



Our vision of Coeur d'Alene is of a beautiful safe city  
that promotes a high quality of life and sound economy  
through excellence in government

## **PUBLIC WORKS COMMITTEE**

with

**Council Members McEvers, Miller & English**

**August 12, 2019, 4:00 p.m.**

### **AGENDA**

\*\*\*\*ITEMS BELOW ARE CONSIDERED TO BE ACTION ITEMS

- Item 1 Approval of Change Order #2 for Collection System Telemetry Upgrade – Mike Anderson, Wastewater Superintendent
  
- Item 2 Approval of Amendment No. 3 to Professional Services Agreement with HDR Engineering, Inc. for Tertiary Treatment Phase 2 Improvements – Mike Anderson, Wastewater Superintendent

**Library Community Room**  
**702 Front Street**

*The City of Coeur d'Alene will make reasonable accommodations for anyone attending this meeting who requires special assistance for hearing, physical or other impairments. Please contact Amy Ferguson, Public Works Committee Liaison, at (208) 666-5754 at least 24 hours in advance of the meeting date and time.*

## PUBLIC WORKS COMMITTEE STAFF REPORT

**DATE:** August 12, 2019

**FROM:** Mike Anderson, Wastewater Superintendent

**SUBJECT:** Approval of Change Order #2 for Collection System Telemetry Upgrade

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**DECISION POINT:** The Council may decide to approve Change Order #2 for the Cd'A Collection Telemetry Upgrade, which includes a change from ESTeem 195M radios to Esteem 210M radios and modifications associated with this change.

**HISTORY:** The Wastewater Utility began to upgrade the collections telemetry system in 2018 with the intent to reduce “loss of communication” issues with the current system. Issues with the selected Programmable Logic Control (PLC) resulted in Change Order #1. Change Order #2 was found to be necessary to allow communication between the Radio and the newly selected PLC.

**FINANCIAL ANALYSIS:** The original contract total was \$134,405. Change Order #1 was approved for \$34,250. Change Order #2 will add \$22,960.77 to the contract for a total of \$191,615.77. This project is funded as a portion of a multi-year SCADA upgrade project that budgeted \$215,000 for 2018 and \$200,000 in 2019. Change can therefore be accounted for by postponing other projects.

Other options, including an “adapter” that would allow communication between the new PLC and originally specified Radios proved more costly and possibly less reliable.

**PERFORMANCE ANALYSIS:** The intention of the upgrade is not only to prevent “nuisance” false alarms and the resultant overtime but to ensure the proper operation of the City’s eleven lift stations.

**DECISION POINT/RECOMMENDATION:** Council should approve Change Order #2 to the Cd'A Collection Telemetry Upgrade.

## **Change Proposal Request (CPR)**

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**CPR No.** #2

**CPR Date:** 2019.07.15

**Project:** CDA Collections  
Telemetry Upgrades

**Client:** City of Coeur d'  
Alene Wastewater  
Department

**Client Project No.** 15228

**TEI Project No.** 15228

**Date Sent to  
Contractor:** \_\_\_\_\_

**Date Received  
from Contractor** \_\_\_\_\_

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### **Description of the proposed changes:**

Proposed changes as itemized below:

**1) Radio Installation Modifications (Site Specific)**

- a. Per the submitted BOM and list of modifications included in the CPR #1, Item #2 response (MOD004), provide installation and all required equipment for completion of the aforementioned work.

**2) Radio Net Cost Change**

- a. Provide pass through, net cost change, of thirteen (13) 195M radios at \$900 per radio, per ESTEEM correspondence dated 03/27/2019 provided by Eric Marske in exchange for (13) 210M radios.
- b. Provide all appurtenances for connection to the new radio with the existing hardware as required for operation. Per the aforementioned correspondence, hardware additions should be minimal with power supply connectors and termination pieces varying from the original contract requirements for successful operation of the radio telemetry system.
- c. Modifications shall include all pertinent equipment and/or hardware required for the installation of the 210M in place of the 195M for proper operation of the respective equipment inside the local control panel.
- d. Per the submitted BOM, Engineer letter and Contractor response (MOD005), provide installation and all required equipment for completion of the aforementioned work.

All work shall be in accordance with the terms, stipulations, and conditions of the original Contract Documents.

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**Change Proposed by:** Grady J. Weisz, P.E.  
Trindera Engineering, Inc.

