

MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

FROM: Martin P. Cleveland, Construction Engineer

SUBJECT: Little Papillion Creek Channel Stabilization
Amendment No. 2 to Professional Services Agreement with HDR Engineering, Inc.

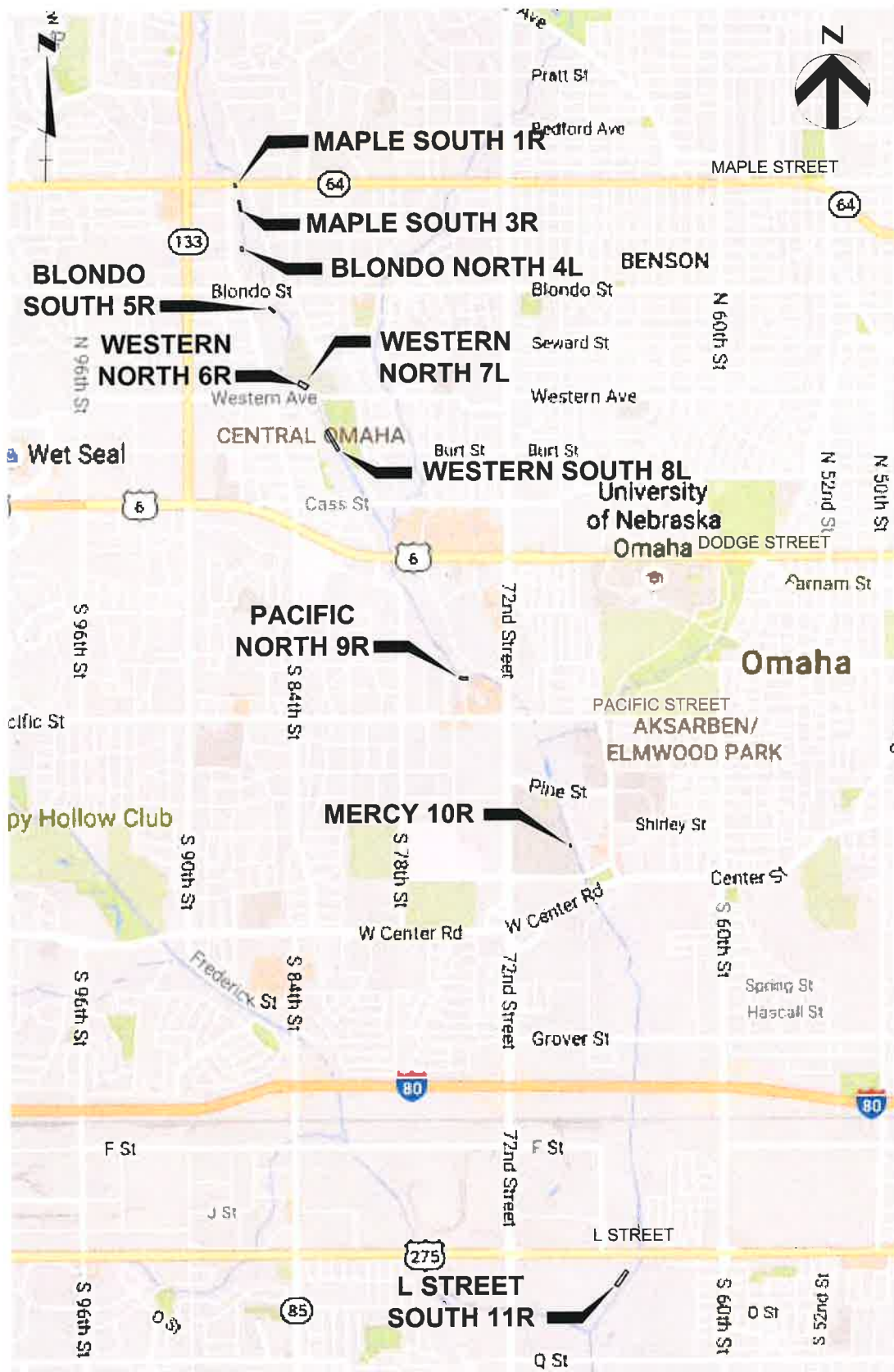
DATE: February 4, 2019

In September 2016, a professional services contract was approved with HDR Engineering, Inc. for the Little Papillion Creek Channel Stabilization Project which included preliminary and final design, US Army Corps of Engineers [USACE] Sections 404 and 408 permitting, bidding assistance and construction contract services for the 10 locations of the referenced project for a not-to-exceed amount of \$398,228.

Due to the USACE review process and a District decision to split 10 channel stabilization sites into a group of 9 sites and 1 separate site (Site 10R site near Mercy Road) in order to accomplish work in a timely fashion, Agreement Amendment No. 1, a scope change, was approved in October 2017 and provided for preparation of three USACE Section 404 permit applications, two USACE Section 408 permit applications and separate bid documents for two bid lettings for an amount of \$32,307, bringing the total not-to-exceed amount to \$430,535. The Initial scope of the project planned for two 404 permit applications, one 408 permit application and one set of bid documents.

The proposed Agreement Amendment No. 2 consists of an Agreement Scope Change to allow for re-bid of Site 10R (near Mercy Road) which required modification of the contract documents and additional bid support. In addition, the Amendment No. 2 provides for additional construction observation services beyond the December 31, 2018 construction contract deadline, as the project will not be substantially complete until the end of February 2019. Amendment No. 2 has a cost of \$27,878 and this addition will result in the total not-to-exceed agreement amount of \$458,413. The initial construction bid of \$912,971.60 was determined to be too high and rebidding effort resulted in a new low bid of \$289,383.02, which saved the District \$623,588.38 in construction costs.

Management recommends that the Programs, Projects and Operations Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute the proposed Amendment No. 2 to Professional Services Agreement with HDR Engineering, Inc. in the amount of \$27,878 for the Little Papillion Creek Channel Stabilization Project, bringing the total not-to-exceed amount to \$458,413, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.



