

## MEMORANDUM

**To:** Programs, Projects and Operations Subcommittee  
**From:** Amanda Grint, Water Resources Engineer  
**Date:** October 7, 2021  
**Re:** Amendment 2 to Professional Services Contract with FYRA Engineering for WP2

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In May 2017, the Board approved the selection of FYRA Engineering for professional services for the planning, permitting, design and construction of West Papillion Regional Basins Number 2 (WP2). The original contract with FYRA and Amendment No. 1 took the project through final plans and permitting. Amendment No. 2 will provide for professional services to finalize permitting, complete the design, prepare contract bidding documents and construction administration.

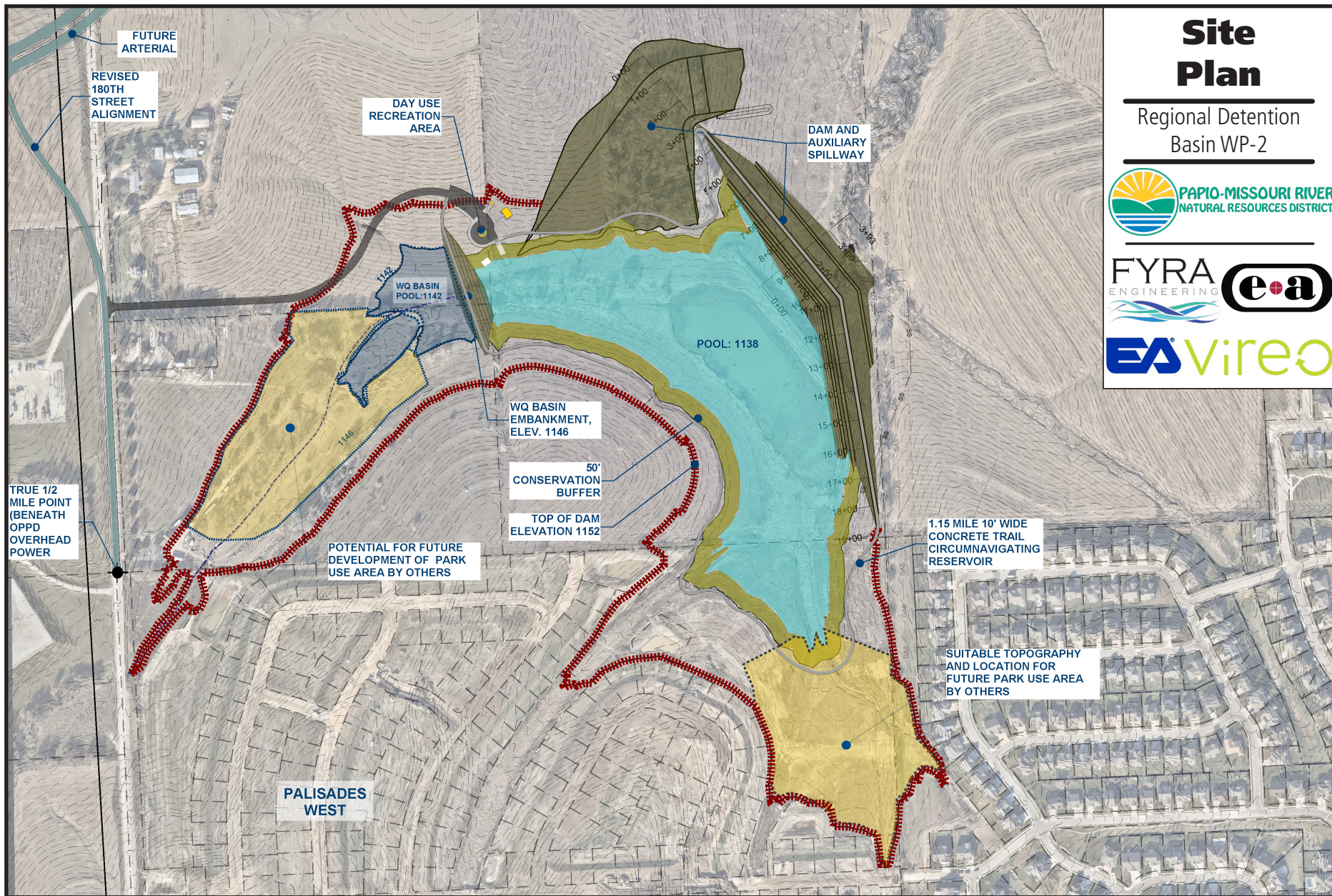
A summary of the tasks in Amendment No. 2 is as follows:

- Final 404 permitting details
- Complete the final design, with a staged construction to build the water quality basin and adjacent development sanitary sewer connection in the first stage.
- Revise fisheries plans per Game and Parks comments.
- Prepare specifications, bid documents, and provide services throughout bidding.
- Provide construction observation services throughout construction of WP2.

FYRA Engineering proposed to provide the professional services in contract Amendment No. 2 for a total not to exceed amount of \$967,940. See attached Exhibit K with attachments. This would bring the total contract, including Amendment No. 1 and Amendment No. 2, to \$1,668,167.

**Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Amendment No. 2 to the Professional Services Agreement between the District and FYRA Engineering for the Regional Detention Site WP2 Project for the maximum amount of \$967,940, bringing the total maximum not to exceed contract amount to \$1,668,167, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**





# Site Plan

Regional Detention  
Basin WP-2





SUGGESTED FORMAT  
(for use with E-500, 2002 Edition)

This is **EXHIBIT K**, consisting of 2 pages, referred to in  
and part of the **Agreement between Owner and Engineer**  
**for Professional Services** dated 12 May 2017.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT**

1. Background Data:

- a. Effective Date of Owner-Engineer Agreement: 12 May 2017
- b. Owner: Papio-Missouri River Natural Resources District
- c. Engineer: FYRA Engineering, LLC
- d. Project: Preliminary Design of Regional Detention Site WP-2

2. Nature of Amendment

- ☒ Additional Services to be performed by Engineer
- ☐ Modifications to Services of Engineer
- ☐ Modifications to Responsibilities of Owner
- ☒ Modifications to Payment to Engineer
- ☒ Modifications to Time(s) for rendering Services
- ☐ Modifications to other terms and conditions of the Agreement

3. Description of Modifications

Attachment 1, "Modifications", Exhibit A "Task Descriptions", Exhibit B "Task List and Fee Estimate"

**Attachment 1, "Modifications" includes Additional Basic Services related to the design services for the supporting features of WP-2, which include the water quality basin, recreation/fisheries and stream mitigation, and bidding and construction observation phases for the project. Exhibit A to Attachment 1 details the task descriptions of the services to be performed by Engineer and Exhibit to Attachment 1 details the fee estimate for the described tasks.**

**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. The Effective Date of this Amendment is 14 October 2021.**

OWNER:

ENGINEER:



By: John Winkler

By: Michael K. Sotak, P.E., D.WRE

Title: General Manager

Title: Owner/Principal Engineer

Date  
Signed:

Date Signed: 14 October 2021

## **Modifications**

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1. Engineer shall perform the following Additional Services:

N/A.

2. 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:

**The addition of the design services for the supporting features of WP-2, which include the water quality basin, recreation/fisheries and stream mitigation, and bidding and construction observation phases for the project.**

**Exhibit A, attached hereto and incorporated herein, entitled “Regional Detention Site WP-2 Final Design of Supporting Features; Bid and Construction Services – Task Descriptions,” details the Services to be performed by Engineer.**

**Exhibit B, attached hereto and incorporated herein, entitled “Task List and Fee Estimate,” details the Services to be performed by Engineer and the estimated fees associated with those Services.**

3. The responsibilities of Owner are modified as follows:

N/A

4. For the Additional Services or the modifications to services set forth above, Owner shall pay Engineer the following additional or modified compensation:

**A maximum not to exceed total fee of \$967,940 representing time actually expended and invoiced by Engineer as estimated by the time remaining on the project and the effort expended each month by Engineer and Subconsultants.**

5. The schedule for rendering services is modified as follows:

**The services will be performed October 2021 through May 2023.**

6. Other portions of the Agreement (including previous amendments, if any) are modified as follows:

## **Section C2.01.3 of Exhibit C – Article 2 – Owner’s Responsibilities with the following:**

7. The total compensation for services under Paragraph C2.01 is estimated to be a not-to-exceed amount of **\$1,668,167** based on the following assumed distribution of compensation and as detailed in Attachment 1 to Exhibit C, Exhibits of Amendment 1 and this Amendment 2:

a. Amendment 1 (May 2020)	\$106,988
b. Amendment 2 (October 2021)	\$967,940
Original Agreement Amount:	\$593,239

## **Attachment 1 to Exhibit A**

### **4 WATER QUALITY BASIN**

#### **4.1 Final H&H**

Perform final hydrology and hydrologic modeling runs for frequent storm events to size the embankment and develop rating curves for water quality drawdown features in the outlet works.

#### **4.2 Final Design and Quantities**

Perform final design of the water quality basin embankment, borrow areas, site access, outlet works, and structural design of the inlet structure. Perform grading and calculations to estimate quantities.

#### **4.3 Sanitary Sewer Coordination/Inclusion in Design**

Coordinate with local development consultant to coordinate and incorporate sanitary sewers into the water quality basin embankment design and construction plans.

#### **4.4 Update Construction Plans and Individual Set for Separate Bid**

Update construction plans with update designs and separate out the water quality basin sheets and create an individual plan set to be separately from the main dam and remaining supporting features.

#### **4.5 Develop Project Specifications for Individual Bid**

Develop the project specification package for water quality basin work to be bid separately and prior to the main dam and remaining supporting features.

#### **4.6 Obtain Permits for Individual Bid**

Obtain permit required for bidding and constructing the water quality basin. Includes NPDES and Permex grading permits, as well as coordination with the USACE on obtaining the 404 permits that were submitted previously.

### **5 STREAM MITIGATION**

#### **5.1 Final H&H**

Perform final hydrology and hydrologic modeling of frequent and large events to develop inflow hydrograph and peak flow to guide stable channel designs for stream mitigation.

#### **5.2 Final Design and Quantities**

Develop design concepts and details to meet the stream mitigation requirements. Coordinate with NRD on feasible site locations/design alternatives. Perform grading and calculations to estimate quantities.

### **5.3 Construction Plans**

Drafting of site plan sheets and details to develop a plan set for construction.

### **5.4 Project Specification Additions**

Additional of any material or performance specifications specific to stream mitigation above and beyond the dam requirements.

## **6 FISHERIES**

### **6.1 NGPC Coordination**

Coordination with the NGPC staff to determine potential fisheries funding requirements, design layout and details to develop fisheries habitat and access in the reservoir.

### **6.2 Supplemental Excavation and Spoils Plan**

Excavation and spoils planning and design to meet the depth requirements of NGPC to be eligible to receive supplemental funding to establish the fishery in the reservoir.

### **6.3 Fisheries Structures Design and Quantities**

Design of in-lake habitat features and potential shoreline stabilization requirements. Design fish pier and coordinate with manufacturer to include required information into construction documents. Perform grading and calculations to estimate quantities.

### **6.4 Construction Plans**

Drafting of site plan sheets and details to develop a plan set for construction.

### **6.5 Project Specifications Additions**

Addition of any material or performance specifications specific to fisheries above and beyond the dam requirements.

## **7 PARKING LOT AND RECREATION**

### **7.1 Recreation Design Coordination Meetings with NRD**

Coordination with the P-MRNRD to understand needs and requirements of the parking lot and recreation facilities at the WP-2 project site.

### **7.2 Consultant Team Coordination Meetings**



Internal coordination between FYRA, E&A and Vireo to develop cohesive plans for the civil, grading, recreational components and share files between companies.

