

MEMORANDUM

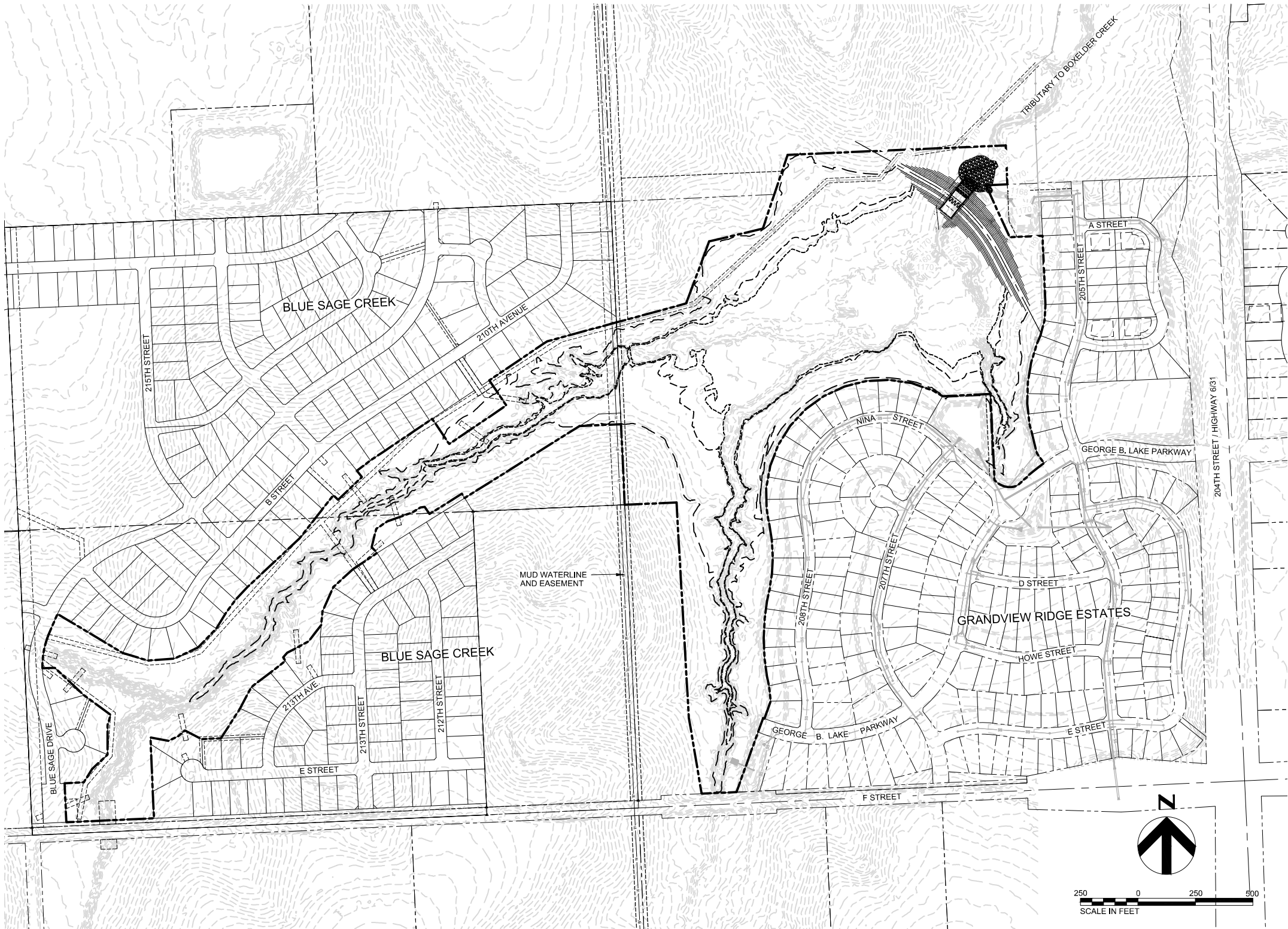
To: PPO Subcommittee
From: Amanda Grint, Water Resources Engineer
Date: December 6, 2018
Re: Amendment No. 4 to Professional Services Contract with HDR Engineering for Zorinsky Basin 2

In 2016, HDR Engineering, Inc. was awarded a professional services contract for the Preliminary Design (Phase 1) of the Zorinsky Basin No. 2 (ZB2) project for a not to exceed amount of \$470,200. Amendment 1 and 2 followed in April and November 2017 for the final design and construction administration as well as additional out of scope items. Amendment 3 was approved in August 2018 to address revisions to the stream mitigation bringing the total contract not to exceed amount of \$1,443,560. ZB2 is the last of four planned water quality basins identified through a community planning session in 1999 to protect the water quality of Zorinsky Lake. See attached map. Amendment No. 4 addresses the following items:

- Extend the Project Management and SWPPP inspections for an additional six months to match the construction schedule.
- Additional technical support for high groundwater conditions.
- Update of construction documents for access road revisions and rock check dam revision.
- Additional survey to support construction document revisions
- Additional construction contract administration for six months.