Title: Electrical Engineer

**Contractor Provide Information:**

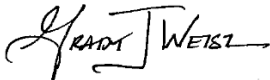
Add: \$ 22,960.77  
 Deduct: \$  
 Net Changed: \$ 22,960.77  
 Contractor: Power City Electric, WC-18041  
 By: Steve Gilbertz  
 Date: 2019.06.11

**Engineer's Review:**

TEI Recommendation:	<input checked="" type="checkbox"/>	Approval
	<input type="checkbox"/>	Non Approval
By: Grady J. Weisz, P.E.	Date:	2019.07.15
Reason for Non Approval:		

Engineer's Comments: \_\_\_\_\_

Engineer's Approval Signature:



**OWNER'S ACTION:**  ACCEPTED  NOT ACCEPTED

BY: Mike Anderson, Acting Capital Program Manager Date: 2019.07.15

Owner's Comments: \_\_\_\_\_



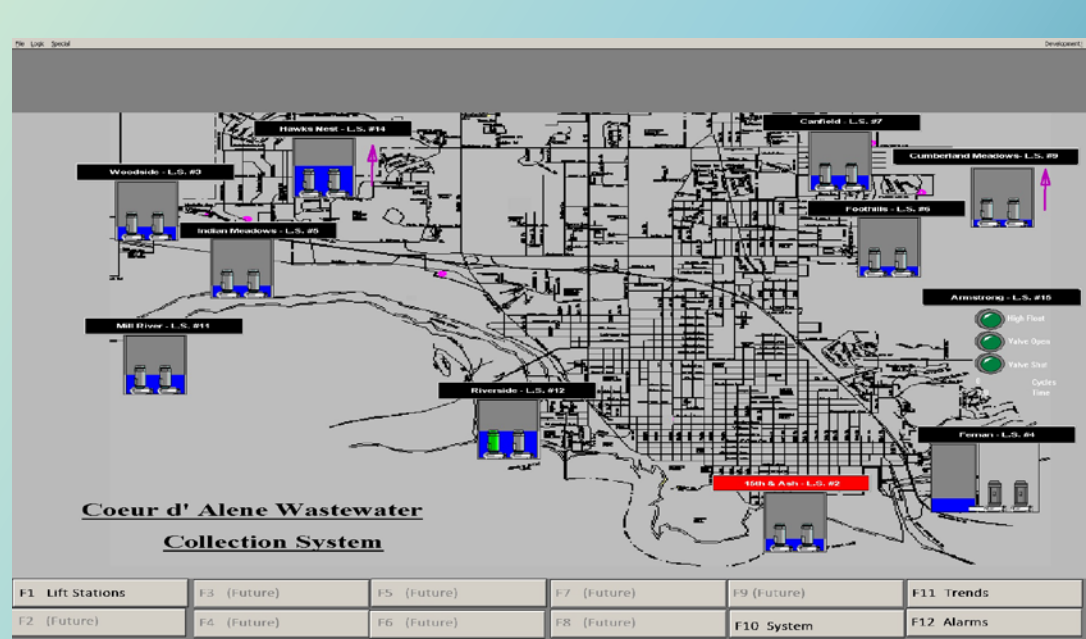
City of  
**Coeur d'Alene**  
IDAHO

# **Collections System Telemetry Upgrade**

**August 12, 2019**



- The Telemetry system monitors 11 wastewater lift stations throughout the City.
- This is accomplished through a network of computers (PLC's) and radios for transmitting data.