### **7.3 Final Design and Quantities**

Perform final design of embankment, horizontal and vertical layout, roadway/pavement and all associated drainage and utilities for the parking lot and recreation facilities. Perform drafting and calculations to estimate quantities.

### **7.4 Update Construction Plans**

Drafting to update the 60% construction plans sheets and details to develop final construction documents.

### **7.5 Project Specifications Additions**

Addition of any material or performance specifications specific to parking and recreation above and beyond the dam requirements.

## **8 BID SERVICES**

### **8.1 Preparation of Bid Documents**

Prepare necessary bid documents, coordinate the bid announcement, distribute information to contractors about the advertised bid package. Two printed sets of bid documents including plans and specifications and geotechnical report will be provided to the P-MRNRD. All information to contractors will be transmitted electronically along with information about which printers have the plans available to print hard copies.

### **8.2 Pre-Bid Meeting**

Preparation for and attendance of one pre-bid meeting with interested contractors and other project stakeholders. Meeting will visit both project sites and include review of the plans and addressing any inquiries about the project. FYRA will prepare meeting minutes and responses to questions asked during the meeting to be distributed to all interested parties.

### **8.3 Contractor Coordination**

Answer questions and provide any additional design information requested by contractors interested in bidding the project. Issue addendums to the original bid package as needed.

### **8.4 Attend Bid Letting**

Attendance of the bid opening and collection of bids. Perform verification of bids and bonds, and develop summary of bids.

## **8.5 Review Bids/Make Recommendations**

Review bids and gather background/references on contractors to make engineer's recommendation of award. Provide formal written recommendation to the P-MRNRD.

## **8.6 Contract Execution**

Upon award of the project by the P-MRNRD board, a Notice of Award will be prepared by FYRA Engineering and followed by a Notice to Proceed once all applicable information from contractor is received.

# **9 CONSTRUCTION SERVICES**

## **9.1 Construction Kickoff Meeting**

Preparation for and attendance of a pre-construction meeting with the selected contractor, the P-MRNRD and other stakeholders to discuss all pertinent construction-related project issues. This include preparation and distribution of meeting minutes.

## **9.2 Submittal Review**

Coordinate with contractor, review product submittals and shop drawings, and compare to project specifications for approvals.

## **9.3 On-Site Construction Observation and Field Tests/Surveys**

Full time staff on site to observation construction of project to ensure contractor is constructing the project as designed. Includes inspections of all materials placed, quality control surveys, monitoring instrumentation, and performing compacting testing of earth embankments. Includes coordination with contractor on necessary changes based on observations.

## **9.4 Weekly Construction Reports and Permix Reporting**

Develop construction reports with detailed descriptions and photos of construction activities, and submit to the P-MRNRD on a weekly basis. Summarize SWPPP inspections in reports and upload onto the Permix website.

## **9.5 Pay Requests and Change Order Processing**

Review requests, verify quantities and process pay requests and change orders.

## **9.6 Preparation of As-Builts**

Data collection of final site conditions upon completion of construction required for the as-built drawings. Prepare as-built drawings to document the projects as constructed and provide one hard copy and an electronic copy of each site to the P-MRNRD.



Exhibit B to Attachment 1 - Task List and Fee Estimate  
P-M RNRD Regional Detention Site W P-2  
Final Design of Supporting Features, Bid and Construction Services  
FYRA Project # 001-17-01

