

Agenda Item: 6.

MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

SUBJECT: Phase VIII of Engineering Contract with Olsson Associates for Professional Services for Pigeon/Jones Site 12A

DATE: September 5, 2017

BY: Terry Schumacher, Land & Water Programs Coordinator

In September of 2007, the P-MRNRD Board of Directors approved a contract with Olsson Associates for the Pigeon/Jones Site 15 Final Design in the amount of \$534,573. The contract for Phase I included the design of the dam, design of the County road improvements, design of the downstream levees and the off-line storage area. In March of 2009, the Phase I contract was amended to include \$51,300 for additional design of the dam using new Probable Maximum Precipitation values and preparation of a Nebraska Environmental Trust application.

The Phase II Amendment to the contract was approved in July of 2009 for an additional \$513,000. Phase II not only provided additional fees for environmental permitting and final land rights survey, but added new services for recreation area design and a subcontract with Midwest Right of Way to assist in land rights acquisitions.

Phase III, approved in October 2010 for \$114,150, only pertained to preliminary design services for upstream sediment and grade control structures and was partially funded by an EPA Section 319 Grant through NDEQ.

Phase IV, \$340,980, was approved in April of 2012 to provide administration, observation and testing for construction of the Phase I design: including the dam, county roads, in-lake fisheries, levee and offline storage. Like the amendment addressed by this memo, construction services were approved in a separate phase once construction plans were complete so that services could be better prescribed and estimated.

Phase V was approved in March of 2013 for \$179,000. This amendment covered increased costs in the design of the recreation area and provided additional funding to continue the design of upstream sediment and grade control structures supported by additional 319 Grant funding.

Phase VI was approved in April of 2014 for \$142,270.00 for services necessary to provide construction administration and inspection of the recreation facilities at Kramper Lake. These services included contract administration, field survey, field observation and documentation and a migratory bird nesting survey.

Phase VII, approved in September of 2016 for \$389,000.00 provided for final design, permitting and construction administration services for Pigeon/Jones Site 12 and construction administration services for Pigeon/Jones Site 16. This approval increased the professional services contract with Olsson Associates for Pigeon Jones Site 15 project to a not to exceed amount of \$2,264,853.00.

The proposed Phase VIII Amendment would provide for final design, permitting and construction administration for Pigeon/Jones Site 12A.

Attached is a letter from Olsson Associates that explains in detail their request for additional professional services, in the not to exceed amount of \$179,122.00. If approved, it would increase the overall project contract to a not to exceed amount of \$2,443,975.00.

Management recommends that the Subcommittee recommend to the Board of Directors that the General Manager be authorized to execute an amendment to increase the maximum, not to exceed amount of the professional services contract with Olsson Associates for the Pigeon Jones Site 15 Project, to \$2,443,975.00, subject to changes deemed necessary by General Manager and approval as to form by District legal counsel.

DAKOTA COUNTY, NEBRASKA
Dakota County
Board of Commissioners
P.O. BOX 39
DAKOTA CITY, NEBRASKA 68731
(402) 987-2130

July 17, 2017

Papio-Missouri River NRD
8901 S 154th Street, #A
Omaha NE 68138-3621

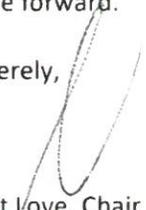
RE: Pigeon/Jones Creek Dam Site 12 project

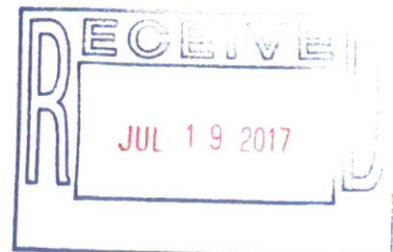
To Whom It May Concern:

Dakota County made an offer to Doug Huggenburger for the purchase of right-of-way for the Pigeon/Jones Creek Dam Site 12. Mr. Huggenburger declined the County's offer and we feel negotiations can go no further.

We appreciate all that the NRD has done on this project and regret that the project did not move forward.