LITTLE PAPILLION CREEK CHANNEL STABILIZATION PROJECT SITE MAP

Slough



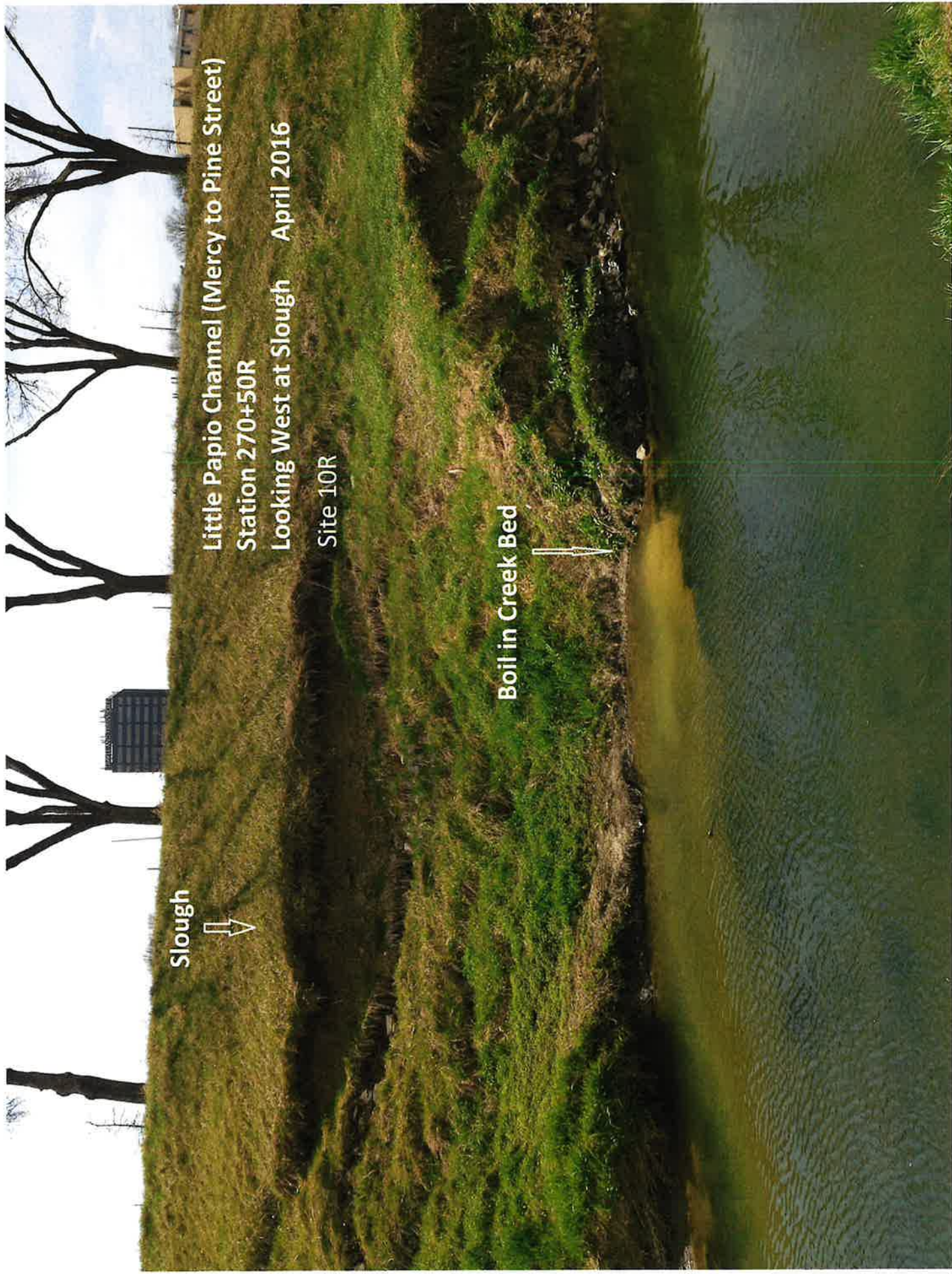
Little Papio Channel (Mercy to Pine Street)

