

## Memorandum

To: Programs, Projects and Operations Subcommittee

Subject: Elkhorn River IPA – Professional Engineering Services Agreement  
with Tetra Tech, Inc.

Date: February 4, 2011

From: Gerry Bowen

The District hired Tetra Tech, Inc. to conduct a study of the Elkhorn River Improvement Project Area to determine the effectiveness of the project after 20 years, and also to assess needed repairs to the project following the June, 2010 high water event. The report listed needed repairs and maintenance items for the project. A map of the 12 treatment sites, and a table summarizing the needed repairs and maintenance items are attached. The estimated total cost of the repairs is \$2.3 million (Site Number 13 on the table is excluded since it is outside of the IPA boundaries).

Management has asked Tetra Tech, Inc. to prepare a draft scope of services and cost estimate, to perform professional engineering services to design the needed repairs and maintenance for the Elkhorn River IPA Bank Stabilization Project. Modeling of the Elkhorn River within the IPA is included to ensure that the most effective, long term solution is identified.

The proposed services are estimated to cost \$359,736. The detailed scope of services and a spreadsheet summarizing the proposed fees are attached. The scope of services includes alternative evaluation, final design, environmental permitting, preparation of construction documents, bidding, and construction observation.

It is proposed that the District waive its normal consultant selection process and hire Tetra Tech, Inc. for the following reasons:

1. Time is of the essence. The District has obtained emergency funding from FEMA for a portion of the cost of these repairs.
2. The individuals at Tetra Tech, Inc. who will be providing the proposed engineering services are the same individuals who designed the original bank protection measures in 1989-90. Management believes that Tetra Tech, Inc.'s expertise in major river systems is essential to providing the needed services on this project. Further, they are already familiar with the area.
- **It is recommended that the Subcommittee recommend to the Board that the District waive its consultant selection procedures and that the General Manager be authorized to execute a professional engineering services agreement for the Elkhorn River IPA Bank Stabilization Project with Tetra Tech, Inc. with a maximum not-to-exceed fee of \$359,736, subject to changes deemed necessary by the General Manager, and acceptance as to form by District legal counsel.**

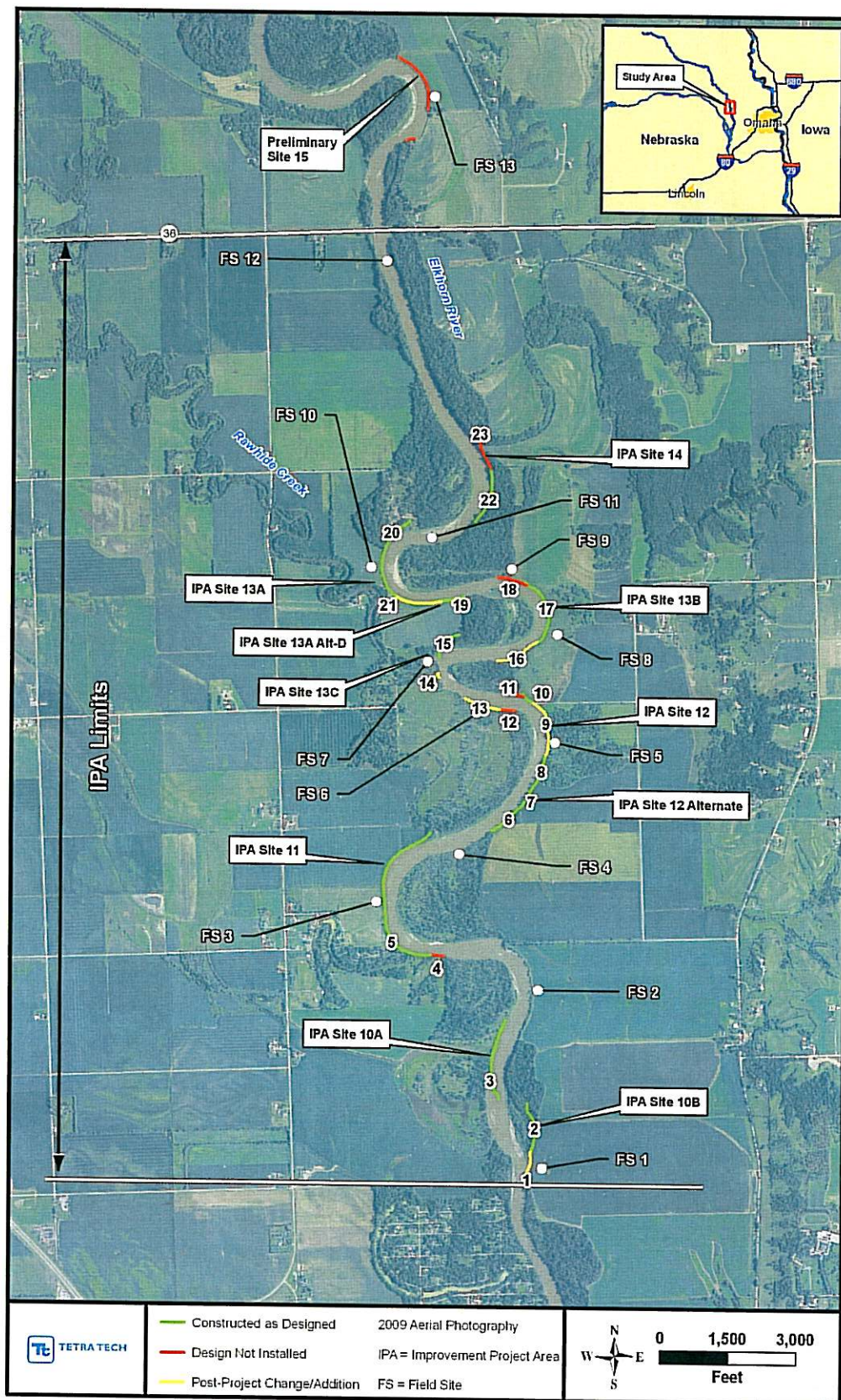


Figure 1. Site map showing the construction sites for the original IPA and the sites that were visited during the October 6, 2010 field reconnaissance. Also shown are label corresponding to the summary notes in Table 1 that were provided by Mr. Bowen (PMNRD).