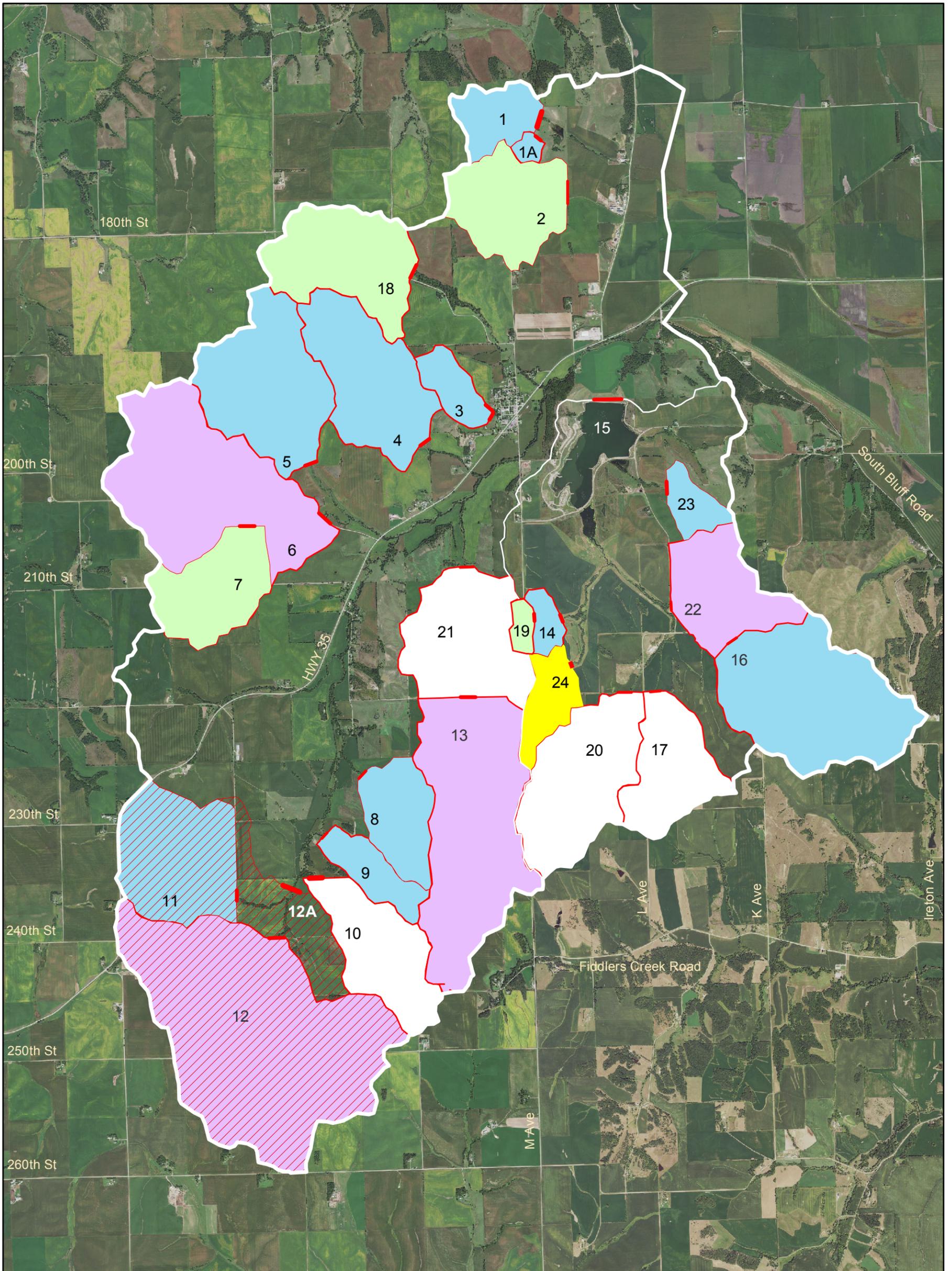
Sincerely,


Scott Love, Chair
Dakota County Board of Commissioners



PIGEON/JONES WATERSHED DAKOTA COUNTY

Date: 9/6/17

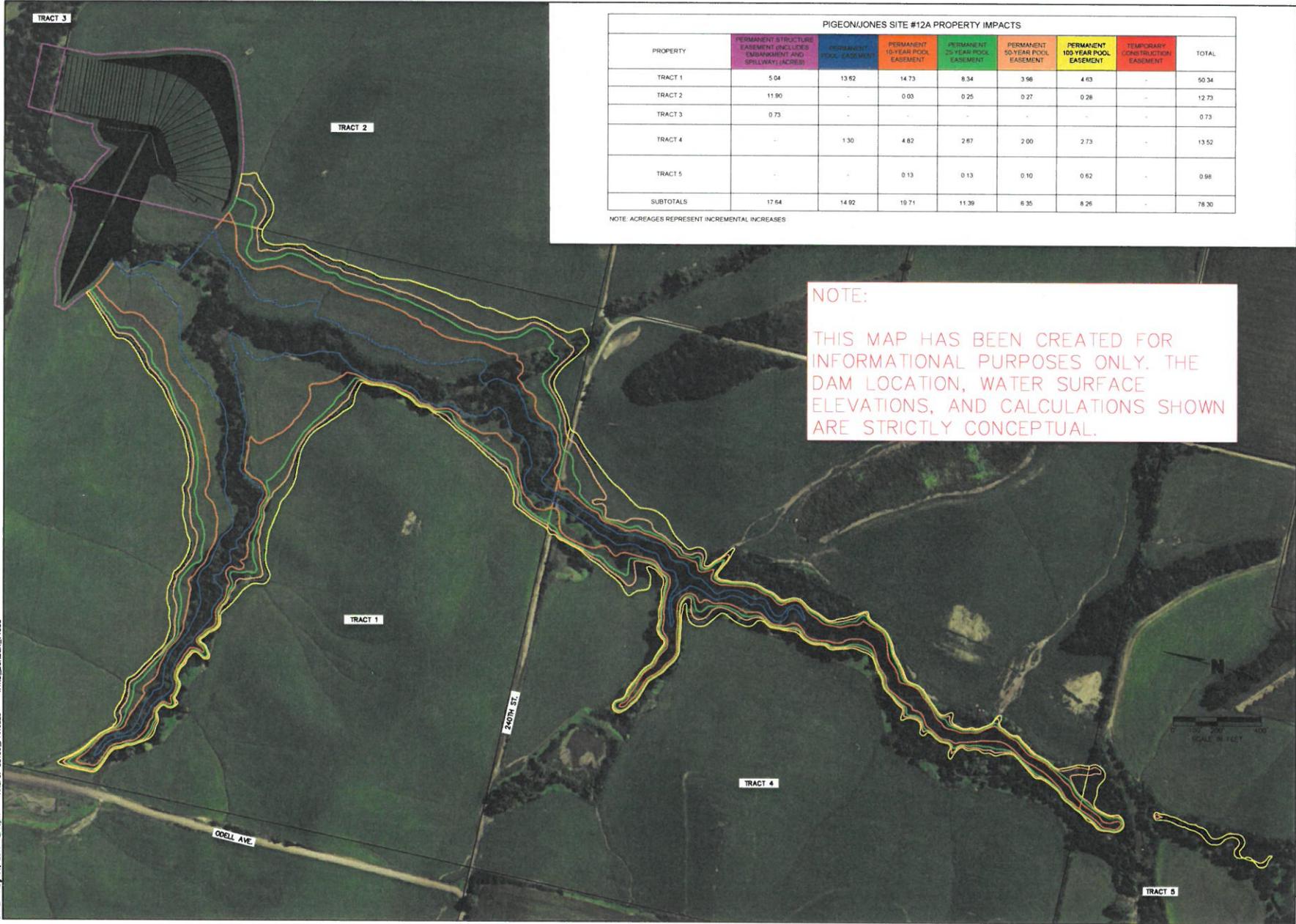


Legend

- PLANNED
- ROAD STRUCTURES (PLANNED)
- COMPLETED
- ADDITIONAL PLANNED STRUCTURES
- TECHNICALLY INFEASIBLE SITES
- PJ12A Drainage



D:\Temp\MapSubmittal\1832A\WTRLS_LAND_RIGHTS_7163A.dwg USER: sghighbody
 DATE: Aug 30, 2017 2:18pm XREFS: 31106_PARCELS WTRLS_BORDER_7163B



PIGEON/JONES SITE #12A PROPERTY IMPACTS

PROPERTY	PERMANENT STRUCTURE EASEMENT (INCLUDES EASEMENT AND SPILLWAY) (ACRES)	PERMANENT POOL EASEMENT	PERMANENT 15-YEAR POOL EASEMENT	PERMANENT 25-YEAR POOL EASEMENT	PERMANENT 50-YEAR POOL EASEMENT	PERMANENT 100-YEAR POOL EASEMENT	TEMPORARY CONSTRUCTION EASEMENT	TOTAL
TRACT 1	5.04	13.62	14.73	8.34	3.56	4.43	-	50.34
TRACT 2	11.90	-	0.03	0.25	0.27	0.28	-	12.73
TRACT 3	0.73	-	-	-	-	-	-	0.73
TRACT 4	-	1.30	4.82	2.67	2.00	2.73	-	13.52
TRACT 5	-	-	0.13	0.13	0.10	0.62	-	0.98
SUBTOTALS	17.64	14.92	19.71	11.39	6.35	8.26	-	78.30

NOTE: ACREAGES REPRESENT INCREMENTAL INCREASES

NOTE:
 THIS MAP HAS BEEN CREATED FOR INFORMATIONAL PURPOSES ONLY. THE DAM LOCATION, WATER SURFACE ELEVATIONS, AND CALCULATIONS SHOWN ARE STRICTLY CONCEPTUAL.

OLSSON ASSOCIATES
 801 P Street, Suite 200