Station 270+50R

Looking West at Slough April 2016

Site 10R

Boil in Creek Bed

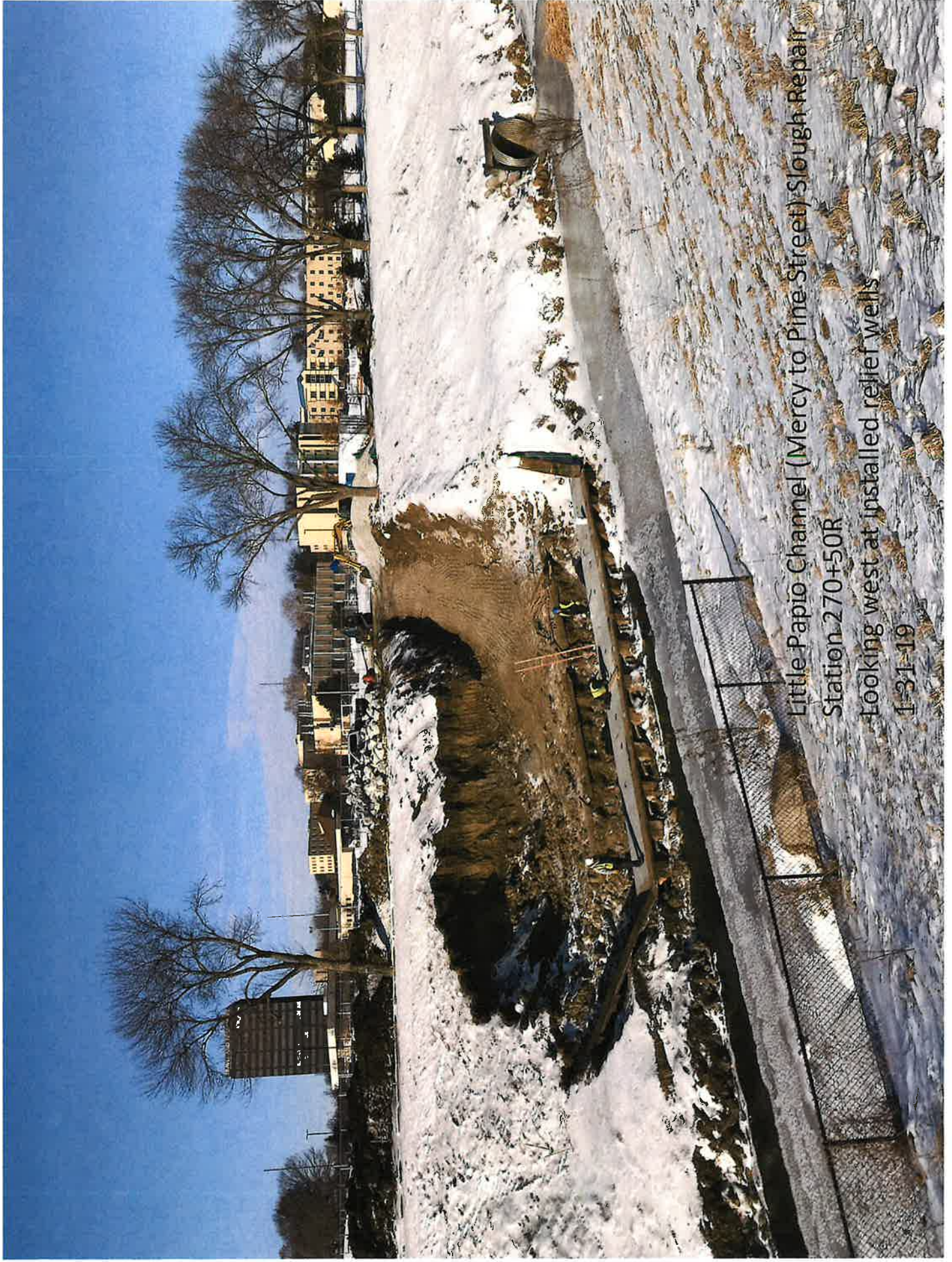




Little Papio Channel (Mercy to Pine Street)

Station 270+50R

Looking at Relief Well Installation 12-14-18



Little Papio Channel (Mercy to Pine Street) Slough Repair

Station 270+50R

Looking west at installed relief wells

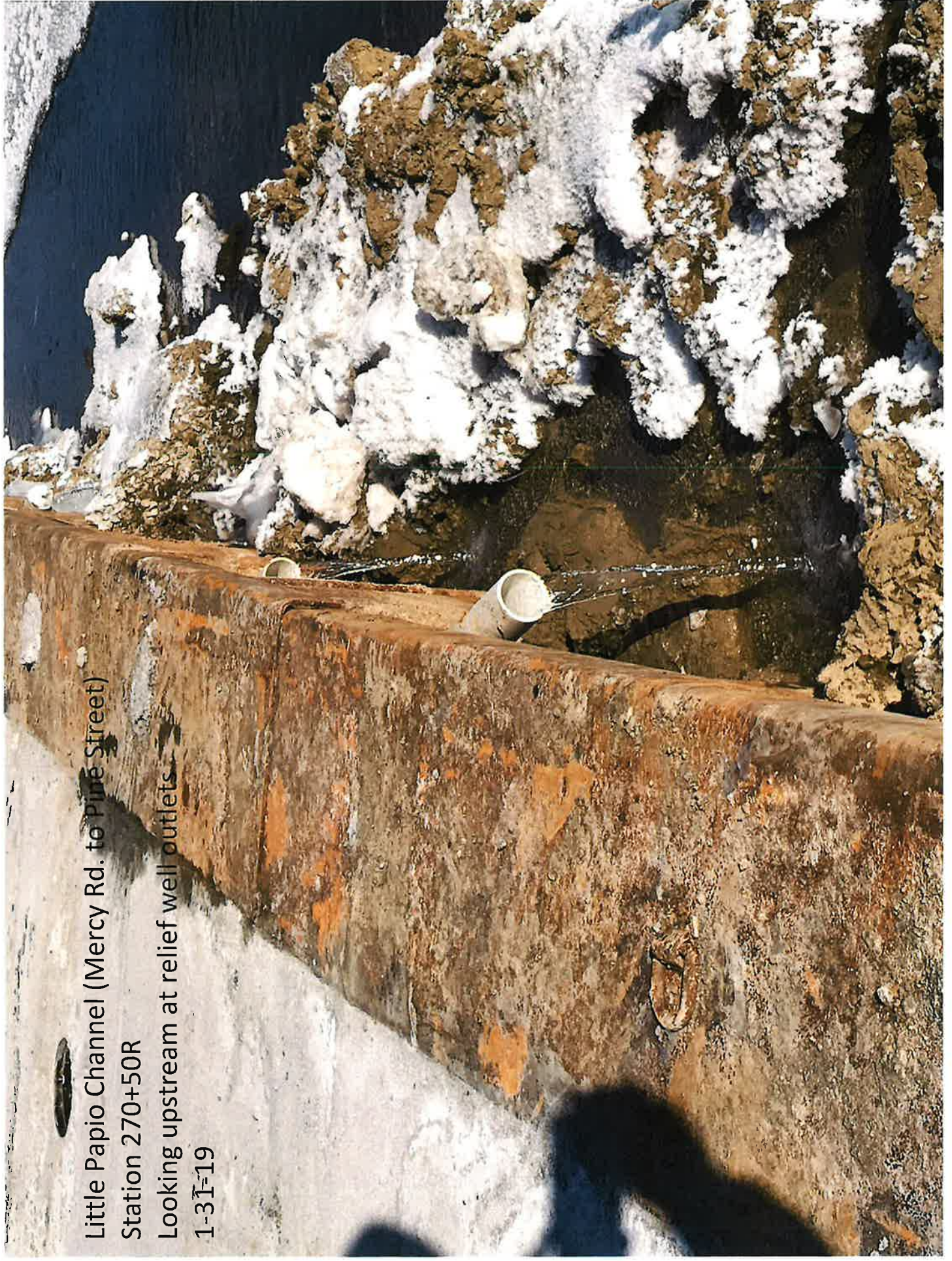
1-31-19

Little Papio Channel (Mercy Rd. to Pine Street)

