

MEMORANDUM

To: Programs, Projects, and Operations Subcommittee
From: Amanda Grint, Assistant General Manager
Date: August 3, 2022
Re: Amendment 3 with Houston Engineering, Inc. for Missouri River Levees

Houston Engineering Inc, (FYRA Engineering) is currently under contract with the District to provide professional engineering services for the FEMA accreditation of the Missouri River Levee System Units R-613 and R-616. The contract for project management, design, bidding, and construction is a not to exceed amount of \$3,725,610.50. Since the last amendment to the contract, many out of scope items have been documented and are presented in this amendment.

A summary of the tasks in Amendment No. 3 is as follows:

- 2019 flooding from the Missouri and Platte Rivers damaged the levees and repairs, design adjustments and increased duration of the project.
- Highway 370 closure modifications due to BNSF requirements
- Modifications and investigations at Rumsey West wetland mitigation site
- USACE recent updates to Platte River hydrology
- Updates to interior drainage and FEMA flood insurance rate maps
- Finalizing as-built documents and O&M manual
- Construction observation/administration for the remaining 5 months of work
- Finalize levee certification package

FYRA Engineering proposes to provide the professional services in contract Amendment No. 3 for a total not to exceed amount of \$395,500, see attached Exhibit K. This would bring the total contract, including Amendments 1, 2 and 3 to \$4,121,110.50.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Amendment No. 3 to the Professional Services Agreement between the District and Houston Engineering, Inc. for the Modifications of Federal Levee Systems R-613/R-616-613 Project for the maximum amount of \$395,500, bringing the total maximum not to exceed contract amount to \$4,121,110.50, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.

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 July, 2012.

AMENDMENT TO OWNER-ENGINEER AGREEMENT – AMENDMENT # 3

1. Background Data:

- a. **Effective Date of Owner-Engineer Agreement:** 12 July 2012
- b. **Owner:** Papio-Missouri River Natural Resources District
- c. **Engineer** FYRA Engineering – A Part of HEI
- d. **Project:** P-MRNRD Missouri River R-613/R-616 Federal Levee Certification

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

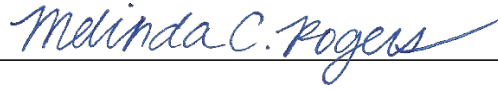
3. Description of Modifications

Attachment 1, “Modifications” includes additional services related to the construction phase of Federal Levees R-616-613 and R-613. Exhibits A and B to Attachment 1, detail the additional services that were performed by the engineer and the fees for those 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 11 August 2022.

OWNER:
Papio-Missouri River NRD

ENGINEER:
FYRA Engineering – A Part of HEI



By: John Winkler

By: Melinda C. Rogers, P.E.

Title: General Manager

Title: Principal Engineer, Project Manager

Date Signed: _____

Date Signed: 29 July 2022

Modifications

1. Engineer shall perform the following Additional Services:

Exhibit A, attached hereto and incorporated herein, entitled “Additional Services/Tasks Related to the Construction Phase of Federal Levees R-616-613 and R-613” details the Additional Services performed by Engineer.

Exhibit B, attached hereto and incorporated herein, entitled “Invoice Summaries Showing Additional Service Descriptions and Costs Associated with Additional Services,” details the Additional Services performed by Engineer and the fees and hours associated with those Additional Services.

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:

Exhibit A and Exhibit B, referred to above, details the additional services to be performed by Engineer.

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 compensation:

A maximum not to exceed total fee of \$395,500 representing time actually expended and invoiced by Engineer as shown in Exhibit B, and remaining work to be completed on the project.

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

The services have been extended from 1 June 2021 to 1 January 2022. The additional services listed in Exhibit A, have been previously completed.

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

NA



29 July 2022

Papio-Missouri River Natural Resources District (P-MRNRD)
Attn: Mr John Winkler
8901 S. 154th Street
Omaha, NE 68138

Re: Modifications of Federal Levee Systems R-613/R-616-613

Dear Mr. Winkler,

This letter is an update on the above referenced contract with FYRA Engineering and offers an opportunity to document scope items that have changed since the start of the original contract. Submitted for the August board meeting is an invoice that takes the project through 25 June 2022.

The contract total for this project is \$3,725,610.50 which includes project management, preliminary design, permitting (408 and 404), railroad coordination, final design, bidding, and construction. To date there have been two (2) amendments to this project as shown below.