A proposed detailed scope of work and cost estimate for Amendment 4 are attached for review. HDR would provide these additional out of scope items on an hourly basis not to exceed the amount of \$280,431, for a total contract not to exceed amount of \$1,723,991.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute Amendment No. 4 to the Professional Services Agreement with HDR Engineering, Inc. for the Zorinsky Water Quality Basin Number 2 project in an amount not to exceed \$280,431 bringing the total contract not to exceed amount to \$1,723,991, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.



LEGEND

	TOP OF DAM ELEV. 1191.0		EASEMENTS
	SPILLWAY ELEV. 1183.0		
	NORMAL POOL ELEV. 1181.5		
	PROPERTY LIMITS		
	PROPERTY PARCELS		

GENERAL NOTES

1. TOP OF DAM AFTER SETTLEMENT SET AT ELEVATION 1191.0.
2. DESIGN SEDIMENT STORAGE AVAILABLE BELOW ELEVATION 1181.5 = 97 ACRE-FT.
3. EXISTING TOPOGRAPHY IS COMBINATION OF JUNE 2016 E&A CONSULTING GROUP, 2010 LIDAR 2-METER DEM FROM NEBRASKA DNR, AND 2016 OLSSON ASSOCIATES PROPOSED GRADING PLAN FOR GRANDVIEW RIDGE SUBDIVISION.
4. COORDINATES ARE MODIFIED STATE PLANE (MODIFIED SCALE FACTOR = 0.99961299)
2. ELEVATIONS ARE NAVD 88, NAD 1983.

STRUCTURE CAPACITY DATA			
ELEVATION (FT)	SURFACE AREA (AC)	INCREMENTAL STORAGE (AC-FT)	CUMULATIVE STORAGE (AC-FT)
DRAWDOWN → 1156	0.0	0	
		0.1	0
1158	0.1	0.3	0
1160	0.2	0.4	0
1162	0.2	0.6	0
1164	0.4	0.9	1
1166	0.5	1.2	2
1168	0.7	1.7	3
1170	1	3	5
1172	2	6	8
1174	4	11	14
1176	7	18	25
1178	11	26.5	43
1180	15.5	26.6	70
NORMAL POOL → 1181.5	20	10.5	97
1182	22	23	108
SPILLWAY CREST → 1183	24	25.5	131
1184	27	58	157
100-YR POOL - 1185.7 →	31	67	215
1186	36	77	282
1188	41	43	359
TOP OF DAM → 1191	45	46.5	402
1192	48	103	449
1194	55	117	552
1196	62		669

NOTE:
1. STRUCTURE CAPACITY DATA BASED ON PRE-PROJECT CONDITIONS.



Date
01-18

TRM

Designed

Date
01-18

TRM

Drawn

Date
01-18

JUE

Checked

Approved

RESERVOIR AREA PLAN AND CAPACITY TABLE

ZORINSKY WATER QUALITY BASIN NO. 2 DAM DOUGLAS COUNTY, NE

PAPIO - MISSOURI RIVER NATURAL RESOURCES DISTRICT

CAD file:
00G-02.dwg

Drawing No.
G-2



Emailed Electronically on December 4, 2018

December 4, 2018

John Winkler
General Manager
Papio-Missouri River Natural Resources District
8901 S. 154th Street
Omaha, NE 68138-3621

RE: Zorinsky Water Quality Basin No 2
Phase III Construction Administration Services Amendment No. 4
Extend Construction Administration Services

Dear John,

HDR Engineering, Inc. is pleased to submit the attached Amendment No. 4 to our Agreement for the Phase III Construction Administration services on the Zorinsky Water Quality Basin #2 project. This amendment extends our construction services schedule and provides design modifications, as requested by P-MRNRD, to address adjacent property owner development. The not to exceed estimate for Amendment No. 4 is \$ 280,431.00. The amended agreement is not to exceed \$1,723,991.00.