 P.O. Box 94009
 Lincoln, NE 68509
 TEL: 402.474.0311
 FAX: 402.474.0328
 www.olssonassociates.com

PRELIMINARY
 NOT TO BE USED FOR CONSTRUCTION
 August 30, 2017
 OLSSON ASSOCIATES

REV. NO.	DATE	REVISION DESCRIPTION

CONCEPTUAL SITE PLAN
 PAPIO-MISSOURI RIVER NRD
 PIGEON / JONES WATERSHED - SITE 12A
 DAKOTA COUNTY, NEBRASKA

drawn by:
 checked by:
 approved by:
 project no.: 001-1806
 drawing no.:
 date: 8/30/2017

The below tables show a comparison of site PJ-12 vs PJ-12A relative costs

Location	Drainage Area (acres)	Construction Cost	Cost per Acre
PJ-12	1,960	\$1,478,242	\$754 / Acre
PJ-12A	3,000	\$1,215,428	\$405 / Acre

Location	50-YR Sediment (acre feet)	Construction Cost	Cost per Acre Foot
PJ-12	78.3 AF	\$1,478,242	\$18,879 / AF
PJ-12A	120 AF	\$1,215,428	\$10,128 / AF



August 29, 2017

Mr. Terry Schumacher
Papio-Missouri River NRD
8901 S. 154th Street
Omaha, NE 68138-3621

Re: Pigeon Jones Creek Dam Site 15 Phase VIII Services
PJ-12A Design and Construction Services
OA Project No. 007-1658

Dear Mr. Schumacher,

The purpose of this letter is to request an amendment to the above referenced project for additional services necessary to provide final design and construction services for Pigeon/Jones Creek Site 12A. At this time, Olsson is requesting \$179,122.00 for Phase VIII services.