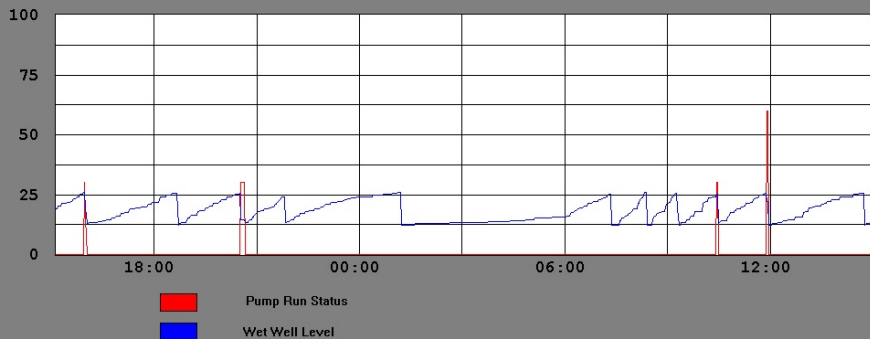
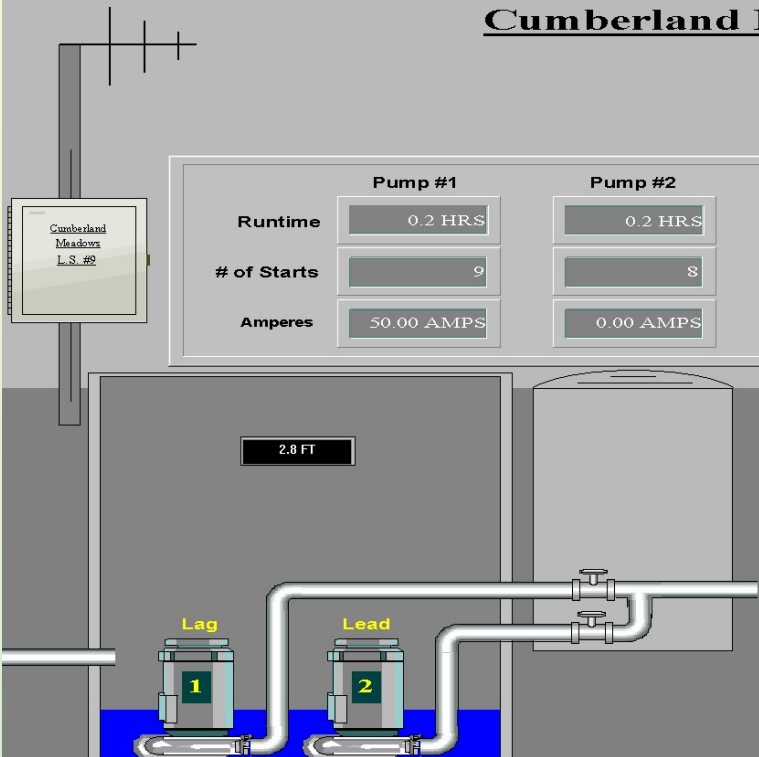


# Cumberland Meadows- L.S. #9

## Status / Alarms

Pump #1 Fail to Start	OK
Pump #2 Fail to Start	OK
Pump #1 HOA in AUTO	OK
Pump #2 HOA in AUTO	OK
120 VAC Control Power	OK
120 VAC Surge Supsressor	OK
480 VAC Power	OK
RTU Communication	OK
Lift Station Alarming	ENABLED
(Future)	
(Future)	
(Future)	

	Pump #1	Pump #2
Runtime	0.2 HRS	0.2 HRS
# of Starts	9	8
Ampers	50.00 AMPS	0.00 AMPS



F1 Lift Stations	F3 (Future)	F5 (Future)	F7 (Future)	F9 (Future)	F11 Trends
F2 (Future)	F4 (Future)	F6 (Future)	F8 (Future)	F10 System	F12 Alarms



## PLC



## Radio



**PUBLIC WORKS COMMITTEE STAFF REPORT**

**DATE:** August 12, 2019

**FROM:** Mike Anderson, Wastewater Superintendent

**SUBJECT:** Amendment No. 3 to Professional Services Agreement between City of Coeur d’Alene and HDR Engineering, Inc. for Tertiary Treatment Phase 2 Improvements, dated September 15, 2015.

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**DECISION POINT:**

The Council may wish to approve proposed Amendment No. 3 to the Agreement between the City of Coeur d’Alene and HDR Engineering, Inc. for Professional Services for the design and construction of Tertiary Treatment Phase 2 Improvements. Amendment No. 3 will provide for additional field services including field observations and materials testing/special inspections. Amendment No. 3 will be billed on the same basis as the original Agreement with an estimated additional cost of \$139,750.

**HISTORY:**

The September 15, 2015 Professional Services Agreement between the City of Coeur d’Alene and HDR Engineering, Inc. for Tertiary Treatment Phase 2 Improvements scope of services consisted of the design and bidding phases necessary for this project. Amendment No.1 to this Agreement identified and defined the Professional Consulting Services for Services during Construction for this project. Amendment No. 2 provided the design phase services that were required for the construction of the bridge crane.

