on same day as bi-weekly progress meeting. Conduct on-site observations of the work in progress to determine if the work is proceeding in accordance with the Contract Documents.

The estimated construction duration of 38-weeks will overlap with the on-going water treatment facility (WTF) expansion project by approximately 12-weeks. Therefore, our construction phase services for the hydroelectric facility will cover 26-weeks. Thirteen (13) bi-weekly progress meetings and site visits are included to continue to the end of the estimated hydro-electric facility construction period.

- 404 Compliance Site Visits – Specific discipline engineers to visit the site at times required to observe critical events or progress. Assumed as 2 additional site visits of 4-hour duration for one engineer. This may include work observation of building construction, HVAC, plumbing or electrical as required, exclusive of special inspections.
- 405 Special Inspections– Specific discipline engineers to visit as required by applicable codes to observe critical events or progress. Assumed as one 8-hour visit for drilled pier installation, three 4-hour visits for concrete (grade beams, base slab, equipment pads), three 8-hours days for masonry and two 8-hour days for roof installation. Special inspection for the following items:
  - a. Material review of high-strength bolts
  - b. Visual review of pre-tensioning
  - c. Material review of structural steel
  - d. Visual review of steel frame joint details
  - e. Material review of cold-formed steel deck material

- f. Visual review of concrete formwork
- g. Visual review of concrete reinforcement
- h. Visual review of cast in place concrete placement
- i. Visual review of cast in place concrete curing conditions/methods
- j. Visual review of size and placement of cast in place and post installed anchors
- k. Confirm compliance of masonry construction with approved documents
- l. Visual review of masonry size, placement, and conditions to conform with approved documents
- m. Visual review of grout space prior to placement and grout placement

406 Materials Testing Coordination –The Contractor will be responsible for materials testing, including density testing of subgrade, concrete materials testing and verification of properties, grout materials testing and verification of properties.

- a. The Contractor will be responsible for sub-contracting with a testing agency to perform materials testing to verify that the CMAR tests are in conformance with the specifications.
- b. Cost for material testing shall be covered by the Materials Testing and Drilled Shaft Observation Allowance.
- c. The CMAR will be responsible for weld inspections.

407 Construction Oversight and Residential Project Representative (RPR)

- a. Observe the progress and quality of the work as is reasonably necessary at various stages of construction to determine if the work is proceeding in general accordance with the Contract Documents. Keep the Town informed about the progress and quality of the portion of the Work completed.
- b. Review and monitor the progress schedule, schedule of shop drawings and other submittals prepared by CMAR and notify Town of concerns regarding acceptability.
- c. Attend meetings with CMAR and Town, such as preconstruction conferences, progress meetings, job conferences, and other project-related meetings, and prepare and circulate copies of minutes thereof, and keep Town advised, as necessary.
- d. Confirm that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate personnel.
- e. Maintain, at Contractor's field office, orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents including all Requests for Information, Construction Change Directives, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing submittals and other project related documents. Maintain an updated set of Contract Documents showing "Conforming to Construction Records" conditions based on the CMAR's records and the RPR's observations and inspections.
- f. Review checklists of work to be completed or corrected with a request for issuance of a certificate of substantial completion. Conduct a review with the Town to check conformance of the Work with the requirements of the Contract Documents and, if the checklists are accurate and complete, take the necessary action to document completion.
- g. Conduct a final inspection, accompanied by Town, prepare a final checklist of items to be

completed or corrected, and prepare documentation for transmittal to the Town as required to close out the Project, including:

- i. Consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment;
- ii. Affidavits, receipts, releases and waivers of liens or bonds indemnifying the OWNER against liens; and
- iii. Any other documentation required of the CMAR under the Contract Documents.
- iv. The estimated construction period of 38-weeks will overlap the on-going WTF expansion project by approximately 12-weeks. However, full time RPR services will not be required for the remaining 26-weeks. Assumed RPR effort is staggered to reflect site activities:
  - 8 weeks at 40 hours per weeks for building construction and yard piping
  - 6 weeks at 16 hours per week for periodic observation
  - 416 hours total

408 Submittal Review – Review (or take other appropriate action in respect of) Shop Drawings, Samples, and other submittals and data. A list of submittals will be prepared at the project outset to identify products used at the WTF expansion that will be incorporated into the hydroelectric facility. Assumes the majority of the submittals will be those previously approved under the on-going WTF project. Assumes 30 submittals at 2-hours per initial submittal and one hour each for 20 re-submittals.

409 Construction Administration Engineering Services:

- a. Review and respond to up to 12 requests for information (RFI) in writing. Prepare and issue supplemental Drawings and Specifications as reasonably necessary in response to RFIs. Maintain an orderly record of all RFIs, responses provided to the General Contractor, and documentation of each RFI's resolution.
- b. Review and inform Town of construction schedule.
- c. Review and prepare field orders as directed by Town.
- d. Review cost change proposals and provide office staff support for the project.
- e. Receive, review and transmit to Town, with written comments, operating and maintenance instructions, schedules, guarantees, or certificates required by the Contract Documents provide to Contractor by the CMAR or construction contractor, certificates of inspection, tests and approvals, and marked up record documents based on information provided by CMAR or construction contractor (including Shop Drawings, samples and other data approved as provided) which are to be assembled by Contractor in accordance with the Contract Documents to obtain final payment.
- f. Assumed as 5-hours per week over 26-weeks, spread across project manager and engineering disciplines