This project has been completed in several phases and is summarized below:

Phase I Design and planning – Oct 2007:	\$534,573.00
Phase I Design Amendment – Mar 2009:	\$ 51,380.00
Phase II Amendment – July 2009:	\$513,000.00
Phase III Upstream Structures – Oct 2010:	\$114,150.00
Phase IV Construction – April 2012:	\$340,980.00
Phase V Rec Design and 319 Structures – Mar 2013:	\$179,500.00
Phase VI Amendment Construction Services – Feb 2014	\$142,270.00
Phase VII Amendment PJ-16 and PJ-12 Services – Sept. 2016	\$389,000.00
Total Contract Cost:	\$2,264,853.00

Phase VIII of the project is for the Final Design and Construction Services for Pigeon/Jones Creek Site 12A. Site 12A proposes a ¼ mile downstream shift of the centerline when compared to site 12. This downstream shift will benefit the watershed, environment and the P-MRNRD. By moving the alignment downstream, the captured drainage area will increase by 50% (an additional 1,000 acres of treated land equating to 40 Acre Feet of sediment), eliminate the need for overhead power line relocation (\$120,000 cost savings), lessen environmental impacts (approximately 142 feet less channel impact, this could potentially avoid channel mitigation for the project saving costs for the design, construction, and monitoring for channel mitigation), and reduced earthwork.

A detailed scope of services and fee breakdown is attached to this letter. A summary of the tasks is provided below.

Phase 100, Project management services
Phase 200, Survey services including survey, site plan, and land rights maps
Phase 300, Geotechnical investigation
Phase 400, Environmental permitting including wetland delineation and 404 permit
Phase 500, Final design and construction documents
Phase 600, Construction services

Thank you for your consideration of our proposal. Please feel free to contact me with any questions you may have.

Sincerely,



Michael W. Placke
Olsson Associates

Attachments:
Scope of Services
Fee Breakdown
Schedule
Appendix K

SCOPE OF SERVICES

This exhibit is hereby attached to and made a part of the Agreement for Professional Services dated September 13, 2007, between Papio-Missouri River Natural Resources District ("Client") and Olsson Associates ("Olsson") providing for professional services. Olsson's Scope of Services for the Agreement is indicated below.

PROJECT DESCRIPTION AND LOCATION

Project will be located at: Dakota County, Nebraska

Project Description: Phase VIII – Pigeon/Jones Creek Site 12A Final Design and Construction Services

This amendment is for additional services necessary for the realignment of Site 12A. Budget remaining from Phase VII is applied to this amendment to show total fees.

SCOPE OF SERVICES

Olsson shall provide the following services (Scope of Services) to Client for the Project:

DESIGN SERVICES

Phase 100 – Project Management

This component involves a Project Manager from Olsson to work with the Client's Project Manager to ensure the timely completion of quality work products within available budgetary resources. Olsson will be responsible for:

Task 101 – Project Management

- Establishing and maintaining project schedule and budget.
- Define individual tasks and establish cost and schedule of each task.
- Provide monthly status updates to the Client's primary contacts for the project.

Task 102 – Project Meetings

- Conduct a project initiation meeting with stakeholders to refine project scope, review the project site, identify specific goals, determine survey area, establish schedule for completion, and establish channels of communication. Olsson will prepare and distribute minutes of the meeting.
- Conduct progress meetings throughout project. Four meetings are anticipated.
- Conduct meetings with Nebraska Department of Natural Resources (NDNR) to ensure design meets state's regulations for dams.

Time and expense basis anticipated fee - \$15,289.22

Phase VII budget remaining - \$9,577.22

This amendment - \$5,712.00

Phase 200 – Survey Services

Task 201 – Survey

Conduct a field survey to determine existing topographic features of the entire area of embankment, this will include spot elevations, and will provide one foot contours. Roadway and drive locations, electrical power lines, building structures, trees, shrubs, fences, signs within the area will be surveyed. Upstream and downstream culvert crossings will be obtained.

Task 202 – Prepare a Site Plan and Land Owner Maps

Prepare a site plan showing the information obtained during the filed survey. The utility locations will be determined by surveying the visible features and using record information from the utility owners. No underground exploration for the utilities will be provided. Horizontal control will be based on Dakota County Coordinates and vertical control will be based on the NAVD 88 datum.

Task 203 – Land Owner Maps

Compile ownership information and establish property locations. Land owner easement maps will be prepared for the up to five parcels. A metes and bounds survey description will be prepared for the permanent structure easement.

Time and expense basis anticipated fee - \$14,057.69

Phase VII budget remaining - \$8,555.69

This amendment - \$5,502.00

Phase 300 – Geotechnical Services

Task 301 – Geotechnical Investigation

- DRILLING SERVICES - Field Exploration
 - Olsson proposes to use a truck-mounted drill rig to complete the following soil test borings and Electronic Cone Penetration (CPT) holes for the geotechnical investigation.
 - Four (4) soil test borings to depths of 80 feet each.
 - Four (4) soil test borings to depths of 60 feet each.
 - One (1) soil test boring to a depth of 70 feet.
 - Two (2) soil test boring to a depth of 50 feet.
 - One (1) soil test boring to a depth of 25 feet.
 - Four (4) soil test borings to depths of 20 feet each.
 - Eight (8) CPT test holes to accompany the above soil test borings at a depth of 60 feet.
 - The soil borings will be advanced to the depths proposed, or to refusal, whichever is shallower. This proposal is based on a total drilling footage of 835 linear feet and approximately 480 linear feet of CPT.
 - Contact Diggers Hotline of Nebraska to locate underground utilities. To insure the safety of the crew on site, Client must inform Olsson of the location of all private utilities and private utility service connections. Cost of locating private utility lines and private service connections shall be Client's responsibility. Olsson is not responsible or liable for damage to any private utility or private service connection.