Agreement (9/15/2015)	Design Services	\$ 1,710,810
Amendment No. 1 (1/3/2017)	Construction Phase Services	\$ 2,113,441
Amendment No. 2 (2/26/2018)	Bridge Crane Design	\$ 33,701
Amendment No. 3	Additional Field Services	\$ 139,750

**PERFORMANCE ANALYSIS:**

HDR Engineering, Inc. has successfully performed similar professional services to the satisfaction of the Coeur D’Alene Wastewater Department.

**FINANCIAL ANALYSIS:**

Funding for this amendment will come from the current FY 2018-2019 City of Coeur D’Alene Wastewater Operating Fund budget. Funds have been budgeted and are available in account # 031-052-4954-7925.

**RECOMMENDATION:**

Approve Amendment No. 3 for additional professional design services and authorize the Mayor to execute Amendment No. 3 to the September 15, 2015 Professional Services Agreement Between City of Coeur d’Alene and HDR Engineering, Inc. for these additional professional services.

Attachments:

Amendment No. 3, Exhibit A – Scope of Services

**AMENDMENT NO. 3**

**to**

**PROFESSIONAL SERVICES AGREEMENT**

**Between**

**CITY OF COEUR D'ALENE**

**And**

**HDR ENGINEERING, INC.**

**For**

**TERTIARY TREATMENT PHASE 2 IMPROVEMENTS**

The Agreement, made and entered into the 15<sup>th</sup> day of September, 2015, between the City of Coeur d'Alene, Kootenai County, Idaho, a municipal corporation organized and existing under the laws of the state of Idaho, hereinafter referred to as the "City," and HDR Engineering, Inc., a Nebraska corporation, with its principal place of business at 412 E. Parkcenter Blvd., Suite 100, Boise, Idaho 83706, hereinafter referred to as the "Consultant," is hereby amended on the 20<sup>th</sup> day of August, 2019, as set forth herein.

**W I T N E S S E T H:**

WHEREAS, the City Tertiary Treatment Phase 2 Improvements is nearing completion; and

WHEREAS, in order for the City to accept the project, observations and testing must be completed to determine conformance of the completed construction with the requirements of the Contract Documents, and to monitor the quality of the work; and

WHEREAS, Consultant is available and is willing to provide personnel and services to accomplish the required observations and testing according to the City's schedule; and

WHEREAS, the original Agreement contains provisions in Section 10, for the City to authorize extra services in connection with this project.

NOW, THEREFORE, in consideration of the terms, conditions and covenants of performance contained or incorporated herein, the City and the Consultant agree that the agreement entered into on the 15<sup>th</sup> day of September, 2015, shall be amended as follows:

Section 1. Scope of Services

The scope of services is amended to revise the project budget to cover the observations and testing required to accept the work upon completion of the Tertiary Treatment Phase 2 Improvements at the Wastewater Utility facility. The work tasks are to be performed in accordance with Exhibit "A" hereto: Scope of Services, Additional Geotechnical Services, Additional Field Services.

Section 2. Compensation

For services described in this Amendment, Consultant's total compensation for professional services, including labor and overhead costs and expenses, sub-consultant compensation, sub-consultant mark-up, and Consultant's additional fixed fee, shall be One-Hundred Thirty-Nine Thousand Seven Hundred Fifty and no/100 Dollars (\$139,750.00), of which the fixed fee is Eleven Thousand Three Hundred Fifty-Two and no/100 Dollars (\$11,352.00). This brings the total compensation under the Agreement to \$3,997,702.00 for design and construction observation, with a fixed fee total of \$324,903.00.

Section 3. Schedule

Project Duration shall be amended according to the schedule presented in Exhibit "A."

CITY OF COEUR D'ALENE

HDR ENGINEERING, INC.

\_\_\_\_\_  
Steve Widmyer, Mayor

\_\_\_\_\_  
Kate Eldridge, Vice President

ATTEST:

ATTEST:

\_\_\_\_\_  
Renata McLeod, City Clerk

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Zelma Z. Miller, Department Accountant

# **Amendment No. 3**

## **EXHIBIT A**

### **TERTIARY TREATMENT PHASE 2 IMPROVEMENTS**

#### **SCOPE OF SERVICES ADDITIONAL GEOTECHNICAL SERVICES ADDITIONAL FIELD SERVICES**

## **Introduction**

Professional Consulting Services for the Services During Construction (SOC) of the Tertiary Treatment Phase 2 Improvements project are described in this Exhibit and are amended to the original Agreement (City of Coeur d'Alene Professional Services Agreement Resolution No. 15-48) entered into on September 15, 2015. Tasks included in this Contract amendment include the following and are described in more detail below:

## **Key Understandings**

- This is a Time and Materials contract. Consultant will charge the City for actual hours worked on the project by assigned personnel and direct expenses attributed to the project.
- Direct expenses for travel, subsistence, technology, printing, photocopying, and conference calls will be billed to City with no mark-up.