Station 270+50R

Looking upstream at relief well outlets

1-31-19





January 18, 2019

Mr. Martin Cleveland, PE
Papio-Missouri River Natural Resources District
8901 South 154th Street
Omaha, NE 68138-3621

RE: Little Papillion Creek Channel Stabilization Mercy North 10R
Project Update and Amendment No. 2 Request

Dear Mr. Cleveland,

This letter is provided to you as an update of the Little Papillion Creek Channel Stabilization Project (Project) and to request an amendment to the engineering contract. The Project was initiated in September of 2016. The scope of services and associated fee for the Project included:

- Development of a feasibility study to evaluate stabilization alternatives for observed locations of channel instability along Little Papillion Creek; and,
- Development of one bid package, one Section 408 submittal, and one Section 404 permit submittal for the observed locations (nine sites), as well as an additional location near the Blue Cross Blue Shield building, known as Mercy N 10R.

The contract was modified for the preparation of two sets of contract documents to facilitate the regulatory process (see Amendment No. 1). Contract documents were developed for the nine sites, known as the Riprap Fill and Rock Filled Trenches Project, in May 2017. Construction was completed in October 2017. Contract documents were developed for the Mercy North 10R site in June 2018. The Project was advertised to bidders and contract documents were made available beginning June 11, 2018. Five prospective bidders attended the mandatory pre-bid site showing on June 19, 2018. Only one bid was received on June 26, 2018 from those present at the mandatory pre-bid site showing. The single bid from GeoStabilization International, LLC (GSI) totaled \$912,971.40, after making adjustments for arithmetic errors as prescribed in the specifications. The bid was considerably higher than the Engineer's opinion of probable construction cost, which was in the range of \$250,000 to \$300,000.

Input was solicited from the four contractors who did not submit a bid to ascertain their concerns regarding the Project. The contractors cited the following:

- Short turn-around time between pre-bid showing and bid submission deadline. This prevented some contractors from finding, or even contacting, subcontractors who could accommodate the required installation in the contract documents.
- Narrow window to substantially complete the construction (three weeks), which involves well development, placement of sheet piling, pouring concrete and placing riprap in a prescribed sequence of construction. Given the presence of a sand boil and artesian pressures, there was concern of what may be encountered, how the schedule could be impacted, and potential for liquidated damages being imposed.

hdrinc.com

The lone bidder, GSI, also cited concerns with schedule as justification for their bid amount. Their concerns included insufficient time to contact prospective sub-contractors, short construction window, and the risk potential of working around artesian pressures.

Based on that feedback it was recommended that the bid be rejected and re-bid. The following adjustments were made to the project:

- The bid submission schedule was modified to maximize time between advertisement, pre-bid site showing, and bid receipt;
- The allowable construction window to schedule work and substantially complete the work was increased from three (3) weeks to six (6) weeks; and,
- The wells were redesigned to allow the use of less expensive materials and installation process.

The revised Mercy North 10R contract documents were completed in August 2018. A mandatory pre-bid meeting was held on August 13, 2018, and bids were received on August 30, 2018. Two bids were submitted. The low bid of \$289,383.02 was submitted by Valley Construction. Niewohner Construction submitted a bid of \$374,225. The Engineer's opinion of probable construction cost totaled \$351,475. Construction of the Mercy North 10R Site began in November 2018, and is anticipated for completion in January 2019.

Rebidding the Project resulted in considerably lower bids than were previously received. However, the rebid process required modification to the contract documents and additional bid support, both of which were out of scope items. The effort included:

- Modification to the plan sheets and associated specification sections for a change in pipe material type, screen type, approved installation, and construction sequence;
- Revision to the engineer's opinion of probable construction cost; and,
- Bid support which required an additional pre-bid meeting, receipt and response to contractor's questions, and evaluation and recommendation of bids.

In addition, the construction was anticipated to be complete in December 2018, and will now likely extend to the end of January, resulting in additional construction observation time. The cost to accommodate the contract document modifications, bid support, and additional construction observation is approximately \$28,000. As previously discussed, we had hoped we could absorb this effort with remaining funds but were unable to do so.

Enclosed for your review is a proposed contract amendment. Please call me if you have any questions.

Sincerely,
HDR Engineering, Inc.



Patrick J. Engelbert, P.E.
Project Manager

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated September 6, 2016.

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. ~~21~~

The Effective Date of this Amendment is: _____, 201~~8~~9.

Background Data:

Effective Date of Owner-Engineer Agreement: September 6, 2016
Owner: Papio-Missouri River Natural Resources District
Engineer: HDR Engineering, Inc.
Project: Little Papillion Creek Channel Stabilization Project

Nature of Amendment:

☒ ~~Additional Services to be performed by~~ Modifications to services of Engineer
☒ Modifications of payment to Engineer

Description of Modifications:

The justification for the modifications provided in attached January 18, 2019 letter.

Based on the justification in the January 18, 2019 letter, the Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is ~~modified-replaced~~ as follows:

- 1) Exhibit A, Attachment 1, "Scope of Services", of this Agreement, including Amendment No. 1, shall be amended to include Exhibit A1, Attachment 1 "Scope of Services for Amendment No. 2." Only those tasks from Exhibit A, Attachment 1, "Scope of Services," that were modified by Exhibit A1, Attachment 1 "Scope of Services for Amendment No 2." are listed. All other tasks in Exhibit A, Attachment 1, "Scope of Services," are unchanged and shall remain in effect.
- 2) Exhibit C1, Appendix 2 "Fee Estimate" shall be amended to include Exhibit C1, Appendix 2 "Fee Estimate".

Agreement Summary:

Original agreement amount:	\$ <u>398,228.00</u>
Net change for prior amendments:	\$ <u>32,307.00</u>
This Amendment No. 21 amount:	\$ <u>27,878.00</u>
Adjusted Agreement amount:	\$ <u>458,413.00</u>

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:

ENGINEER:

**PAPIO-MISSOURI RIVER NATURAL RESOURCES
DISTRICT**

HDR ENGINEERING, INC.