- All boring locations must be readily accessible. Any cost of making boring locations accessible is Client's responsibility. Olsson will not perform work until boring locations are accessible and acceptable to Olsson's satisfaction.
- Drilling rigs are heavy equipment. Disturbance of natural surroundings including but not limited to soil indentations, concrete cracking and damage to underground sprinkler systems, may occur. Olsson shall not be liable or responsible for any site disturbance that may occur as a result of bringing equipment on site. Client accepts full responsibility for site disturbance.
- Sampling of soils in general accordance with ASTM D-1586 and ATSM D-1587.
- Obtain groundwater levels in the test borings at the time of drilling and upon completion of the drilling operations.
- Geotechnical Services - Laboratory Services
 - As soil conditions dictate, laboratory testing may include visual soil classification (ASTM D-2488), unconfined compression tests (ASTM D-2166), thin-walled tube density tests (ASTM D-2937), moisture content tests (ASTM D-2216), Atterberg limit tests (ASTM D4318), a Standard Proctor test (ASTM D-698), a one-dimensional consolidation test (ASTM D-2435), crumb, pinhole, permeability, and triaxial testing.
- Geotechnical Services - Engineering Analysis and Report Preparation
 - Settlement analysis to evaluate the total and differential settlement anticipated along the dam centerline. Recommendations regarding fill height to account for the settlement will be provided along with any remedial measures necessary to address potential cracking related to excessive differential settlement.
 - Analysis of the seepage potential through the dam embankment and underlying alluvial soils. For water budgeting purposes, estimated seepage rates through the embankment and foundation will be provided.
 - Slope stability analysis will be performed for the following conditions: steady state seepage, seismic, rapid drawdown and end of construction.
 - Discussion of the effects of the structural fill placement on the existing soil strata.
 - Recommendations regarding the thickness, moisture and compaction criteria of any backfill or embankment fill.
 - Discussion of anticipated groundwater concerns, along with recommendations for addressing these concerns during construction, if required.

Time and expense basis anticipated fee - \$82,800

Phase VII budget remaining - \$0

This amendment - \$82,800

Phase 400 – Environmental Permitting

Task 401 – Wetland Delineation

- A delineation of potential wetlands and other waters on the project study area will be completed. The delineation will be conducted for the proposed dam, spillway, and inundated area. If additional areas require survey, additional fees may be required.

- The delineation effort will include a review of existing data including USGS 7.5 minute topographical maps, National Hydrography Dataset information, National Wetland Inventory maps, soil survey data, and aerial photographs, as well as a field investigation.
- The field investigation will follow methodology of the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987); regional Supplement 2010 (Midwest Region) with investigation of hydrology, vegetation, and soils.
- In addition, the delineation will include photography of wetlands, other waters, and upland areas. Wetland boundaries and stream channels will be identified with GPS equipment, and a map showing the extent of wetlands and other waters of the U.S. will be developed.
- A jurisdictional wetland report will be prepared documenting the findings. The report will include color photographs of the site, copies of data sheets, maps depicting the location, acreage, and Cowardin classification.
- In addition, a preliminary Threatened and Endangered Species (TES) critical habitat will be identified during the wetland investigation and described in the report. This project will not include a detailed survey for TES and/or critical habitat. Any detailed surveys required by state and/or federal agencies will require additional fees.

Task 402 – 404 Permitting

- Based on preliminary project design, an Individual Section 404 permit is likely required. Olsson will facilitate a pre-application meeting with the USACE upon completion of the wetland delineation. A permit application will be prepared and will include a project purpose and need, alternatives analysis, and 12-point mitigation plan. The project purpose and need will be prepared based on information obtained from the CLIENT and will be the basis for the project action.
- The alternatives analysis will be prepared to demonstrate the project presents the Least Environmental Damaging Practicable Alternative (LEDPA). If the proposed design does not appear to be the LEDPA, Olsson will coordinate with the CLIENT and USACE to identify potential minimization measures. Potential mitigation will be evaluated during the permitting process and will be the basis for a conceptual mitigation plan. The conceptual mitigation plan will be presented to the CLIENT. Upon approval of the plan from the CLIENT, a 12-point mitigation plan will be prepared and submitted to the USACE as part of the permit application.
- Olsson anticipates approximately 4 meetings with the CLIENT and USACE will be required throughout the permitting process. Olsson will facilitate these meetings, although they will occur at the Lake Wehrspann office.

Time and expense basis anticipated fee - \$63,266.07
Phase VII budget remaining - \$30,639.07
This amendment - \$32,627.00

Phase 500 – Final Design and Construction Documents

This component involves the design of the Pigeon/Jones Site 12 Dam.

Task 501 – Final Hydrologic Analysis

Olsson will review the preliminary hydrology and routing completed and finalize for use during final design. Modifications will be made prior to completing dam design.

Task 502 – Final Design and Construction Documents

Olsson will prepare detailed drawings and technical specifications for the proposed construction work and for equipment and materials required under the Agreement, generally the construction plans will include the following:

- General reservoir layout and grading plans
- Auxiliary spillway alignment
- Auxiliary spillway plan and profile
- Principal spillway alignment
- Principal spillway plan and profile
- Cross sections for spillways and dam embankment
- Outlet details
- Erosion control details
- Additional Details
- Technical specifications

Task 503 – Quality Control/Quality Assurance

Olsson will conduct internal quality reviews at the 60 and 90 percent design stages.