## **Scope of Services**

### **Task 900 - Field Services**

#### **Sub-task 901 - Field Observations**

##### **Objective**

Determine substantial conformance of the completed construction with the requirements of the Contract Documents through observation of the work.

##### **Approach**

This sub-task includes services related to providing observation of field activities. Specific activities conducted by Consultant will include the following:

##### **ACTIVITY 901.1 CONSTRUCTION OBSERVATION**

- Provide general observation including:

- o Observe, record, and report Contractor's daily work progress to determine the Work observed is in general conformance with the requirements of the Contract Documents.
- o Document activities observed making note of deficiencies and any issues requiring resolution. Maintain work deficiency log in the OMS.
- o Create daily field reports defining specified work completed, Contractor work force figures, progress made on the controlling activity established by the approved construction schedule, job site visitors, and weather conditions.
- o Review approved shop drawings and apply them to the conducting of observations.
- o Photograph construction to document progress of deficiencies, and log photos in the OMS.
- o Conduct, or coordinate the conduct of, specified inspections and document results.
- Notify Contractor when written verification from the Materials Testing sub-consultant representative has been obtained stating that acceptable subgrade preparation is provided for structures and is ready to receive concrete for foundations and structural slabs on grade.
- Monitor the prequalification of soils and concrete materials, and coordinate in-place moisture and density testing and the sampling and testing of concrete (see Sub-task 902 - Materials Testing and Special Inspection).
- Observe and document pressure testing of interior and exterior piping systems.
- Review stored materials and/or equipment for quantity determination for Contractor payment and to verify that equipment and/or materials are adequately protected until installed. Consultant will notify Contractor if additional measures are required to protect the equipment.
- Develop and provide to Contractor an on-going list of items requiring correction to encourage correction of noted construction deficiencies, including:
  - o Monitor and document construction throughout the project duration and identify deficient items.
  - o Provide Contractor with an updated list of non-conforming items at construction progress meetings.
  - o As deficiencies are corrected, revise the list by indicating corrected status.
  - o Utilize the deficiencies list to aid in identifying appropriate retainage amounts near project completion.
  - o Issue Non-Conformance Reports for deficiencies not being acknowledged or addressed by Contractor with corrective measures or corrective action plans.

- On a monthly basis, prior to signing off on the monthly payment request, review Contractor's as-recorded drawings to verify the Contract Documents are up-to-date with contract modifications and annotated to reflect actual construction.
- Review tagging of equipment to verify conformance with approved registers for equipment, valves, and other items designated to be tagged by the Contract Documents.
- Coordinate training activities between Contractor and City.
- Monitor vendor training for City's operations and maintenance personnel.
- Document any observations made of property damage or personal injury accidents within the project construction limit lines, and notify and provide a written report to City.

### **Assumptions**

- Consultant's observation of the work performed under the construction contract shall not relieve Contractor from responsibility for performing work in accordance with applicable contract documents.
- Consultant shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction.
- Consultant shall not be responsible for the acts or omissions of construction Contractor(s) or other parties on the project.
- Observations will be performed in accordance with industry-recognized standard practices.
- Monitoring removal and/or disposal of contaminated materials is not included.
- The original fee for this sub-task was based upon field observation from a single Resident Project Representative (RPR) for eight (8) weeks at twenty-four (24) hours per week during initial project ramp-up and then eighty-six (86) weeks at forty (40) hours per week for a total of 94 weeks. Due to the addition of Owner requested work items, the project duration related to field observation has increased from 94 weeks to 125 weeks for a total of 31 weeks of additional field observation at 40 hours per week. However, this amendment is only requesting 21 weeks at 40 hours of RPR time.

### **Deliverables**

- Resident Project Representative's Daily Reports transmitted to City via e-mail in .pdf format, if requested.
- Photographs filed in the OMS.

## **Sub-task 902 - Materials Testing and Special Inspection**

### **Objective**

Monitor quality of work by testing construction materials and conducting special inspections.