By: _____
Name: John Winkler

By: _____
Name: Ronald J. SovaMatthew B. Tondl, PE

Title: General Manager

Title: Sr. Vice President

Date Signed: _____

Date Signed: _____

EXHIBIT A1, ATTACHMENT 1
AMENDMENT 1-2 SCOPE OF SERVICES
Little Papillion Creek Channel Stabilization Project
Douglas County, NE

BACKGROUND AND BASIS OF PROPOSAL

The purpose of this effort is to provide engineering evaluations and analysis, final design services, permitting services, and construction observation and administration for ten (10) locations of slope instability along the Little Papillion Creek channel as identified by P-MRNRD staff between Pratt Street and Q Street in Omaha. The locations are listed in Table 1.

Table 1. Slope Instability Locations

Location	Station
Pratt Street to Blondo Street	73+50R
	78+00R
	89+50L
Blondo Street to Western Avenue	108+00R
	132+50R
	132+50L
Western Avenue to Cass Street	145+00L
Cass Street to 72 nd Street	217+50R ^a
72 nd Street to Center Street	270+50R ^b
Center Street to Q Street	383+00R

^aAlso known as Pacific N 9R.

^bAlso known as Mercy N 10R.

AMENDMENT NO. 24 SCOPE OF SERVICES – Little Papillion Creek Channel Stabilization

The basis for changes to the original scope of Services are documented in a May 3, 2017 letter to Mr. Martin Cleveland. Those tasks modified are shown below in track changes format.

TASK SERIES 300 – PRELIMINARY AND FINAL DESIGN

Task Objectives: HDR will perform slope stability evaluation and analysis for the existing condition and the proposed stabilization measure at each of the ten (10) locations. HDR will also develop draft and final design details of the proposed stabilization measures

Deliverables:

- Two sets of Preliminary Design Documents (drawings, technical specifications); one for Mercy N 10 R, and one for the remaining sites in Table 1.
- Two sets of Final Design Documents (drawings, technical specifications, opinion of approximate construction cost); one set for Mercy N 10R, and one set for the remaining sites in Table 1.
- One set of revised Final Design Documents (drawings, technical specifications, opinion of approximate construction cost) for the Mercy N 10R site.

Key Understandings:

- The purpose of the design is to stabilize the channel where slope distress has occurred at the ten (10) sites identified by P-MRNRD staff. Any modifications to the design concept after work has been completed resulting from unforeseen changes in soil conditions or requirements will be considered Additional Services.
- Two sets of contract documents will be developed for the sites listed in Table 1. One set of contract documents will be developed for the Mercy N 10R, and one set for the remaining sites.

- One set of revised Final Design Documents will be developed for Mercy N 10R based on the re-bid effort.

TASK SERIES 400 – PERMITTING

Task Objectives: Assist P-MRNRD in coordinating with regulatory agencies, and developing necessary documentation for submission of Section 404 permitting and Section 408 approval.

HDR Activities: **Task 430 Section 404 Documentation.** Prepare Pre-Construction Notification authorization under the Nebraska Regional General Permit (NE 1998-11497) for each of the following;

- Pacific N 9R,
- Mercy N 10 R,
- Remaining Sites listed in Table 1.

Task 440 Section 408 Documentation. Prepare two Section 408 submittals to USACE, one for Mercy N 10R, and one for the remaining sites in Table 1, indicating that the integrity of the flood control channel will be maintained during and after construction. The 408 submittal will include the following items:

- Project description of existing condition and proposed stabilization measure.
- Slope stability and material compatibility evaluation.
- Results of the geotechnical investigation.
- Statement that the proposed stabilization measures will not impact the integrity of the channel improvement project during and after the proposed construction.
- Preliminary design plans. Final plans will be provided upon acceptance of the Section 408 submittal.
- Draft and final specifications for construction.
- Requirements for the contractor's Emergency Action Plan.

Deliverables:

- Three Section 404 Pre-Construction Notifications (Draft and Final).
- Two Section 408 Submittals. All pertinent geotechnical information and analysis will be included with this submittal.

Key Understandings:

- Both Section 408 submittals will require 3 hard copies and one electronic copy or a CD.
- Both Section 408 submittals to the USACE may take 6 to 8 weeks for review or longer depending on staff availability.

TASK SERIES 500 – BIDDING ASSISTANCE

Task Objectives: Assist P-MRNRD in preparing the invitation for bids, attend the pre-bid meetings, provide replies to prospective bidder inquiries, attend the bid openings, assist with review of the bids received, and prepare recommended actions for P-MRNRD Board consideration.

HDR Activities: **Task 510 Bid Modifications.** Receive and respond to questions from plan holders concerning interpretations of the bidding procedure. HDR to provide technical interpretations on both design documents. Inquiries that can be addressed by referring to information in the Bidding Documents will be recorded in telephone conservation records. Address inquiries that require a modification of the Bidding Documents by preparing an addendum item. HDR to prepare appropriate addenda for P-MRNRD distribution.

Task 520 Pre-Bid Meeting. Attend ~~two-three~~ pre-bid meetings with prospective bidders. Prepare agenda and notes for the pre-bid portion of ~~both-all three~~ meetings. Address

inquiries that require a modification of the Bidding Documents by preparing an addendum item.

Task 530 Bid Opening. Attend ~~two~~ three Bid Openings to assist in the initial screening of bids regarding Bidder's use of required Bid Forms, inclusion of Bid Security and inclusion of other qualifying information to accompany the Bid. Tabulate bids. Evaluate bids and prepare a letter of recommendation.

Task Deliverables:

- Electronic copy of addenda(um) to be distributed by P-MRNRD to all plan holders.
- ~~Two~~ Three pre-bid meeting agendas and minutes.
- Tabulation of bids and letter of recommendation of award.