Task 504 – Permitting

Olsson will prepare exhibits and letters for use in obtaining the following permits.

- Floodplain Development Permit
- NPDES Permit – Storm Water Pollution Prevention Plan (SWPPP) will be developed
- NDNR Dam Approval

Task 505 – Emergency Action Plan and Operations and Maintenance Manual (O&M)

Olsson will prepare an Emergency Action Plan (EAP) and Operation and Maintenance (O&M) manual and submit for approval to the NDNR once design is complete. The EAP will include the completed breach routing and analysis.

Deliverables

- 60% Submittal
 - Preliminary plan set
 - Preliminary Opinion of Probable Costs
- Design drawings, specifications and opinion of probable costs for 90% Submittal and Final Bid Set Submittal.
 - Olsson will prepare and submit applicable permit applications and information prior to the Final Bid Set submittal. Olsson will work with regulatory agencies to address review comments and provide additional requested information.

- Olsson will prepare bidding documents required to complete the bidding and contractor selection process. The bidding documents will be provided after the Final Bid Set submittal. It is assumed that Front End documents will be prepared in the EJCDC format.
- Emergency Action Plan
- Operation and Maintenance manual

Time and expense basis anticipated fee - \$91,152.05

Phase VII budget remaining - \$43,975.05

This amendment - \$47,177.00

Phase 600 – Construction Administration, Observation and Testing

Task 601 – Bidding Services

- Prepare Notice to Bidders and Issue Documents
Olsson will coordinate the issuance of notices to bidders and the production and distribution of bidding documents. Notices will be placed in the official publications by the Client, and in bidding services known to provide data to contractors in the area. In addition, invitations will be mailed directly to contractors whom the project team and/or the Client know will be interested in the project. Documents will be available for inspection at Olsson offices.
- Answer Questions and Prepare Addenda
Olsson will coordinate answering questions raised by bidders. Addenda will be prepared, as required, to provide clarification to questions. The Client will be informed on a regular basis of any project changes resulting from bidders' questions.
- Review and Evaluate Bids
Olsson will attend the bid opening. All bids properly received will be reviewed. Any inconsistencies or irregularities found in the bids will be reported to the Client. Olsson will prepare a bid tabulation of bids received and will distribute the bid tabulation to all bidders. Olsson will evaluate the bids and make a written recommendation to the Client concerning contract award.
- Conform Documents
Conformed copies of the contract documents, including all insurance and bond forms, will be prepared by Olsson. Olsson will review the documents to confirm that all procedures have been properly followed. Copies of the conformed documents will be provided to the Client for review. Approved copies will be distributed to the Client, the contractor, and Olsson. These documents form the official contract between the Client and the contractor, as well as the basis for all decisions concerning the work.

Task 602 – Construction Management

Olsson will perform Construction Management Services during the construction phase of the project. It is assumed for scoping purposes that construction will be a maximum of 90 working days. In the performance of

these services, Olsson shall not have authority or responsibility to supervise, direct, or control the Contractor's work or the Contractor's means, methods, techniques, sequences, or procedures of construction. Olsson shall not have authority or responsibility for safety precautions and programs incident to the Contractor's work or for any failure of the Contractor to comply with laws, regulations, rules, ordinances, codes or orders applicable to the Contractor furnishing and performing the work. Specific services to be performed by Olsson are as follows:

- **Pre-construction Conference**
Olsson will prepare an agenda and conduct a pre-construction conference. The pre-construction conference will include a discussion of the Contractor's tentative schedule, procedures for transmittal and review of the Contractor's submittals, processing payment applications, critical work sequencing, change orders, record documents, and the Contractor's responsibilities for safety and first aid. Procedures for dealing with unforeseen problems will be developed and discussed.
- **Progress Meetings**
Olsson will prepare an agenda and conduct progress meetings as needed to assist in resolution of conflicts and scheduling of the project. Progress meetings will include discussion of the Contractor's construction schedule, site coordination and defects and deficiencies in the work of the Contractor.
- **Review Contractor's Submittals**
Olsson will review Contractor submittals, for equipment, materials, and construction. Submittals shall include all shop drawings, request for information and project correspondence. Submittals will be logged and date stamped upon receipt. All requests for variations from the contract documents will be reviewed with Olsson's Project Engineer and Client before issuing an approval to the contractor. Such reviews shall not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Olsson will respond to fabrication and field questions and proposed changes and evaluate conflicts involving utilities
- **Pay Requests**
Review and process the Contractor's monthly payment requests, and forward to the Client for payment.
- **Process Change Orders**
Olsson will coordinate the preparation of any change orders that are agreed to by the contract parties. Documentation to support the basis for the claim will be developed, as well as justification for change to the contract price. Olsson will review all change orders to ensure that the Client's interests have been protected in the proceedings, and all change order requests will be discussed with the Client before they are developed in final form.
- **Contract Document Clarification**
Clarify construction contract documents when requested by the Client or Contractor. When authorized by the Client and Contractor, Olsson may interpret construction contract drawings and specifications upon request by subcontractors and suppliers.
- **Weekly Summary Report**
Olsson will submit to the Client weekly reports summarizing the progress of the project.