Amendment Number	Date of Amendment	Amendment Amount
1	14 Feb 2019	\$ 1,843,526.00
2	8 Oct 2020	\$ 46,498.50

Since the execution of this contract and above amendments, several additional services have been provided outside of the initial scope of the contract. Most of the additional services can be attributed to the following items:

1. 2019 Floods on the Missouri and Platte Rivers, damages from the flooding, and expanded project duration due to the floods
2. Highway 370 closure section modifications due to BNSF requirements and projected Missouri River increased discharges
3. Investigation and modifications of the Rumsey West Wetland Mitigation site
4. USACE recent updates to Platte River hydrology
5. Updates to interior drainage and FEMA future flood insurance rate maps due to improved methods of determining ponding areas

An invoice summary has been sent along with every invoice for this project. Each month, the invoice summary details the out of scope work that has been completed that particular month, describes the work that was completed. In addition, a total out of scope services amount is shown on the invoice summary. An expanded and detailed list of additional services throughout the project duration is attached to this letter. At the time of the issuance of the latest invoice (25 June 2022) the total effort on



these additional services totals \$245,500. The contractor (Graham Construction) has approximately 5 months remaining on the project which will include the following work:

1. Construction of the Highway 370 closure section system under Highway 370/Mission Avenue
2. Modifications to the gate well structures due to levee raises and construction of new gate wells
3. Finalizing punch list items

FYRA Engineering's work remaining on this contract includes the following:

1. Finalizing the as-built documents and the Operation and Maintenance Manuals for both levee systems
2. Oversee the work completed by the contractor in the remaining months
3. Finalize and coordination with FEMA on the levee certification package and associated technical documents required for the determination of accreditation.

The original construction completion date prior to the 2019 flood was set at June 1 2021. Due to multiple delays from USACE flood repair projects, delays with construction due to COVID and material supply, and other unforeseen circumstances this project will be extended an additional 18 months past the original estimated completion date. During this extended time, FYRA has continued to have staff on site every day that the contractor has been working, has provided weekly construction reports to NRD staff, and has continued to complete all construction related coordination on this project. At this time, FYRA estimates that the effort to complete this project is slightly over the additional services being requested. FYRA is requesting an amendment of \$395,500 for the work completed on out of scope items and the extensive project delay.

FYRA appreciates the opportunity to serve your NRD on this critical project. Please feel free to contact me with any questions you may have.

Sincerely,

A handwritten signature in black ink that reads "Lindy Rogers".

Lindy Rogers, PE

Additional Services/Tasks as listed in all project invoice summary reports

- Highway 370 closure section modifications by Lamp Rynearson due to comments from BNSF and projected increase in Missouri River discharges.
- Adjustments to land rights documents after negotiations with landowners.
- Coordination and construction observation on the repair of a levee breach that was caused by NDOT's contractor during the Highway 75 construction project.
- Design, coordination, and construction observation of a high ground access road in Haworth Park that will allow emergency vehicles to access the Highway 370 closure section when park is inundated with flood water.
- Coordination with USACE and USACE contractor on 2019 flood repair project. This included pre-construction site visits, coordination on land rights, development of phasing plans, and post-construction site visits.
- Re-staking the limits of construction for landowners.
- Miscellaneous work related to the 2019 flood repairs and project modifications.
- Coordination with Tregaron golf course and adjustments to design required for Tregaron to grant the additional easements/land rights necessary for the project.
- Re-design of the Papillion Creek Wastewater Treatment Plant utility corridor due to damages to the area during the flood and modifications to their existing fence.
- Adjustment to the R-613 Missouri River Right Bank levee near the MUD sludge line.
- Seepage investigation at the proposed wetland mitigation site at Rumsey West.
- Re-design to the Rumsey West mitigation site to decrease the length of the intake culvert, design of drawdown culvert to empty the site if/when required, coordination with manufacturers and suppliers on seepage mitigation products, and coordination with the contractor on all the modifications.
- Review and coordination with the USACE for contractors' construction alternative to use sheet pile instead of the ring levee originally designed.
- Coordination/meetings on the Platte River Trail that will connect to the R-613 Platte River Left Bank levee near Allied Road.
- Development of a flood forecasting tool that utilizes the hydraulic models of the Missouri River, Platte River and Papillion Creek to accurately predict water surface elevations from National Weather Service flood forecasts.
- Review of USACE's updated Platte River Hydrology information, coordination with NRD staff on the information and development of a technical memorandum to challenge the methods the USACE utilized in developing the updated hydrology.
- Development of O&M Manuals for BNSF and UPRR closure sections.
- Review of multiple 408 submittals including a major review for a force main going under the levees near Harlan Lewis Road.
- Modifications to gatewells, fencing, and the addition of several borrow areas to the project vicinity.
- Design and coordination on the repair of concrete panels that were damaged during the 2019 flood.
- Modifications to the interior drainage study and modeling due to updated modeling methods since original mapping was completed.
- Modifications to Highway 370 closure section design and ongoing coordination with BNSF on phasing, shoring and construction plans.
- Design and coordination on repair of sloughing within the Papillion Creek channel.



- Coordination on USACE riprap repairs post construction.
- Coordination with the NRD and Schemmer for the Platte River Trail connection between Cass and Sarpy Counties.
- Grading modifications to the raised gatewells.
- Modifications to the Rumsey West wetland design.
- Developing plans and coordination with the contractor on the removal and replacement R-616
- Coordination with HDR on sanitary sewer force main project going under the levees near Harlan Lewis Road, development of new borrow sites, survey of sloughing areas, and coordination on reseeding required.
- Drone flights of the levee systems, and coordination with the contractor on fence modifications.
- Post construction surveying of additional borrow areas that were used for the project.