Table 2. Summary of field sites, recommended repairs and estimated cost.								
Site Number	Site Location	Length (ft)	Previous Application Rate (l/ft)	Unit Cost (\$/ft)	Approximate Total Cost	Priority	Proposed Fix	Applicable Figure
2	pre-existing Site	N/A			\$ 119,000	High	Re-grade and protect drainage swale	Figure 15
3	11	900	3	\$ 183	\$ 247,000	High	Additional piled windrow revegetment	Figure 15
4	12	1500	2.5	\$ 180	\$ 405,000	Low-Medium	Additional piled windrow revegetment	Figure 22
5	12	600	3	\$ 180	\$ 162,000	Low-Medium	Additional piled windrow revegetment	Figure 25
6	13C	1400	Cabled trees	\$ 182	\$ 382,000	Medium	Additional piled windrow revegetment	Figure 27
7	13C	100	End of levee	\$ 182	\$ 27,000	Medium	Repair riprap point	Figure 31
8	13B	400	Cabled trees	\$ 363	\$ 145,000	Medium	Realign bank line and back fill to eliminate scallop	Figure 36
9	13B	300	5	\$ 182	\$ 82,000	Low	Additional piled windrow revegetment	Figure 39
10	13A	1000	3.5	\$ 182	\$ 136,500	High	Repair gaps in existing windrow revegetment	Figure 47
11	14	2000		\$ 180	\$ 562,000	High	Windrow revegetment on left bank and relocate Elkhorn Crossing Boat Ramp	Figures 50 and 59
12	N/A	400		\$ 180	\$ 108,000	Low-Medium	Windrow revegetment	Figure 61
13	15	2250	3	\$ 287	\$ 645,000	High	Realign bank line and back fill to eliminate scallop, windrow revegetment	Figure 65
Total					\$ 2,901,500.0			



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

This is **EXHIBIT A**, consisting of 6 pages, referred to in  
and part of the **Agreement between Owner and Engineer  
for Professional Services** dated 10 Feb, 2011.

**Engineer's Services**

---

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. Engineer shall provide Basic and Additional Services as set forth below.

**PART 1 – BASIC SERVICES**

The Engineer was selected to assist the Owner in the design, permitting and construction observation of bank stabilization repairs needed to restore and enhance previous bank stabilization measures constructed in a reach of the Elkhorn River through Douglas County, Nebraska that was designated by NRCS in the 1980's as an Improvement Project Area (IPA.)

*A.1.01 Scope of Services*

The scope of services contained herein is intended to provide all professional engineering services needed to investigate, design, permit and observe being constructed the bank stabilization measures identified in a technical memo to the NRD dated 10 January 2011.

The following scope of services is broken down into 8 phases, as intended to describe the intended process. (A schedule for the services detailed above is provided for in Attachment 1 to Exhibit A):

**Project Management**

Client Coordination and Meetings – Prepare for and attend meetings at negotiated milestones between consultant team project manager and client representative(s) to review progress and work ahead.

Monthly Invoice/Schedule Update – Monthly preparation of consultant invoice including description of services rendered and update of MS Project schedule.

Public/Board Presentations – Prepare for and attend one public or board meeting to present project information prepared during design phase.

Internal Coordination and Meetings – Prepare for and attend frequent internal meetings to define project roles, review project schedule, discuss inter-relationships of tasks and report on the status of each task.

**Assessment and Modeling**

Develop and Validate 2D Hydraulic Model – Develop hydraulic model of Elkhorn River reaches to represent the field sites within IPA boundaries identified in the technical memorandum dated January 10, 2011. Incorporate information from the bathymetric/topographic field surveys and results from the sediment sampling lab analysis into the model.

Conduct Hydraulic Analysis – Perform model runs to simulate pertinent flood routings through the field sites within the IPA project reach (2-12.)



Scour Analyses and Riprap Design – Analyze results of the flood routing to identify scour and erosion potential at each field site and develop the necessary design guidance.

### Surveying

Survey Preparation – Organize site maps, horizontal and vertical control, survey rental equipment and arranging travel accommodations for field work to obtain survey information.

Travel – Travel time and expenses for bathymetric field work.

Collect Bathymetric/Topographic Survey Info– Collect bathymetric survey data for sites 2, 8 and 11 and upland/bank topographic survey at all field sites.

Reduce Survey Data/Develop DTM– Process the survey information collected in the field to create a digital terrain model (DTM) surface and contours to be used during the modeling and design tasks.

### Geotech

Soil Borings and Lab Analysis – Based on the results of the scour analysis, additional soil borings or Dutch Cone analysis will be determined at each site. Laboratory costs are also included and have been estimated at this time.

Bed and Bank Sampling and Lab Analysis – Collect bed and bank sediment samples during the field survey and test for material properties at laboratory to be incorporated into the scour analysis.

Design Recommendations and Guidance – Develop conclusions and pertinent design recommendations from lab analysis results.

### Design

Finalize Site Specific Design Plan/Concepts – Based on findings from data collection, model results and lab analysis, determine the necessary design configuration to stabilize the bank. Work in conjunction with the NRD to prioritize the sites and determine construction sequencing.

Field Sites 2-12 – Apply design concept finalized above for each site to determine the site specific layout and cross sections. Assess site specific constraints from permitting, site access, constructability, etc. Determine construction material requirements and calculate quantities.

Quality Control – Review construction documentation and provide guidance on the design.