### **Approach**

This sub-task includes services related to conducting materials testing and special inspections. Specific activities conducted by sub-consultant will include the following:

#### ACTIVITY 902.2 MATERIALS TESTING AND SPECIAL INSPECTION

- Quality control testing of construction materials may include:
  - o Soil/Aggregate Observation and Testing including observation and testing of compaction during site grading, excavation, footing and slab subgrade preparation, utility trench and wall backfilling; and sampling, testing, and recommendations regarding suitability of on-site and any imported materials used for backfill.
  - o Concrete Sampling and Testing including testing for slump, temperature (concrete and ambient), air content, and casting of compressive test cylinders for verification purposes.
  - o Structural Masonry Testing including compression testing of pre-construction masonry prisms, grout, and mortar.
  - o Hot Mix Asphalt (HMA) Observation and Testing including observation, sampling and compaction testing during HMA paving placement.
- Special Inspections per currently adopted Building Code may include:
  - o Reinforcing Steel Placement and Embedded Items Special Inspection by International Code Council (ICC) certified special inspector to verify the placement of reinforcing steel and embedded items prior to the placement of concrete.
  - o Concrete Observation by ICC certified special inspector to observe placement of structural concrete.
  - o Structural Masonry Observation by ICC certified special inspector to observe placement of structural concrete.
  - o Structural Masonry Observation by ICC certified special inspector to observe placement of masonry units, mortar, reinforcing steel, and items embedded in masonry.
  - o Structural Steel Field Welding Special Inspection by a special inspector certified by either the American Society (AWS-CWI) or ICC to observe welding operations during structural steel erection and connection.
  - o Drilled-In-anchors (Adhesive/Expansion Anchors) Special Inspection of adhesive or expansion anchors.



- Testing shall be performed on an as-needed basis by an accredited testing laboratory approved by local building official.
- Identify non-conformance issues, prepare reports, evaluate corrective actions, perform testing, establish conformance, and prepare documentation.
- Maintain records for materials testing and special inspections in the OMS.

### **Assumptions**

- Sub-consultant will perform testing in accordance with construction contract documents and other recognized/applicable standards.
- Consultant initially included a sub-consultant fee of \$90,000.00 for materials testing and special inspections. Sub-consultant throughout project requested increases to their fee of an additional \$30,597.63 for additional materials testing and special inspections. HOR provided these fee adjustments to their sub-consultant and notified the City. It was discussed that if HOR was able to absorb these additional costs in their original budget then HOR would not need to request a contract amendment. However, because of the increase in the project timeline it was not possible for HOR to absorb these costs in their original budget.

### **Deliverables**

- Materials Testing and Special Inspection Plan transmitted to City and local building official via e-mail in .pdf format.
- Weekly summaries of Daily Reports, materials testing information, and special inspections transmitted to City and local building official via e-mail in .pdf format.
- Summaries of materials testing information transmitted to Contractor via e-mail in .pdf format.

### **Compensation**

Consultant's total compensation for professional services provided pursuant to this amendment, including labor and overhead costs and expenses, sub-consultant compensation, sub-consultant mark-up, and Consultant's additional fixed fee for services in Amendment No. 3 shall be **\$139,750.00**, including the Fixed Fee for Amendment No. 3, which is **\$11,352.00**.

This brings the total compensation under this contract to **\$3,997,702.00** for design and construction observation, with a fixed fee total of **\$324,903.00**.



City of  
**Coeur d'Alene**  
IDAHO

**Wastewater Tertiary Treatment  
Upgrade:  
Engineering Contract Amendment 3  
August 12, 2019**



Original Agreement (9/15/2015): Design Services  
\$1,710,810

Amendment No. 1 (1/3/2017): Construction Phase Services  
\$2,113,441

Amendment No. 2 (2/26/2018): Bridge Crane Design  
\$33,701

Amendment No. 3: Additional Field Services  
\$139,750

# **Amendment 3 Provides for Field Observations & Materials Testing/Special Inspections**

## **Field Observations**

- **Original fee based on 94, 40 hour weeks.**
- **Additional tasks (requested by owner) resulted in 125, 40 hour weeks**

## **Materials Testing**

- **\$30,597.63**
- **Testing included soils, concrete, asphalt, etc.**
- **Special inspections included concrete pours, field welding, anchors, etc.**