Please sign the Agreement and provide me with a signed copy for my files. Our receipt of your signed acceptance will constitute our Notice to Proceed.

We look forward to continue working with you on this very important project. If you have any questions, please contact me at 402.926.7110 at your convenience.

Very truly yours,
HDR Engineering, Inc.

A handwritten signature in black ink, appearing to read 'John Engel'.

John Engel, P.E.
Project Manager

Enclosures

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated April 22, 2016.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 4**

The Effective Date of this Amendment is: _____.

Background Data

Effective Date of Owner-Engineer Agreement: April 22, 2016

Owner: Papio-Missouri River Natural Resources District (P-MRNRD)

Engineer: HDR Engineering, Inc. (HDR)

Project: Zorinsky Water Quality Basin No. 2

Nature of Amendment: [Check those that are applicable and delete those that are inapplicable.]

☐ Additional Services to be performed by Engineer

☒ Modifications to services of Engineer

☒ Modifications to responsibilities of Owner

☒ Modifications of payment to Engineer

☒ Modifications to time(s) for rendering services

☒ Modifications to other terms and conditions of the Agreement

Description of Modifications:

- a. The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows:
 - 1) Exhibit A, "Engineer's Services", shall be amended to include Exhibit A1, "Engineer's Services for Amendment No. 4" and Enclosure A, Subconsultants Proposals.
 - 2) Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses"
 - i) As modified by Amendments Nos. 1, 2, 3, and 4 change C2.01 as follows:
 1. C2.01.A.1 delete "\$34,042" and replace with "\$44,846" and delete "\$125,120" and replace with "\$141,320."
 2. C2.01.A.3 delete "\$1,443,560" and replace with \$1,723,991.
 - ii) Amend Appendix 1 to include Attachment 2, "Engineer's Fee Estimate" and Attachment 3 "Engineer's Schedule".

- b. Modify Article 7 – Definitions, 7.01.A.24 Maximum Amount. Remove “one million four hundred forty three thousand five hundred sixty dollars (\$1,443,560)” and replace with “one million seven hundred forty three thousand nine hundred ninety nine dollars (\$1,723,991)”.

Agreement Summary:

Original agreement amount (Preliminary Design):	\$ 470,200.00
Net change for Amendment No. 1 (Design & Constr.):	\$ 858,930.00
Reduction in Phase I Scope and Fees:	\$ (49,470.00)
Net change for Amendment No. 2 (Add. Design):	\$ 56,200.00
Net change for Amendment No. 3 (Stream Mitigation):	\$ 107,700.00
This amendment amount (Add Construction):	<u>\$ 280,431.00</u>

Adjusted Agreement amount: \$ 1,723,991.00

Change in time of services: April 15, 2017 to April 1, 2020 (Amendment No. 4) (Additional 10 months)

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

Papio-Missouri River Natural Resources District

By: _____
Print
name: John Winkler

Title: General Manager

Date Signed: _____

ENGINEER:

HDR Engineering, Inc.

By: 
Print
name: Matthew Tondl, P.E.

Title: Senior Vice President

Date Signed: 12/4/18

This is **EXHIBIT A1**, consisting of 5 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated April 22, 2016.

AMENDMENT NO. 4

Engineer's Services

PART 1 – BASIC SERVICES

A1.02 Phase III Construction Observation Services

**Zorinsky Water Quality Basin No. 2
for Papio-Missouri River Natural Resources District
Douglas County, NE**



ENGINEERING PROPOSAL – ADDITIONAL DESIGN MODIFICATIONS DURING CONSTRUCTION AND CONSTRUCTION OBSERVATION SERVICES FOR EXTENDED CONSTRUCTION SCHEDULE



BACKGROUND AND BASIS OF PROPOSAL

HDR Engineering, Inc. was selected by the P-MRNRD to provide planning, permitting, preliminary and final design and construction contract administration services for Zorinsky Basin No. 2 (ZB-2). ZB-2 is a proposed water quality basin to be located upstream of Zorinsky Lake on Boxelder Creek located in Douglas County and is located near 204th and F Streets in Omaha, Nebraska.

To more concisely respond to project requirements, a phased approach was proposed. Phase I, which included preliminary design, is completed. Phase II generally included preparing final design documents and providing bidding assistance is completed. Phase III is currently underway for construction contract administration services.