Task Description	FYRA Engineering					EACG				Vireo			Totals
	Principal Sotak, PE, D W RE	Proj Engr M echtenberg, PE	Proj Engr PE (Varies)	Staff Engr EI (Varies)	FYRA Expenses	Proj Mgr Beasley	Proj Engr/ Sr Tech	Construction Tech	EACG Expenses	Principal Fornlyoe	Associate II IA Henrihs	Vireo Expenses	
	\$225	\$160	\$125	\$110		\$180	\$105	\$94		\$145	\$90		
4 Water Quality Basin													
4.1 Final H&H	1			8									
4.2 Final Design and Quantities	4	16	16	30									
4.3 Sanitary Sewer Coordination/Inclusion in Design	2	12		4									
4.4 Update Construction Plans and Individual Set for Separate Bid	2	24	24	60						1	4		
4.5 Develop Project Specifications for Individual Bid	4	16	4							1	2		
4.6 Obtain Permits for Individual Bid (USACE Coord, NPDES and Permit)		16	16										
Task Total	\$2,925	\$13,440	\$7,500	\$11,220	\$0	\$0	\$0	\$0	\$0	\$145	\$540	\$0	\$35,770
5 Stream Mitigation													
5.1 Final H&H		2	16										
5.2 Final Design and Quantities		16	16	40									
5.3 Construction Plans	2	24	24	60						1	4		
5.4 Project Specification Additions	2	4									2		
Task Total	\$900	\$7,360	\$7,000	\$11,000	\$0	\$0	\$0	\$0	\$0	\$73	\$540	\$0	\$26,873
6 Fisheries													
6.1 NGPC Coordination	4	16											
6.2 Supplemental Excavation and Spoils Plan	2		24										
6.3 Fisheries Structures Design and Quantities	2		24	40									
6.4 Construction Plans	4	16	16	24									
6.5 Project Specification Additions		4											
Task Total	\$2,700	\$5,760	\$8,000	\$7,040	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,500
7 Parking Lot and Recreation													
7.1 Recreation Design Coordination Meetings with NRD										2	6		
7.2 Consultant Team Coordination Meetings		12				12					18		
7.3 Final Design and Quantities						8	24		\$30	4	60		
7.4 Update Construction Plans		24	24			16	80			8	75		
7.5 Project Specification Additions		8	8			16					4		
Task Total	\$0	\$7,040	\$4,000	\$0	\$0	\$9,360	\$10,920	\$0	\$30	\$2,030	\$14,670	\$0	\$48,050
8 Bid Services													
8.1 Preparation of Bid Documents	16	24	8										
8.2 Pre-Bid Meeting	8	8											
8.3 Contractor Coordination	30	60	24										
8.4 Attend Bid Letting	6	6											
8.5 Review Bids/Make Recommendation	8	8		8									
8.6 Contract Execution	6	4											
Task Total	\$16,650	\$17,600	\$4,000	\$880	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,130
9 Construction Services													
9.1 Construction Kickoff Meeting	4	4	8			2			\$15				
9.2 Submittal Review	24	100	120			4				4	16		
9.3 On-Site Construction Observation and Field Tests/Surveys	240	168	3080	56	\$41,600	8		96	\$360	2	8		
9.4 Weekly Construction Reports and Permit Reporting	60	448	672	56	\$1,500			16					
9.5 Pay Request and Change Order Processing	24	84	84			4		8					
9.6 Preparation of As-BUILTs	4	16	48	24	\$4,000	2		8			8		
Task Total	\$80,100	\$131,200	\$501,500	\$14,960	\$47,100	\$3,600	\$0	\$12,032	\$375	\$870	\$2,880	\$0	\$794,617
Column Total (Hours)	459	1,140	4,256	410	—	72	104	128	—	225	1,124	—	
Column Total (Costs)	\$103,275	\$182,400	\$532,000	\$45,100	\$47,100	\$12,960	\$10,920	\$12,032	\$405	\$3,118	\$18,630	\$0	\$967,940

- Task Assumptions
- 6.3

Includes fishing pier and in-lake habitat only, no shoreline access
- 8

All subtasks assume two bid packages
- 9.3

Construction occurs over 4 weeks for water quality basin and 52 weeks for main dam package with full time observation

Construction Expenses

Mileage	\$3,000	
Meals	\$0	
Survey	\$16,800	1 day per week @ \$300/day
Field Supplies	\$5,000	
Drone Flights	\$5,600	\$100/flight
Troxler Testing	\$11,200	\$50/test - max \$300/week assume 2/3 of weeks have testing