Key Understandings:

- HDR will be the issuing office in the bidding documents for questions and will coordinate with P-MRNRD on responses.
- P-MRNRD is responsible for bid solicitation.
- HDR is responsible for document distribution (including addendum) and bid opening.
- P-MRNRD is responsible for advertising the project and payment of any fees.
- Bidding assistance is for two (2) sets of contract documents and two (2) contractors.

TASK SERIES 600 – CONSTRUCTION ADMINISTRATION

Task Objectives: Provide full-time on-site observation and document construction activities.

HDR Activities: **Task 610 Preconstruction Meeting.** Assist P-MRNRD with organizing and holding ~~two~~ three preconstruction meetings. The meetings will be attended by representatives from HDR, P-MRNRD, Contractor, and other interested parties. The main purpose of the meetings will be to establish lines of communication, discuss areas of responsibility, establish operational constraints, and to discuss and clarify items.

Task 630 Construction Observation. Conduct full-time on-site observation of work in progress to determine if work is generally proceeding in accordance with the Contract Documents. Anticipated duration of construction is 55 working days from contractor mobilization. The level of construction observation effort included in this scope equates to ~~57850~~ hours (10-hour days for 55 days and 4-hour days for 7 days) for a full-time resident project representative (RPR) for the anticipated duration. Reasonable variations in work days and schedules are anticipated, but no protracted overtime, work stoppages or extended work schedules are anticipated. A geotechnical engineer will observe the start of construction and will provide periodic visits to observe the progress of the construction. If the construction schedule exceeds the estimated effort, all parties agree that the contract will be adjusted.

The following activities are to be conducted:

- Conduct a construction kickoff meeting.
- Conduct up to ~~twelve~~ (102) construction progress meetings.
- Provide clarifications and interpretations of Contract Documents to Contractor.
- Assist in negotiating change orders.
- Maintain files for correspondence, shop drawings and samples, change orders and other project related documents.
- Maintain log book to record working days; weather conditions; weekly activities; decisions; and general observations.
- Review and verify applications for payment with Contractor. HDR will provide a recommendation and forward payment application to P-MRNRD.

- Conduct a substantial completion inspection and submit a list of observed items requiring completion or correction. After items on list have been completed or corrected, HDR to issue Certificate of Substantial Completion.
Conduct a final inspection and submit a list of observed items requiring completion or correction. After items on list have been completed or corrected, HDR to review final payment application.

Task 640 Construction Closeout. Compile construction documentation and prepare record drawings, which will be the final record drawings, corrected to reflect field conditions observed and changes documented by the contractor during the construction period. An addendum to the Operations and Maintenance (O&M) Manual for the Little Papillion Channel Improvement Project will be prepared and submitted to USACE.

Key Understandings:

- The Contractor for each set of design documents will be responsible for marking up a set of drawings as changes are identified. Upon completion of construction, the marked-up drawings will be used in making “record” revisions to the original drawings.
- It is assumed that the construction for the seven (7) sites located north of Cass Street and the one (1) site south of L Street will take four (4) weeks, the Mercy N 9R site will take three (3) weeks, and the Pacific N 9R site will take four (4) weeks, and the construction between sites will not occur concurrently.

Exhibit C1 Appendix 2

PAPIO - MISSOURI RIVER NATURAL RESOURCES DISTRICT
LITTLE PAPILLION CREEK CHANNEL STABILIZATION
FEE ESTIMATE

TASKS	Labor						Expenses					Subconsultants (LRA, Thiele)	Est. Total Cost
	Project Manager	Sr Engr/ Technical	Project Engineers/ scientist	Technical Support	Clerical	Total Hours	Total Labor Cost	Printing	Travel	Misc.	Total Expenses		
	\$225	\$229	\$158	\$93	\$101								
TASK SERIES 300 - Preliminary and Final Design													
Task 320	24	14	26	4	4	72	\$13,828	\$0	\$0	\$0	\$0	\$0	\$13,828
	24	14	26	4	4	72							
Estimated Task Hours Subtotal													
Estimated Task Cost Subtotal	\$5,688	\$2,542	\$2,822	\$372	\$404		\$13,828	\$0	\$0	\$0	\$0	\$0	\$13,828
TASK SERIES 500 - BIDDING ASSISTANCE													
Task 510	4	2	8	4	2	20	\$3,204	\$0	\$0	\$0	\$0	\$0	\$3,204
Task 520	6	2	4	0	0	12	\$2,516	\$0	\$0	\$0	\$0	\$0	\$2,516
Task 530	4	4	2	0	0	10	\$2,254	\$0	\$0	\$0	\$0	\$0	\$2,254
	14	6	14	4	2	42							
Estimated Task Hours Subtotal													
Estimated Task Cost Subtotal	\$3,318	\$2,024	\$2,058	\$372	\$202		\$7,974	\$0	\$0	\$0	\$0	\$0	\$7,974
TASK SERIES 600 - CONSTRUCTION CONTRACT ADMINISTRATION													
Task 630	4	4	28	0	0	36	\$6,076	\$0	\$0	\$0	\$0	\$0	\$6,076
	4	4	28	0	0	36							
Estimated Task Hours Subtotal													
Estimated Task Cost Subtotal	\$948	\$1,012	\$4,116	\$0	\$0		\$6,076	\$0	\$0	\$0	\$0	\$0	\$6,076
TOTAL HOURS	42	28	68	6	6	150							
TOTAL COST	\$ 8,954	\$ 6,278	\$ 9,898	\$ 744	\$ 608		\$14,050	\$0	\$0	\$0	\$0	\$0	\$27,878

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated September 6, 2016.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 2**

The Effective Date of this Amendment is: _____, 2019.

Background Data:

Effective Date of Owner-Engineer Agreement: September 6, 2016
Owner: Papio-Missouri River Natural Resources District
Engineer: HDR Engineering, Inc.
Project: Little Papillion Creek Channel Stabilization Project

Nature of Amendment:

- ☒ Modifications to services of Engineer
☒ Modifications of payment to Engineer

Description of Modifications:

The justification for the modifications provided in attached January 18, 2019 letter.