Develop Technical Memorandum – Summarize the model findings, client input and the final design determined for each site. Report any assumptions or estimates used during the process.

Project Closeout – Administrative duties and organization of project files.

### Construction Documents

Develop Construction Plans – Create plan views, cross sections and details to include in the construction drawings. Gather and display necessary utility and landowner information.

Develop Construction Specifications – Prepare construction contract documents and technical specifications for the construction documents using EJCDC standards.

Bid Estimates and Assemble Bid Package – Develop construction cost estimates based on available recent and similar bid tabs and assemble up to two bid packages as per future direction from NRD on packaging high/medium/low priority sites and what will work with the current budget.

Pre-Bid Meeting and Bid Reviews – Attend one pre-bid meeting on-site and review bids received by the NRD to provide engineers' recommendation for award.

### **Permitting**

Wetland Delineation and Report Preparation – Perform a jurisdictional wetland delineation at the field sites and complete the necessary documentation for submission to the United States Army Corps of Engineers (USACE).

USACE Meetings and Coordination – Coordinate with the USACE prior to permit application submission, and subsequent meetings as required to obtain the 404 permit.

Individual Permit Application and Documentation – Complete the necessary paperwork and documentation for an individual 404 permit for Sites 2, 8 and 11, as they are the field sites that are anticipated to require work within the river.

Alternatives Analysis – It is anticipated that meetings with the USACE will indicate the need for an alternatives analysis to meeting the requirements of obtaining a 404 permit. The effort included for this task includes the development of a permit application and alternatives assessment that identifies project alternative impacts and makes a recommendation for the LEDPA. The effort required to fulfill this task will be dependent upon the appropriate alternatives development guidance provided by the USACE and the detail required by the USACE representative.

Address USACE Comments – Continued effort to fulfill the USACE permit requirements and respond to comments after the permit is submitted will likely be required. This task covers what is anticipated ahead of discussions with the USACE to be a reasonable level of effort to complete this task.

### **Construction Observation**

On-Site Observation – Provide oversight during the construction of this project to ensure the design is implemented according to methods intended and shown on the plans and specifications. The construction period is anticipated to be approximately 16 weeks.

Documentation and Reporting – Complete bi-weekly summaries of construction progress during observation period, including photo documentation. Coordinate any changes in the executed construction contract that may arise.

As-Builts Completion – Document final configuration of constructed features (including elevation data) and highlight any differences from the design construction documents.

## **PART 2 – ADDITIONAL SERVICES**

### ***A2.01 Additional Services Requiring Owner's Written Authorization***

A. If authorized in writing by Owner, Engineer shall furnish or obtain from others Additional Services of the types listed below.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements;

review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.
3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer or its design requirements including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond Engineer's control.
4. Services resulting from Owner's request to evaluate additional alternative solutions beyond those identified in the Scope of Services.
5. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.
6. Providing renderings or models for Owner's use.
7. Undertaking investigations and studies including, but not limited to, detailed consideration of operations, maintenance, and overhead expenses; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules, and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing, and assisting Owner in obtaining process licensing; detailed quantity surveys of materials, equipment, and labor; and audits or inventories required in connection with construction performed by Owner.
8. Furnishing services of Engineer's Consultants for other than Basic Services.
9. Services attributable to more prime construction contracts than specified in Paragraph A1.03.C.
10. Services during out-of-town travel required of Engineer other than for visits to the Site or Owner's office.
11. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructibility review requested by Owner; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other Bidding Documents as a result of such review processes.
12. Preparing additional Bidding Documents or Contract Documents for alternate bids or prices requested by Owner for the Work or a portion thereof.
13. Determining the acceptability of substitute materials and equipment proposed during the Bidding or Negotiating Phase when substitution prior to the award of contracts is allowed by the Bidding Documents.



14. Assistance in connection with Bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services, except when such assistance is required by Exhibit F.
15. Providing construction surveys and staking to enable Contractor to perform its work other than as required under Paragraph A1.05.A.6, and any type of property surveys or related engineering services needed for the transfer of interests in real property; and providing other special field surveys.
16. Providing Construction Phase services beyond the original date for final completion of the Work.
17. Providing assistance in responding to the presence of any Constituent of Concern at the Site, in compliance with current Laws and Regulations.
18. Preparing and furnishing to Owner Record Drawings showing appropriate record information based on Project annotated record documents received from Contractor.
19. Preparation of operation and maintenance manuals.
20. Preparing to serve or serving as a consultant or witness for Owner in any litigation, arbitration, or other dispute resolution process related to the Project.
21. Providing more extensive services required to enable Engineer to issue notices or certifications requested by Owner.
22. Other services performed or furnished by Engineer not otherwise provided for in this Agreement.

*A2.02 Additional Services Not Requiring Owner's Written Authorization*

- A. Engineer shall advise Owner that Engineer is commencing to perform or furnish the Additional Services of the types listed below. For such Additional Services, Engineer need not request or obtain specific advance written authorization from Owner. Engineer shall cease performing or furnishing such Additional Services upon receipt of written notice from Owner.
  1. Services in connection with Work Change Directives and Change Orders to reflect changes requested by Owner.
  2. Services in making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or-equal" items; and services after the award of the Construction Contract in evaluating and determining the acceptability of a substitution which is found to be inappropriate for the Project or an excessive number of substitutions.
  3. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
  4. Additional or extended services during construction made necessary by (1) emergencies or acts of God endangering the Work, (2) the presence at the Site of any Constituent of

Concern, (3) Work damaged by fire or other cause during construction, (4) a significant amount of defective, neglected, or delayed work by Contractor, (5) acceleration of the progress schedule involving services beyond normal working hours, or (6) default by Contractor.