- **Project Files**
Olsson will set up and maintain appropriate project files related to the project. Included in the project file shall be all project correspondence, work change directives, change orders, meeting minutes, request for information, material certifications, test reports, weekly construction reports and project schedules.
- **Substantial Completion**
Upon receipt of written notification from the Contractor of substantial completion, schedule and attend a walk through to identify items to be completed or corrected prior to accepting substantial completion.
- **Final Completion**
Schedule and attend a final completion walk through to identify items requiring completion or correction prior to final payment.

Task 603 – Construction Observation

Olsson will furnish Construction Observation starting at the date of the Notice to Proceed. For scoping purposes, we have assumed a duration of 90 working days. Our scope includes 12 site visits by Olsson's construction manager and 60 site visits by Olsson's construction technician. Olsson will observe the Contractor's work and perform the services listed below. Olsson shall not have the responsibility for the superintendence of construction site conditions, safety, safe practices or unsafe practices or conditions, operation, equipment, or personnel other than employees of Olsson. This service shall in no way relieve the Contractor of complete supervision of the work or the Contractor's obligation for complete compliance with the drawings and specifications. The Contractor shall have sole responsibility for safety and for maintaining safe practices and avoiding unsafe practices or conditions. Specific services performed by Olsson are as follows:

- **Construction Reporting**
Olsson will complete weekly construction reports and a hand-written diary containing a summary of the Contractor's progress, general conditions of the work, problems & resolutions or proposed resolutions and weekly quantities.
- **Project Documentation**
Compile documentation to support the basis of all Requests For Information (RFI), field orders, work change directives, and change orders.
Olsson will prepare and keep detailed notes, computations and measurements; records of quantities of pay items constructed, test reports or basis of acceptance of installed materials and a daily record of the Contractor's operations.
- **Pay Requests**
Verify quantities of stored materials and completed work. Prepare and process payment requests based on field verifications of quantities requested by the Contractor.
- **Field Observation**
Perform Field Observation of the general progress of the work to assist in determining if the work is proceeding in general accordance with the plans and specifications. All discrepancies will be reported to the Client,

Contractor, and Olsson's Project Engineer. The Project Engineer shall approve corrective measures prior to correcting work.

- Utility Coordination
Olsson will assist the general contractor with his coordination with all utility companies that are involved with the project on a weekly basis to resolve scheduling conflicts that could result in delays to the project schedule.
- Substantial Completion
Schedule and attend substantial completion walk through with the Client, Contractor and Olsson's Project Engineer. Prepare and distribute substantial completion punch list.
- Final Completion
Schedule and attend the final completion walk through with the Client, Contractor and Olsson's Project Engineer. Prepare and distribute final completion punch list.
- Record Drawings
Maintain record drawings and specifications based on site observation and the Contractor's record drawings. This information will be combined and one set of redlined record drawings will be provided to the Client at the completion of the project. Electronic files of the record drawings are not included in this scope of work.

Task 604 – Materials Testing and Set Control Points

Olsson will establish up to five (5) control points for the contractor to base his construction off of. Horizontal control will be based upon Dakota County Coordinates and vertical control will be based NAVD 88 datum.

The testing and inspection scope is based off time and tests required to satisfy typical specifications related to the below referenced construction components of the project, which may change as more information becomes available:

- Embankment Fill
- Construction of Drainage Structure Improvements
 - Concrete Pipe Structures
- Pipe and Joint Pressure Testing
- On-site Testing Services
 - Evaluate and sample on-site or borrow material to be used during controlled fill and backfill operations.
 - Monitor and evaluate exposed subgrades prior to controlled fill placement or concrete placement.
 - Provide a technician to monitor and perform field density tests on the control fill and backfill operations within construction limits.
- Concrete
 - Provide an inspector/technician during concrete operations within the scoped site visits. Technician will sample and test the concrete for slump, air, and temperature, and will make sets of 3 compressive strength specimens and 1 reserve specimen.
- Special Inspections
 - Provide an inspector/technician on an as-required basis during construction of headwalls including forming and rebar inspections, concrete

testing, etc.

- Provide an inspector/technician during plant and field pressure testing of pipe and joints per the project specifications and ASTM standards this assumes one test.
- Laboratory Services
 - Laboratory testing to include visual soil classification (ASTM D-2488), standard Proctor (ASTM D-698), standard Proctor aggregate, aggregate sieve analysis (C-136) and Atterberg limit test (D-4318).
 - Compressive Strength testing of cast concrete cylinders will be performed and results forwarded to client.

Task 605 – Geotechnical Observation

- Olsson will be onsite one trip to observe keyway trench excavation and backfill operations, one trip for borrow area observations, and three trips for miscellaneous observations. In addition, Olsson anticipates having a senior engineer on site for various observations for up to three trips.

Task 606 – Post Construction Services

- Olsson will schedule and conduct the final completion walkthrough with the Client and Contractor to identify items requiring completion or correction prior to final payment.
- Olsson will conduct a site visit to conduct final completion walkthrough and review completion of “punch list” work.
- Olsson will perform project closeout services.
- Olsson will prepare record drawings, based on contractors’ “red lines” and site observation. This information will be combined and one set of redlined record drawings in PDF format on CD will be provided to the Client at the completion of the project. (Updated electronic CAD files of the record drawings are not included in this scope of work).
- Olsson will provide a final Operation and Maintenance manual at the completion of construction.