Based on the justification in the January 18, 2019 letter, the Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is replaced as follows:

- 1) Exhibit A, Attachment 1, "Scope of Services", of this Agreement, including Amendment No. 1, shall be amended to include Exhibit A1, Attachment 1 "Scope of Services for Amendment No. 2." Only those tasks from Exhibit A, Attachment 1, "Scope of Services," that were modified by Exhibit A1, Attachment 1 "Scope of Services for Amendment No. 2." are listed. All other tasks in Exhibit A, Attachment 1, "Scope of Services," are unchanged and shall remain in effect.
- 2) Exhibit C1, Appendix 2 "Fee Estimate" shall be amended to include Exhibit C1, Appendix 2 "Fee Estimate".

Agreement Summary:

Original agreement amount:	<u>\$ 398,228.00</u>
Net change for prior amendments:	<u>\$ 32,307.00</u>
This Amendment No. 2 amount:	<u>\$ 27,878.00</u>
Adjusted Agreement amount:	<u>\$ 458,413.00</u>

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:

ENGINEER:

**PAPIO-MISSOURI RIVER NATURAL RESOURCES
DISTRICT**

HDR ENGINEERING, INC.

By: _____

Name: John Winkler

Title: General Manager

Date Signed: _____

By: 

Name: Matthew B. Tondl, PE

Title: Sr. Vice President

Date Signed: 2/6/19

**EXHIBIT A1, ATTACHMENT 1
AMENDMENT 2 SCOPE OF SERVICES
Little Papillion Creek Channel Stabilization Project
Douglas County, NE**

BACKGROUND AND BASIS OF PROPOSAL

The purpose of this effort is to provide engineering evaluations and analysis, final design services, permitting services, and construction observation and administration for ten (10) locations of slope instability along the Little Papillion Creek channel as identified by P-MRNRD staff between Pratt Street and Q Street in Omaha. The locations are listed in Table 1.

Table 1. Slope Instability Locations

Location	Station
Pratt Street to Blondo Street	73+50R
	78+00R
	89+50L
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	132+50L
Western Avenue to Cass Street	145+00L
Cass Street to 72 nd Street	217+50R ^a
72 nd Street to Center Street	270+50R ^b
Center Street to Q Street	383+00R

^aAlso known as Pacific N 9R.

^bAlso known as Mercy N 10R.

AMENDMENT NO. 2 SCOPE OF SERVICES – Little Papillion Creek Channel Stabilization

The basis for changes to the original scope of Services are documented in a May 3, 2017 letter to Mr. Martin Cleveland. Those tasks modified are shown below in track changes format.

TASK SERIES 300 – PRELIMINARY AND FINAL DESIGN

Task Objectives: HDR will perform slope stability evaluation and analysis for the existing condition and the proposed stabilization measure at each of the ten (10) locations. HDR will also develop draft and final design details of the proposed stabilization measures

Deliverables:

- Two sets of Preliminary Design Documents (drawings, technical specifications); one for Mercy N 10 R, and one for the remaining sites in Table 1.
- Two sets of Final Design Documents (drawings, technical specifications, opinion of approximate construction cost); one set for Mercy N 10R, and one set for the remaining sites in Table 1.
- One set of revised Final Design Documents (drawings, technical specifications, opinion of approximate construction cost) for the Mercy N 10R site.

Key Understandings:

- The purpose of the design is to stabilize the channel where slope distress has occurred at the ten (10) sites identified by P-MRNRD staff. Any modifications to the design concept after work has been completed resulting from unforeseen changes in soil conditions or requirements will be considered Additional Services.
- Two sets of contract documents will be developed for the sites listed in Table 1. One set of contract documents will be developed for the Mercy N 10R, and one set for the remaining sites.

- One set of revised Final Design Documents will be developed for Mercy N 10R based on the re-bid effort.

TASK SERIES 400 – PERMITTING

Task Objectives: Assist P-MRNRD in coordinating with regulatory agencies, and developing necessary documentation for submission of Section 404 permitting and Section 408 approval.

HDR Activities: **Task 430 Section 404 Documentation.** Prepare Pre-Construction Notification authorization under the Nebraska Regional General Permit (NE 1998-11497) for each of the following;

- Pacific N 9R,
- Mercy N 10 R,
- Remaining Sites listed in Table 1.

Task 440 Section 408 Documentation. Prepare two Section 408 submittals to USACE, one for Mercy N 10R, and one for the remaining sites in Table 1, indicating that the integrity of the flood control channel will be maintained during and after construction. The 408 submittal will include the following items:

- Project description of existing condition and proposed stabilization measure.
- Slope stability and material compatibility evaluation.
- Results of the geotechnical investigation.
- Statement that the proposed stabilization measures will not impact the integrity of the channel improvement project during and after the proposed construction.
- Preliminary design plans. Final plans will be provided upon acceptance of the Section 408 submittal.
- Draft and final specifications for construction.
- Requirements for the contractor's Emergency Action Plan.

Deliverables:

- Three Section 404 Pre-Construction Notifications (Draft and Final).
- Two Section 408 Submittals. All pertinent geotechnical information and analysis will be included with this submittal.

Key Understandings:

- Both Section 408 submittals will require 3 hard copies and one electronic copy or a CD.
- Both Section 408 submittals to the USACE may take 6 to 8 weeks for review or longer depending on staff availability.

TASK SERIES 500 – BIDDING ASSISTANCE

Task Objectives: Assist P-MRNRD in preparing the invitation for bids, attend the pre-bid meetings, provide replies to prospective bidder inquiries, attend the bid openings, assist with review of the bids received, and prepare recommended actions for P-MRNRD Board consideration.

HDR Activities: **Task 510 Bid Modifications.** Receive and respond to questions from plan holders concerning interpretations of the bidding procedure. HDR to provide technical interpretations on both design documents. Inquiries that can be addressed by referring to information in the Bidding Documents will be recorded in telephone conversation records. Address inquiries that require a modification of the Bidding Documents by preparing an addendum item. HDR to prepare appropriate addenda for P-MRNRD distribution.

Task 520 Pre-Bid Meeting. Attend three pre-bid meetings with prospective bidders. Prepare agenda and notes for the pre-bid portion of all three meetings. Address inquiries that require a modification of the Bidding Documents by preparing an addendum item.