5. Services (other than Basic Services during the Post-Construction Phase) in connection with any partial utilization of any part of the Work by Owner prior to Substantial Completion.
6. Evaluating an unreasonable claim or an excessive number of claims submitted by Contractor or others in connection with the Work.
7. Services during the Construction Phase rendered after the date stated in construction contract, as yet to be determined.

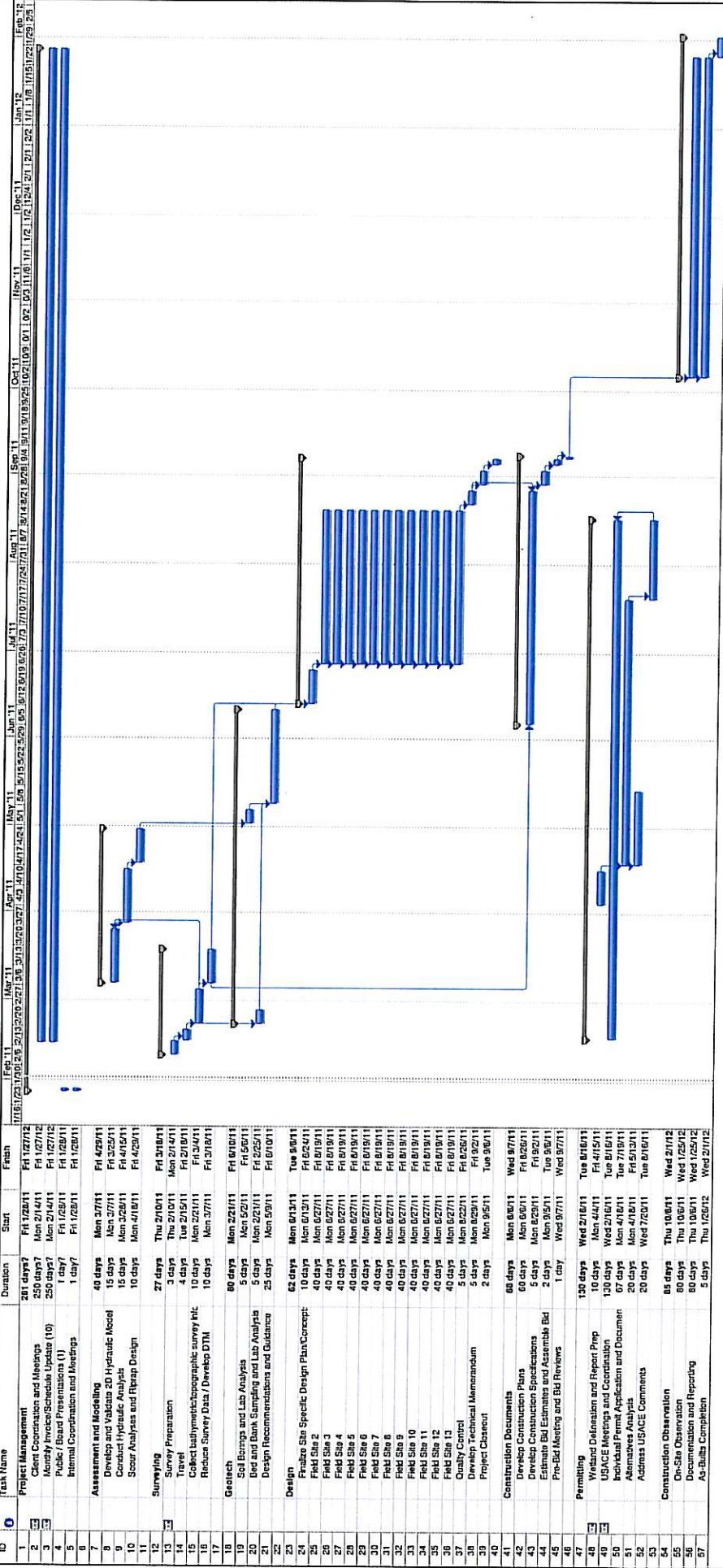
**P-MRNRD Elkhorn River IPA Bank Stabilization**

[illegible]



# Attachment 1 to Exhibit A

## P-MRNRD Elkhorn River IPA Bank Stabilization



This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR  
PROFESSIONAL SERVICES

**P-MRNRD Elkhorn River IPA Bank Stabilization**  
**Douglas County, NE**

Prepared by

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

Issued and Published Jointly by



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*a practice division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This Agreement has been prepared for use with the Standard General Conditions of the Construction Contract (No. C-700, 2002 Edition) of the Engineers Joint Contract Documents Committee. Their provisions are interrelated, and a change in one may necessitate a change in the other. For guidance on the completion and use of this Agreement, see EJCDC User's Guide to the Owner-Engineer Agreement, No. E-001, 2002 Edition.

Copyright © 2004 National Society of Professional Engineers  
1420 King Street, Alexandria, VA 22314-2794  
(703) 684-2882  
[www.nspe.org](http://www.nspe.org)

American Council of Engineering Companies  
1015 15th Street N.W., Washington, DC 20005  
(202) 347-7474  
[www.acec.org](http://www.acec.org)

American Society of Civil Engineers  
1801 Alexander Bell Drive, Reston, VA 20191-4400  
(800) 548-2723  
[www.asce.org](http://www.asce.org)