In Amendment No, 1, where Phase II and III tasks were defined, the duration of the project was 20-1/2 months (begin April 14, 2017 to December 31, 2018). At the time of bidding, the construction schedule was extended to reflect the past construction season's wet weather and higher than normal groundwater conditions, the completion date was established as December 1, 2019. An additional 4 months is added to the HDR schedule for the completion of the O&M Manual, extending the contract schedule to April 1, 2020.

SCOPE OF SERVICES – PHASE III – MODIFICATION TO CONSTRUCTION CONTRACT ADMINISTRATION SERVICES

HDR will perform coordination and design of modifications and provide construction observation and supporting services for the extended construction schedule. The scope of work modifies the following tasks:

TASK SERIES 100 PROJECT MANAGEMENT

- Task Objectives:** Confirm that Project elements are being completed.
- HDR Activities:** **Task 110 Project Management.** Includes Project scheduling, administration and coordination activities on the Project. Internal HDR Project Team meetings will be conducted to discuss tasks, provide Project updates and review deliverables. Prepare monthly invoices and progress report.
- Task Deliverables:**
- Monthly invoices and progress report
- Key Understandings:**
- Extend the contract period from December 31, 2018 to April 1, 2020 or adding an additional 10 months of project management.

TASK SERIES 700 SURVEY AND RIGHT OF WAY

- Task Objectives:** Provide survey and right of way services in support of design modification requested by P-MRNRD and construction activities.
- HDR Activities:** **Task 760 Additional Field Survey.** Per P-MRNRD's request, provide additional field survey and right of way documentation to accommodate adjacent development for purchased land to be returned to development. To address development concerns with access road locations, conduct additional survey to support design access road modifications and generate design contours. Provide additional survey support during construction.
- Task Deliverables:**
- Topographic mapping.
 - Parcel legal descriptions.
- Key Understandings:**
- Survey and right of way services to be conducted by E&A Consulting Group. (See Enclosure A).

TASK SERIES 1000 CONSTRUCTION CONTRACT ADMINISTRATIVE SERVICES

- Task Objectives:** To provide construction contract administration services during the construction schedule.
- Task 1010 Records and Reports.**
- 1010.1 Records and Reports. Continue to document construction activities.
- Task 1020 Construction Contract Support.**
- 1020.7 Technical Field Observation. Additional site visits were conducted by technical experts to respond to variations in site conditions. Due to the unusually wet summer and fall, high groundwater levels were present.

Technical experts were present to closely monitor the dewatering operation for the installation of the drawdown pipe. The labyrinth weir and baffled chute spillway will require non-traditional structural construction and require additional technical oversight.

1020.9 Design Modifications. Prepare drawings, specifications, and cost estimate needed to prepare construction contract modifications. Negotiate change order with Contractor. Specific design modifications include: blanket drain profile, North and South Access Roads as a result of development, and relocating rock checks to align with development pedestrian bridge crossing.

Task 1030 Permit Compliance Support.

1030.1 SWPPP Compliance Monitoring. Conduct minimum of weekly site visit to the site and prepare report on BMP performance. Submit to PWCP website.

Task Deliverables:

- Construction Documentation
- SWPPP reports
- Construction conference agenda and notes

Key Understandings:

- Basis for construction services was defined during preliminary design (Phase I) and refined during design. Bidding documents established final completion by December 1, 2019, extending the construction schedule by 6 months.
- Full-time resident project representative (RPR) will provide construction quality assurance for the Project. An RPR will be on site during construction activity. The level of construction observation effort included in this scope equates to 1,380 hours (1,200 hours for the RPR additional 24 weeks and an additional 180 hours for variation in work day schedule from key understanding in Amendment No. 2 - additional average of 5 hours per week for 36 weeks) when the Contractor is performing work requiring observation, as determined by HDR. An average of 50-hour week for 24 weeks for a RPR. Reasonable variations in work days and schedules are anticipated, but no protracted overtime, work stoppages or extended work schedules are assumed. At critical times, the Engineer and other technical personnel will be provided.