## **500 Post-Construction Phase Engineering Services**

Contractor shall provide for post-construction engineering services as follows:

- 501 Start-Up Assistance – Facility start-up shall be performed by the CMAR and the Town with Contractor as needed for operating recommendations. The Town’s Operation Staff shall oversee operations once raw water is introduced into the new facility. The CMAR shall complete instrumentation and control construction (installation and adjustment) including all items that require water to be present. Contractor shall help resolve start-up issues in a timely manner. Assumed as part-time support over 4-weeks of start-up.
- a. Pre-Start-Up Workshop: To aide in the start-up planning, the Contractor shall conduct a pre-start-up planning workshop with the Town and the CMAR prior to introducing water into each new process of the facility.
  - b. Equipment Operations Training: Equipment training requirements shall be included within the construction document specifications. The CMAR shall be responsible for ensuring that equipment vendors complete the training requirements as outlined in the specifications.
- 502 Final Inspection – Contractor shall conduct a final inspection and issue a final Certificate for Payment indicating that the Work is complete to the best of Contractor’s knowledge based on the Contractor’s limited scope of services set forth herein.
- 503 Operation and Maintenance (O&M) Manual Preparation – The O&M manual for the WTF expansion will be modified to include equipment added at the hydroelectric facility. This includes hydro-turbine, HVAC equipment and electrical systems.
- 504 Record Drawings – Contractor shall prepare conforming to construction record drawings of the constructed facilities. The final set of record drawings furnished shall be “Revised According to Construction Records” in accordance with records provided by Contractor’s RPR and CMAR. Deliverables:
- a. Draft Record Drawings: One (1) complete paper copy for review and comment by the Town.
  - b. Final Record Drawings: One full size paper copy and three (3) half size paper copies with a laminated covers (both front and back) and bound for easy page replacement and electronic versions in both PDF and AutoCAD format. In addition, Contractor shall provide the information required for entry into the Town’s GIS system in accordance with the current User Guide.

Exhibit B - Level of Effort

Client: Town of Erie  
Project: Water Treatment Plant Hydroelectric Facility - Construction Phase Services  
Date: **REVISED April 28, 2020**



Task	Lead Name Support Name Role Bill Rate	Pugh PM \$245	Morton Process \$151	Tessitore Tuttle Civil \$152	Dalglish Hundley Arch \$183	Zemlicka Dalglish Struc \$202	Olsen Mech \$213	Patwari Johnson EIC \$194	Various CAD/Office \$116	Canterbury Process Inspection \$151	Total Hours	Total \$	Expenses \$	Fees & Expense \$
	Task Series 400 - Engineering During Construction													
401	Final Document Preparation	2	16	8	6	6	4	12	24		78	\$ 12,392	\$ 496	\$ 12,887
402	Preconstruction Conference	4									4	\$ 980	\$ 39	\$ 1,019
403	Bi-Weekly Meeting Attendance & Site Visit	52									52	\$ 12,740	\$ 510	\$ 13,250
404	Compliance Visits					4		4			8	\$ 1,581	\$ 63	\$ 1,644
405	Special Inspections				24	36					60	\$ 11,654	\$ 466	\$ 12,121
406	Materials Test Coordination									8	8	\$ 1,208	\$ 48	\$ 1,256
407	Construction Oversight and Resident Project Representative									416	416	\$ 62,816	\$ 2,513	\$ 65,329
408	Submittal Review	2	24	2	6	16	6	24			80	\$ 14,668	\$ 587	\$ 15,254
409	Construction Admin Engineering	8	40	4	8	16	8	32	8		124	\$ 22,127	\$ 885	\$ 23,012
	Task Series 500 - Post-Construction Engineering													
501	Start-Up Assistance	4	8					16			28	\$ 5,286	\$ 211	\$ 5,497
502	Final Inspection	2								8	10	\$ 1,698	\$ 68	\$ 1,766
503	O&M Manual Preparation	2	8								10	\$ 1,698	\$ 68	\$ 1,766
504	Record Drawings		8	2	2	2	2	8	16		40	\$ 6,113	\$ 245	\$ 6,357
	Sub Total (hours)	76	104	16	46	80	20	96	48	432	918	\$ 154,960	\$ 6,198	\$ 161,158
	Sub Total (\$)	\$ 18,620	\$ 15,704	\$ 2,435	\$ 8,427	\$ 16,128	\$ 4,260	\$ 18,586	\$ 5,568	\$ 65,232	918	\$ 154,960	4.0%	\$ 161,158

Task	Notes	Materials Testing & Drilled Shaft Observation Allowance	\$ 5,000
402	Includes pre-construction meeting attendance, agenda and minutes		
403	Assumes bi-weekly meeting over 26 weeks (13 total)	Total	\$ 166,158
404	Assumes 2 additional 4 hour site visits for one engineer.		
405	Assumes one 8-hour visit for drilled piers, three 4-hour visits for concrete, three 8-hours days for masonry and two 8-hour days for roof installation		
407	Assumes 14 weeks in field: 8 weeks full 40h/week, 6 weeks 16h/week		
408	Assumes 30 submittals at 2 hours per initial submittal and 1 hours for 20 re-submittals		
409	Assumes 5 hours per week for 26 week period		