## TABLE OF CONTENTS

### Page

ARTICLE 1 - SERVICES OF ENGINEER .....	1
1.01 Scope .....	1
ARTICLE 2 - OWNER'S RESPONSIBILITIES .....	1
2.01 General .....	1
ARTICLE 3 - SCHEDULE FOR RENDERING SERVICES.....	1
3.01 Commencement .....	1
3.02 Time for Completion .....	2
ARTICLE 4 - INVOICES AND PAYMENTS .....	2
4.01 Invoices .....	2
4.02 Payments .....	2
ARTICLE 5 - OPINIONS OF COST .....	3
5.01 Opinions of Probable Construction Cost.....	3
5.02 Designing to Construction Cost Limit .....	3
5.03 Opinions of Total Project Costs .....	3
ARTICLE 6 - GENERAL CONSIDERATIONS .....	3
6.01 Standards of Performance.....	3
6.02 Design without Construction Phase Services.....	5
6.03 Use of Documents.....	5
6.04 Insurance .....	6
6.05 Suspension and Termination .....	6
6.06 Controlling Law .....	8
6.07 Successors, Assigns, and Beneficiaries.....	8
6.08 Dispute Resolution.....	8
6.09 Environmental Condition of Site.....	9
6.10 Indemnification and Mutual Waiver .....	9
6.11 Miscellaneous Provisions .....	10
ARTICLE 7 - DEFINITIONS.....	11
7.01 Defined Terms.....	11
ARTICLE 8 - EXHIBITS AND SPECIAL PROVISIONS.....	13
8.01 Exhibits Included .....	13
8.02 Total Agreement .....	13
8.03 Designated Representatives.....	13

**STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR  
PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of Feb. 10 , 2011 ("Effective Date") between  
Papio-Missouri River Natural Resources District (P-MRNRD) ("Owner") and  
Tetra Tech, Inc. (Tetra Tech) ("Engineer").

Owner intends to repair damages to the Improvement Project Area (IPA) sites implemented in conjunction with NRCS in the 1980s along the Elkhorn River. The sites were originally designed to provide bank stabilization at select areas along the river course and were damaged in the floods of 2010 ("Project").

---

Owner and Engineer agree as follows:

**ARTICLE 1 – SERVICES OF ENGINEER**

**1.01 Scope**

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

**ARTICLE 2 – OWNER'S RESPONSIBILITIES**

**2.01 General**

- A. Owner shall have the responsibilities set forth herein and in Exhibit B.
- B. Owner shall pay Engineer as set forth in Exhibit C.
- C. Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

**ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES**

**3.01 Commencement**

- A. Engineer shall begin rendering services as of the Effective Date of the Agreement.

### 3.02 *Time for Completion*

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided in Exhibit A, and are hereby agreed to be reasonable.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- C. If Owner authorizes changes in the scope, extent, or character of the Project, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.
- E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled to the recovery of direct damages resulting from such failure.

## ARTICLE 4 – INVOICES AND PAYMENTS

### 4.01 *Invoices*

- A. *Preparation and Submittal of Invoices.* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

### 4.02 *Payments*

- A. *Application to Interest and Principal.* Payment will be credited first to any interest owed to Engineer and then to principal.
- B. *Failure to Pay.* If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, then:
  - 1. amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said sixtieth day; and
  - 2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- C. *Disputed Invoices.* If Owner contests an invoice, Owner may withhold only that portion so contested, and must pay the undisputed portion.



- D. *Legislative Actions.* If after the Effective Date of the Agreement any governmental entity takes a legislative action that imposes taxes, fees, or charges on Engineer's services or compensation under this Agreement, then the Engineer may invoice such new taxes, fees, or charges as a Reimbursable Expense to which a factor of 1.0 shall be applied. Owner shall pay such invoiced new taxes, fees, and charges; such payment shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

## ARTICLE 5 – OPINIONS OF COST

### 5.01 *Opinions of Probable Construction Cost*

- A. Engineer's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional generally familiar with the construction industry. However, since Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner wishes greater assurance as to probable Construction Cost, Owner shall employ an independent cost estimator as provided in Exhibit B.

### ~~5.02 *Designing to Construction Cost Limit*~~

- ~~A. If a Construction Cost limit is established between Owner and Engineer, such Construction Cost limit and a statement of Engineer's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F, "Construction Cost Limit," to this Agreement.~~

### 5.03 *Opinions of Total Project Costs*

- A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in collating the various cost categories which comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

## ARTICLE 6 – GENERAL CONSIDERATIONS

### 6.01 *Standards of Performance*

- A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services.
- B. Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct any such deficiencies in technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in Owner-furnished information.

- C. Engineer may employ such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- E. Engineer and Owner shall comply with applicable Laws and Regulations and Owner-mandated standards that Owner has provided to Engineer in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, and compensation.
- F. Engineer shall not be required to sign any documents, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such documents.
- G. The General Conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition) unless both parties mutually agree to use other General Conditions by specific reference in Exhibit J.
- H. Engineer shall not at any time supervise, direct, or have control over Contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.
- I. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform the Work in accordance with the Contract Documents.
- J. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except Engineer's own employees and its Consultants) at the Site or otherwise furnishing or performing any Work; or for any decision made on interpretations or clarifications of the Contract Documents given by Owner without consultation and advice of Engineer.

~~6.02 — Design Without Construction Phase Services~~

- ~~A. — If Engineer's Basic Services under this Agreement do not include Project observation, or review of the Contractor's performance, or any other Construction Phase services, then (1) Engineer's services under this Agreement shall be deemed complete no later than the end of the Bidding or Negotiating Phase; (2) Engineer shall have no design or shop~~

~~drawing review obligations during construction; (3) Owner assumes all responsibility for the application and interpretation of the Contract Documents, contract administration, construction observation and review, and all other necessary Construction Phase engineering and professional services; and (4) Owner waives any claims against the Engineer that may be connected in any way thereto.~~

### 6.03 *Use of Documents*

- A. All Documents are instruments of service in respect to this Project, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed. Owner shall not rely in any way on any Document unless it is in printed form, signed or sealed by the Engineer or one of its Consultants.
- B. A party may rely that data or information set forth on paper (also known as hard copies) that the party receives from the other party by mail, hand delivery, or facsimile, are the items that the other party intended to send. Files in electronic media format of text, data, graphics, or other types that are furnished by one party to the other are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- C. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any transmittal errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files.
- D. When transferring documents in electronic media format, the transferring party makes no representations as to long-term compatibility, usability, or readability of such documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the documents' creator.
- E. Owner may make and retain copies of Documents for information and reference in connection with use on the Project by Owner. Engineer grants Owner a license to use the Documents on the Project, extensions of the Project, and other projects of Owner, subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project or on any other project without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to Engineer's Consultants; (3) Owner shall indemnify and hold harmless Engineer and Engineer's Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification without written verification, completion, or adaptation by Engineer; (4) such limited license to Owner shall not create any rights in third parties.