Task 530 Bid Opening. Attend three Bid Openings to assist in the initial screening of bids regarding Bidder's use of required Bid Forms, inclusion of Bid Security and inclusion of other qualifying information to accompany the Bid. Tabulate bids. Evaluate bids and prepare a letter of recommendation.

Task Deliverables:

- Electronic copy of addenda(um) to be distributed by P-MRNRD to all plan holders.
- Three pre-bid meeting agendas and minutes.
- Tabulation of bids and letter of recommendation of award.

Key Understandings:

- HDR will be the issuing office in the bidding documents for questions and will coordinate with P-MRNRD on responses.
- P-MRNRD is responsible for bid solicitation.
- HDR is responsible for document distribution (including addendum) and bid opening.
- P-MRNRD is responsible for advertising the project and payment of any fees.
- Bidding assistance is for two (2) sets of contract documents and two (2) contractors.

TASK SERIES 600 – CONSTRUCTION ADMINISTRATION

Task Objectives: Provide full-time on-site observation and document construction activities.

HDR Activities: **Task 610 Preconstruction Meeting.** Assist P-MRNRD with organizing and holding three preconstruction meetings. The meetings will be attended by representatives from HDR, P-MRNRD, Contractor, and other interested parties. The main purpose of the meetings will be to establish lines of communication, discuss areas of responsibility, establish operational constraints, and to discuss and clarify items.

Task 630 Construction Observation. Conduct full-time on-site observation of work in progress to determine if work is generally proceeding in accordance with the Contract Documents. Anticipated duration of construction is 55 working days from contractor mobilization. The level of construction observation effort included in this scope equates to 578 hours (10-hour days for 55 days and 4-hour days for 7 days) for a full-time resident project representative (RPR) for the anticipated duration. Reasonable variations in work days and schedules are anticipated, but no protracted overtime, work stoppages or extended work schedules are anticipated. A geotechnical engineer will observe the start of construction and will provide periodic visits to observe the progress of the construction. If the construction schedule exceeds the estimated effort, all parties agree that the contract will be adjusted.

The following activities are to be conducted:

- Conduct a construction kickoff meeting.
- Conduct up to twelve (12) construction progress meetings.
- Provide clarifications and interpretations of Contract Documents to Contractor.
- Assist in negotiating change orders.
- Maintain files for correspondence, shop drawings and samples, change orders and other project related documents.
- Maintain log book to record working days; weather conditions; weekly activities; decisions; and general observations.
- Review and verify applications for payment with Contractor. HDR will provide a recommendation and forward payment application to P-MRNRD.
- Conduct a substantial completion inspection and submit a list of observed items requiring completion or correction. After items on list have been completed or corrected, HDR to issue Certificate of Substantial Completion.

Conduct a final inspection and submit a list of observed items requiring completion or correction. After items on list have been completed or corrected, HDR to review final payment application.

Task 640 Construction Closeout. Compile construction documentation and prepare record drawings, which will be the final record drawings, corrected to reflect field conditions observed and changes documented by the contractor during the construction period. An addendum to the Operations and Maintenance (O&M) Manual for the Little Papillion Channel Improvement Project will be prepared and submitted to USACE.

Key Understandings:

- The Contractor for each set of design documents will be responsible for marking up a set of drawings as changes are identified. Upon completion of construction, the marked-up drawings will be used in making "record" revisions to the original drawings.
- It is assumed that the construction for the seven (7) sites located north of Cass Street and the one (1) site south of L Street will take four (4) weeks, the Mercy N 9R site will take three (3) weeks, and the Pacific N 9R site will take four (4) weeks, and the construction between sites will not occur concurrently.

Exhibit C1 Appendix 2 PAPIO - MISSOURI RIVER NATURAL RESOURCES DISTRICT LITTLE PAPILLION CREEK CHANNEL STABILIZATION FEE ESTIMATE												
TASKS	Labor					Expenses					Subconsultants (LBA, Thiele)	Est. Total Cost
	Project Manager	Sr Eng'r/ Technical	Project Engineer/S clientist	Technical Support	Clerical	Total Hours	Total Labor Cost	Printing	Travel	Misc.	Total Expenses	
TASK SERIES 300 - Preliminary and Final Design												
Task 320 Final Design	24	14	26	4	4	72	\$13,828	\$0	\$0	\$0	\$0	\$13,828
Estimated Task Hours Subtotal	24	14	26	4	4	72						
Estimated Task Cost Subtotal	\$5,688	\$3,542	\$3,822	\$372	\$404		\$13,828	\$0	\$0	\$0	\$0	\$13,828
TASK SERIES 500 - BIDDING ASSISTANCE												
Task 510 Bid Modifications	4	2	8	4	2	20	\$3,204	\$0	\$0	\$0	\$0	\$3,204
Task 520 Pre-Bid Meeting	6	2	4	0	0	12	\$2,516	\$0	\$0	\$0	\$0	\$2,516
Task 530 Bid Opening	4	4	2	0	0	10	\$2,254	\$0	\$0	\$0	\$0	\$2,254
Estimated Task Hours Subtotal	14	8	14	4	2	42						
Estimated Task Cost Subtotal	\$1,716	\$2,024	\$2,058	\$372	\$202		\$7,974	\$0	\$0	\$0	\$0	\$7,974
TASK SERIES 600 - CONSTRUCTION CONTRACT ADMINISTRATION												
Task 630 Construction Observation	4	4	28	0	0	36	\$6,076	\$0	\$0	\$0	\$0	\$6,076
Estimated Task Hours Subtotal	4	4	28	0	0	36						
Estimated Task Cost Subtotal	\$948	\$1,072	\$4,716	\$0	\$0		\$6,076	\$0	\$0	\$0	\$0	\$6,076
TOTAL HOURS	42	26	68	8	6	150						
TOTAL COST	\$ 9,954	\$ 6,578	\$ 9,996	\$ 744	\$ 608		\$14,050	\$0	\$0	\$0	\$0	\$27,878