ATTACHMENT 2 PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT PHASE II AND PHASE III: CONSTRUCTION CONTRACT ADMINISTRATION OF ZORINSKY WATER QUALITY BASIN NO. 2 AMENDMENT NO. 4 FEE ESTIMATE - DECEMBER 3, 2018																									
HDR Engineering, Inc. Estimated Hours/Costs										Expenses					HDR				Est. Total Cost						
TASKS	Project Manager	Specialist	Principal Staff	Senior Staff	Technical Staff	Tech Support	Admin/ Clerical	Total Hours	Total Labor Cost	Tech. Fee	Printing	Travel	Misc.	Total Expenses	Totals	E&A	Thiele Geotech	Total Sub-Consult.							
TASK SERIES 100 PROJECT MANAGEMENT																									
Task 110	Project Management (10 months)	20			4	4		20	48	\$8,020	\$178		\$50		\$228	\$8,248			\$0	\$8,248					
Estimated Task Hours Subtotal		20	0	0	4	4	0	20	48																
Estimated Task Cost Subtotal		\$4,800	\$0	\$0	\$820	\$500	\$0	\$1,900	\$8,020	\$8,020	\$178	\$0	\$50	\$0	\$228	\$8,248	\$0	\$0	\$0	\$8,248					
TASK SERIES 700 SURVEY AND RIGHT OF WAY																									
Task 710	Additional Field Survey	4			8			12	\$2,600	\$44	\$10			\$54	\$2,654	\$16,200		\$16,200	\$18,854						
Estimated Task Hours Subtotal		4	0	0	8	0	0	12																	
Estimated Task Cost Subtotal		\$960	\$0	\$0	\$1,640	\$0	\$0	\$0	\$2,600	\$2,600	\$44	\$10	\$0	\$0	\$54	\$2,654	\$16,200	\$0	\$16,200	\$18,854					
TASK SERIES 1000 CONSTRUCTION CONTRACT ADMINISTRATION SERVICES																									
Task 1020	Construction Contract Support																								
Subtask 1010.1	Records and Reports (6 months)		8			1380	20	1408	\$176,600	\$5,210		\$3,000		\$8,210	\$184,810			\$0	\$184,810						
Subtask 1010.7	Technical Field Observation			50	40	40		130	\$25,200	\$481		\$500		\$981	\$26,181			\$0	\$26,181						
Subtask 1020.9	Design Modifications	16		8	40	20	55	143	\$23,165	\$529			\$100	\$629	\$23,794			\$0	\$23,794						
Task 1030	Permit Compliance Support																								
Subtask 1030.1	SWPPP Compliance Monitoring	4			20	100		124	\$17,560	\$459	\$25	\$500		\$984	\$18,544			\$0	\$18,544						
Estimated Task Hours Subtotal		20	8	58	100	1540	75	1805																	
Estimated Task Cost Subtotal		\$4,800	\$1,800	\$13,920	\$20,500	\$192,500	\$8,625	\$380	\$242,525	\$242,525	\$6,679	\$25	\$4,000	\$100	\$10,804	\$253,329	\$0	\$0	\$0	\$253,329					
TOTAL HOURS		44	8	58	112	1,544	75	24	1,865																
TOTAL COST (ROUNDED)		\$ 10,560	\$ 1,800	\$ 13,920	\$ 22,960	\$ 193,000	\$ 8,625	\$ 2,280	\$ 253,145	\$ 6,901	\$ 35	\$ 4,050	\$ 100	\$ 11,086	\$ 264,231	\$ 16,200	\$ -	\$ 16,200	\$ 280,431						

November 27, 2018

Laurie Carrette P.E.
C/o Papio NRD

Dear Laurie,

The purpose of this letter is to explain our existing contract and also future fees for our services on the Dam Site ZB-2 Project.

Our current contract for phase III (Construction Administration Services) is \$22,420.00. As of today we have \$3473.50 remaining on the contract. Under the direction of the NRD and also HDR we have performed the following services that fall outside the original contract.

1. Additional Creek Topo on southwest side of project.
2. Grading limits and tree removal
3. Boundary survey for 6 acre return parcel.

The above services total \$9600.00. We wish to have the contract amended for this cost.

To complete the existing contract the following will need to be completed.

1. Instrumentation as-built.
2. Final survey to be delivered to NRD
3. As-built topo of dam phase 2 and 3.
4. Miscellaneous as build's, topo, construction staking.

Our fees to complete the above work are approximately \$ 22,000.00.

Additionally our team completed a survey on outlot H in October. This survey was provided to HDR for new road design. The fees for this survey are \$3800.00. This will also need to be amended in the contract.

Summary

We are requesting a total of **\$16,200.00** to be added or amended to the existing contract. Please review and feel free to contact me with any questions.

Thank you

Jason Headley RLS

Survey project manager.