- F. If Engineer at Owner's request verifies or adapts the Documents for extensions of the Project or for any other project, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

#### 6.04 Insurance

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G, "Insurance." Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.
- B. Owner shall procure and maintain insurance as set forth in Exhibit G, "Insurance." Owner shall cause Engineer and Engineer's Consultants to be listed as additional insureds on any general liability or property insurance policies carried by Owner which are applicable to the Project.
- C. Owner shall require Contractor to purchase and maintain general liability and other insurance in accordance with the requirements of Paragraph 5.04 of the "Standard General Conditions of the Construction Contract," (No. C-700, 2002 Edition) as prepared by the Engineers Joint Contract Documents Committee and to cause Engineer and Engineer's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project.
- D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- E. All policies of property insurance relating to the Project shall contain provisions to the effect that Engineer's and Engineer's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against Engineer or its Consultants, or any insureds or additional insureds thereunder.
- F. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit G. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit G will be supplemented to incorporate these requirements.

#### 6.05 Suspension and Termination

- A. Suspension.

By Owner: Owner may suspend the Project upon seven days written notice to Engineer.

By Engineer: If Engineer's services are substantially delayed through no fault of Engineer, Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement.



- B. Termination. The obligation to provide further services under this Agreement may be terminated:
1. For cause,
    - a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
    - b. By Engineer:
      - 1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
      - 2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control.
      - 3) Engineer shall have no liability to Owner on account of such termination.
    - c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.
  2. For convenience,
    - a. By Owner effective upon Engineer's receipt of notice from Owner.
- C. *Effective Date of Termination.* The terminating party under Paragraph 6.05.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.
- D. Payments Upon Termination.
1. In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination.

Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.E.

2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.05.D.1, to invoice Owner and to payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

#### 6.06 *Controlling Law*

- A. This Agreement is to be governed by the law of the state in which the Project is located.

#### 6.07 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the partners, successors, executors, administrators and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.07.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.
- C. Unless expressly provided otherwise in this Agreement:
  1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.
  2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
  3. Owner agrees that the substance of the provisions of this Paragraph 6.07.C shall appear in the Contract Documents.

#### 6.08 *Dispute Resolution*

- A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit H or other provisions of this Agreement, or exercising their rights under law.

- B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.08.A, then either or both may invoke the procedures of Exhibit H. If Exhibit H is not included, or if no dispute resolution method is specified in Exhibit H, then the parties may exercise their rights under law.

#### 6.09 *Environmental Condition of Site*

- A. Owner has disclosed to Engineer in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location.
- B. Owner represents to Engineer that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at the Site.
- C. If Engineer encounters an undisclosed Constituent of Concern, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to Constituents of Concern. If Engineer or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations.
- E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

#### 6.10 *Indemnification and Mutual Waiver*

- A. *Indemnification by Engineer.* To the fullest extent permitted by law, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, partners, agents, consultants, and employees from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of

tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, partners, employees, or Consultants. The indemnification provision of the preceding sentence is subject to and limited by the provisions agreed to by Owner and Engineer in Exhibit I, "Allocation of Risks," if any.

- B. *Indemnification by Owner.* To the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer, Engineer's officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Owner or Owner's officers, directors, partners, agents, consultants, or employees, or others retained by or under contract to the Owner with respect to this Agreement or to the Project.
- C. *Environmental Indemnification.* In addition to the indemnity provided under Paragraph 6.10.B of this Agreement, and to the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer and its officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- D. *Percentage Share of Negligence.* To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.
- E. *Mutual Waiver.* To the fullest extent permitted by law, Owner and Engineer waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

#### 6.11 *Miscellaneous Provisions*

- A. *Notices.* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.



- B. *Survival.* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. *Severability.* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- D. *Waiver.* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.
- E. *Accrual of Claims.* To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

## ARTICLE 7 – DEFINITIONS

### 7.01 *Defined Terms*

- A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above or in the exhibits; in the following provisions; or in the "Standard General Conditions of the Construction Contract," prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition):
  - 1. *Additional Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 2, of this Agreement.
  - 2. *Basic Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 1, of this Agreement.
  - 3. *Construction Cost* – The cost to Owner of those portions of the entire Project designed or specified by Engineer. Construction Cost does not include costs of services of Engineer or other design professionals and consultants, cost of land or rights-of-way, or compensation for damages to properties, or Owner's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement. Construction Cost is one of the items comprising Total Project Costs.
  - 4. *Constituent of Concern* – Any substance, product, waste, or other material of any nature whatsoever (including, but not limited to, Asbestos, Petroleum, Radioactive Material, and PCBs) which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); [b] the Hazardous Materials Transportation Act, 49 U.S.C. §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); [d] the Toxic Substances Control Act, 15 U.S.C.