Time and expense basis anticipated fee - \$78,954.00

Phase VII budget remaining - \$73,650.00

This amendment - \$5,304.00

Phase	Description	Fee
100	Project Management	\$5,712.00
200	Survey	\$5,502.00
300	Geotechnical Services	\$82,800.00
400	Environmental Permitting	\$32,627.00
500	Final Design and Construction Documents	\$47,177.00
600	Construction Administration, Observation and Testing	\$5,304.00

Design Phases (100 through 500): \$173,819.00

Construction Phase (600): \$5,304.00

TOTAL ALL PHASES FEE: \$179,122.00

Should Client request work in addition to the Scope of Services, Olsson shall invoice Client for such additional services (Optional Additional Services) at the standard hourly billing labor rate charged for those employees actually performing the work, plus reimbursable expenses if any. Olsson shall not commence work on Optional Additional Services without Client's prior written approval.

Olsson agrees to provide all of its services in a timely, competent and professional manner, in accordance with applicable standards of care, for projects of similar geographic location, quality and scope.

OLSSON ASSOCIATES, INC.

By _____
Jeff McPeak, Office Manager

Michael W. Placke, Sr. Engineer

If you accept this Scope of Services, please sign:

Papio-Missouri River Natural Resources District "Client"

By _____
Signature

Print Name _____

Title _____

Dated: _____

Date: 28-Aug-17 Job: PJ-12A (Additional HRS)		LABOR HOURS												EXPENSES				TOTALS	
Phase/ Task	Description of Work	QA/QC Professional	Project Manager	Geotechnical Manager	Environmental Professional	Sr. Environmental Scientist	Senior Field Repr.	Associate Engineer	Assistant Professional/Scientist	Designer	Drill Crew and Rig	Survey CAD Operator	Survey	Admin/ Clerical	Travel, mile (Car)	Travel, mile (Sury)	Prints, each	Misc	Total Fee
Phase 100	Project Management	\$235	\$150	\$150	\$100	\$175	\$130	\$115	\$70	\$65	\$210	\$90	\$110	\$80	\$0.58	\$0.75	\$1.05	\$1.00	
Phase 100 Total			37												282				\$ 5,712
Phase 200	Survey Services																		
Phase 200 Total												48			296				\$ 5,502
Phase 300	Site Investigation and Data Collection																		
Phase 300 Total		47		47				173	131	142	109	15		15	261		60	757	\$ 82,800
Phase 400	Environmental Permitting																		
Phase 400 Total			80		67	65								25	960				\$ 32,627
Phase 500	Final Design																		
Phase 500 Total			114					230						35	525		500		\$ 47,177
Phase 600	Construction Services																		
Phase 600 Total						40									180				\$ 5,304
GRAND TOTAL		47	231	47	67	65	40	403	131	142	109	15	48	75	2208	296	560	757	\$ 179,122

Date: Pigeon/Jones Site 12A
 Job: 007-1658

Phase/ Task	Description of Work	2017				2018											
		September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December
Phase 100	Project Management																
Task 101	Project Management																
Task 102	Project Meetings																
Phase 200	Survey Services																
Task 201	Survey																
Task 202	Site Plan																
Task 203	Land Rights Maps																
Phase 300	Site Investigation and Data Collection																
Task 301	Geotechnical Investigation																
Phase 400	Environmental Permitting																
Task 401	Wetland Delineation																
Task 401	404 Permitting																
Phase 500	Final Design																
Task 501	Final Hydrologic Analysis																
Task 502	Final Design and Construction Documents																
Task 503	Quality Control and Quality Assurance																
Task 504	Permitting (SWPPP, DNR, Floodplain)																
Task 505	EAP and O&M Manual																
Phase 600	Construction Services																
Task 601	Bidding Services																
Task 602	Construction Management																
Task 603	Construction Observation (12 trips)																
Task 604	Material Testing (60 trips at 6 hrs) And Set Control																
Task 605	Geotechnical Observation																
Task 606	Project Closeout																

Pigeon/Jones Creek Site 12A

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 13, 2007].

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. VIII

The Effective Date of this Amendment is: September 15, 2017.

Background Data

Effective Date of Owner-Engineer Agreement: September 13, 2007

Owner: Papio-Missouri River Natural Resources District

Engineer: Olsson Associates

Project: P-MRNRD Pigeon/Jones Creek Watershed Final Design

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: This amendment is for additional services necessary to provide final design and construction services for Pigeon/Jones Creek Site 12A.

Agreement Summary:

Original agreement amount:	\$534,573.00
Net change for prior amendments:	\$1,730,280.00
This amendment amount:	\$179,122.00
Adjusted Agreement amount:	\$2,443,975.00

Change in time for services (days or date, as applicable): _____

MODIFIED VERSION of

Exhibit K – Amendment to Owner-Engineer Agreement.

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services, Copyright © 2014 by the National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. Those portions of the text that originated in copyrighted EJCDC documents remain subject to the copyright. A redline comparison copy highlighting the modifications will be made available upon request if you have not already received one.

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

By: _____
Name: John Winkler
Title: General Manager

By: _____
Name: Jeff McPeak
Title: Office Manager

Date Signed:

Date Signed:

By: _____
Name: Michael W. Placke
Title: Sr. Engineer

Date Signed:

MODIFIED VERSION of

Exhibit K – Amendment to Owner-Engineer Agreement.

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services, Copyright © 2014 by the National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. Those portions of the text that originated in copyrighted EJCDC documents remain subject to the copyright. A redline comparison copy highlighting the modifications will be made available upon request if you have not already received one.