§§2601 et seq.; [e] the Clean Water Act, 33 U.S.C. §§1251 et seq.; [f] the Clean Air Act, 42 U.S.C. §§7401 et seq.; and [g] any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

5. *Consultants* – Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates, consultants, subcontractors, or vendors.
6. *Documents* – Data, reports, Drawings, Specifications, Record Drawings, and other deliverables, whether in printed or electronic media format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.
7. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings are not Drawings as so defined.
8. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
9. *Reimbursable Expenses* – The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic and Additional Services for the Project.
10. *Resident Project Representative* – The authorized representative of Engineer, if any, assigned to assist Engineer at the Site during the Construction Phase. The Resident Project Representative will be Engineer's agent or employee and under Engineer's supervision. As used herein, the term Resident Project Representative includes any assistants of Resident Project Representative agreed to by Owner. The duties and responsibilities of the Resident Project Representative, if any, are as set forth in Exhibit D.
11. *Specifications* – That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.
12. *Total Project Costs* – The sum of the Construction Cost, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner's costs for legal, accounting, insurance counseling and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement.

## ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

### 8.01 *Exhibits Included*

- A. Exhibit A, "Engineer's Services," consisting of 7 pages.
- B. Exhibit B, "Owner's Responsibilities," consisting of 3 pages.
- C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of 3 pages.
- D. Exhibit D, "Duties, Responsibilities and Limitations of Authority of Resident Project Representative," consisting of 5 pages.
- E. Exhibit E, "Notice of Acceptability of Work," consisting of 3 pages.
- ~~F. Exhibit F, "Construction Cost Limit," consisting of 2 pages.~~
- G. Exhibit G, "Insurance," consisting of 2 pages.
- H. Exhibit H, "Dispute Resolution," consisting of 2 pages.
- I. Exhibit I, "Allocation of Risks," consisting of 3 pages.
- J. Exhibit J, "Special Provisions," consisting of 1 page.
- K. Exhibit K, "Amendment to Owner-Engineer Agreement," consisting of 2 pages.

### 8.02 *Total Agreement*

- A. This Agreement (consisting of pages 1 to 14 inclusive, together with the exhibits identified above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument based on the format of Exhibit K to this Agreement.

### 8.03 *Designated Representatives*

- A. With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner:

Papio-Missouri River Natural Resources  
District

Engineer:

Tetra Tech, Inc.

By: John Winkler

By: Michael K. Sotak, P.E.

Title: General Manager

Title: Office Lead

Date  
Signed: \_\_\_\_\_

Date  
Signed: \_\_\_\_\_

Engineer License or Certificate No. E-8759  
State of: Nebraska

Address for giving notices:

8901 S. 154<sup>th</sup> Street

Address for giving notices:

12120 Port Grace Blvd.

Omaha, NE 68138-3621

Suite 102

Omaha, NE 68128

Designated Representative (see Paragraph  
8.03.A):

Gerry Bowen

Designated Representative (see Paragraph 8.03.A):

Michael K. Sotak, P.E.

Title: Project Manager

Title: Office Lead

Phone Number: 402.444.6222

Phone Number: 402.933.1345

Facsimile Number: 402.895.6543

Facsimile Number: 402.933.1346

E-Mail Address: gbowen@papionrd.org

E-Mail Address: Mike.Sotak@tetrattech.com



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

This is **EXHIBIT A**, consisting of 6 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

**Engineer's Services**

---

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. Engineer shall provide Basic and Additional Services as set forth below.

**PART 1 – BASIC SERVICES**

The Engineer was selected to assist the Owner in the design, permitting and construction observation of bank stabilization repairs needed to restore and enhance previous bank stabilization measures constructed in a reach of the Elkhorn River through Douglas County, Nebraska that was designated by NRCS in the 1980's as an Improvement Project Area (IPA.)

*A.1.01 Scope of Services*

The scope of services contained herein is intended to provide all professional engineering services needed to investigate, design, permit and observe being constructed the bank stabilization measures identified in a technical memo to the NRD dated 10 January 2011.

The following scope of services is broken down into 8 phases, as intended to describe the intended process. (A schedule for the services detailed above is provided for in Attachment 1 to Exhibit A):

**Project Management**

Client Coordination and Meetings – Prepare for and attend meetings at negotiated milestones between consultant team project manager and client representative(s) to review progress and work ahead.

Monthly Invoice/Schedule Update – Monthly preparation of consultant invoice including description of services rendered and update of MS Project schedule.

Public/Board Presentations – Prepare for and attend one public or board meeting to present project information prepared during design phase.

Internal Coordination and Meetings – Prepare for and attend frequent internal meetings to define project roles, review project schedule, discuss inter-relationships of tasks and report on the status of each task.

**Assessment and Modeling**

Develop and Validate 2D Hydraulic Model – Develop hydraulic model of Elkhorn River reaches to represent the field sites within IPA boundaries identified in the technical memorandum dated January 10, 2011. Incorporate information from the bathymetric/topographic field surveys and results from the sediment sampling lab analysis into the model.

Conduct Hydraulic Analysis – Perform model runs to simulate pertinent flood routings through the field sites within the IPA project reach (2-12.)

Scour Analyses and Riprap Design – Analyze results of the flood routing to identify scour and erosion potential at each field site and develop the necessary design guidance.

### Surveying

Survey Preparation – Organize site maps, horizontal and vertical control, survey rental equipment and arranging travel accommodations for field work to obtain survey information.

Travel – Travel time and expenses for bathymetric field work.

Collect Bathymetric/Topographic Survey Info– Collect bathymetric survey data for sites 2, 8 and 11 and upland/bank topographic survey at all field sites.

Reduce Survey Data/Develop DTM– Process the survey information collected in the field to create a digital terrain model (DTM) surface and contours to be used during the modeling and design tasks.

### Geotech

Soil Borings and Lab Analysis – Based on the results of the scour analysis, additional soil borings or Dutch Cone analysis will be determined at each site. Laboratory costs are also included and have been estimated at this time.

Bed and Bank Sampling and Lab Analysis – Collect bed and bank sediment samples during the field survey and test for material properties at laboratory to be incorporated into the scour analysis.

Design Recommendations and Guidance – Develop conclusions and pertinent design recommendations from lab analysis results.

### Design

Finalize Site Specific Design Plan/Concepts – Based on findings from data collection, model results and lab analysis, determine the necessary design configuration to stabilize the bank. Work in conjunction with the NRD to prioritize the sites and determine construction sequencing.

Field Sites 2-12 – Apply design concept finalized above for each site to determine the site specific layout and cross sections. Assess site specific constraints from permitting, site access, constructability, etc. Determine construction material requirements and calculate quantities.

Quality Control – Review construction documentation and provide guidance on the design.

Develop Technical Memorandum – Summarize the model findings, client input and the final design determined for each site. Report any assumptions or estimates used during the process.

Project Closeout – Administrative duties and organization of project files.

### Construction Documents

Develop Construction Plans – Create plan views, cross sections and details to include in the construction drawings. Gather and display necessary utility and landowner information.

Develop Construction Specifications – Prepare construction contract documents and technical specifications for the construction documents using EJCDC standards.

Bid Estimates and Assemble Bid Package – Develop construction cost estimates based on available recent and similar bid tabs and assemble up to two bid packages as per future direction from NRD on packaging high/medium/low priority sites and what will work with the current budget.

Pre-Bid Meeting and Bid Reviews – Attend one pre-bid meeting on-site and review bids received by the NRD to provide engineers' recommendation for award.

### Permitting

Wetland Delineation and Report Preparation – Perform a jurisdictional wetland delineation at the field sites and complete the necessary documentation for submission to the United States Army Corps of Engineers (USACE).

USACE Meetings and Coordination – Coordinate with the USACE prior to permit application submission, and subsequent meetings as required to obtain the 404 permit.

Individual Permit Application and Documentation – Complete the necessary paperwork and documentation for an individual 404 permit for Sites 2, 8 and 11, as they are the field sites that are anticipated to require work within the river.

Alternatives Analysis – It is anticipated that meetings with the USACE will indicate the need for an alternatives analysis to meeting the requirements of obtaining a 404 permit. The effort included for this task includes the development of a permit application and alternatives assessment that identifies project alternative impacts and makes a recommendation for the LEDPA. The effort required to fulfill this task will be dependent upon the appropriate alternatives development guidance provided by the USACE and the detail required by the USACE representative.

Address USACE Comments – Continued effort to fulfill the USACE permit requirements and respond to comments after the permit is submitted will likely be required. This task covers what is anticipated ahead of discussions with the USACE to be a reasonable level of effort to complete this task.

### Construction Observation

On-Site Observation – Provide oversight during the construction of this project to ensure the design is implemented according to methods intended and shown on the plans and specifications. The construction period is anticipated to be approximately 16 weeks.

Documentation and Reporting – Complete bi-weekly summaries of construction progress during observation period, including photo documentation. Coordinate any changes in the executed construction contract that may arise.

As-Builts Completion – Document final configuration of constructed features (including elevation data) and highlight any differences from the design construction documents.

## **PART 2 – ADDITIONAL SERVICES**

### *A2.01 Additional Services Requiring Owner's Written Authorization*

- A. If authorized in writing by Owner, Engineer shall furnish or obtain from others Additional Services of the types listed below.
  1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements;

review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.
3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer or its design requirements including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond Engineer's control.
4. Services resulting from Owner's request to evaluate additional alternative solutions beyond those identified in the Scope of Services.
5. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.
6. Providing renderings or models for Owner's use.
7. Undertaking investigations and studies including, but not limited to, detailed consideration of operations, maintenance, and overhead expenses; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules, and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing, and assisting Owner in obtaining process licensing; detailed quantity surveys of materials, equipment, and labor; and audits or inventories required in connection with construction performed by Owner.
8. Furnishing services of Engineer's Consultants for other than Basic Services.
9. Services attributable to more prime construction contracts than specified in Paragraph A1.03.C.
10. Services during out-of-town travel required of Engineer other than for visits to the Site or Owner's office.
11. Preparing for, coordinating with, participating in and responding to structured independent review processes, including, but not limited to, construction management, cost estimating, project peer review, value engineering, and constructibility review requested by Owner; and performing or furnishing services required to revise studies, reports, Drawings, Specifications, or other Bidding Documents as a result of such review processes.
12. Preparing additional Bidding Documents or Contract Documents for alternate bids or prices requested by Owner for the Work or a portion thereof.
13. Determining the acceptability of substitute materials and equipment proposed during the Bidding or Negotiating Phase when substitution prior to the award of contracts is allowed by the Bidding Documents.

14. Assistance in connection with Bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services, except when such assistance is required by Exhibit F.
15. Providing construction surveys and staking to enable Contractor to perform its work other than as required under Paragraph A1.05.A.6, and any type of property surveys or related engineering services needed for the transfer of interests in real property; and providing other special field surveys.
16. Providing Construction Phase services beyond the original date for final completion of the Work.
17. Providing assistance in responding to the presence of any Constituent of Concern at the Site, in compliance with current Laws and Regulations.
18. Preparing and furnishing to Owner Record Drawings showing appropriate record information based on Project annotated record documents received from Contractor.
19. Preparation of operation and maintenance manuals.
20. Preparing to serve or serving as a consultant or witness for Owner in any litigation, arbitration, or other dispute resolution process related to the Project.
21. Providing more extensive services required to enable Engineer to issue notices or certifications requested by Owner.
22. Other services performed or furnished by Engineer not otherwise provided for in this Agreement.

*A2.02 Additional Services Not Requiring Owner's Written Authorization*

- A. Engineer shall advise Owner that Engineer is commencing to perform or furnish the Additional Services of the types listed below. For such Additional Services, Engineer need not request or obtain specific advance written authorization from Owner. Engineer shall cease performing or furnishing such Additional Services upon receipt of written notice from Owner.
  1. Services in connection with Work Change Directives and Change Orders to reflect changes requested by Owner.
  2. Services in making revisions to Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than "or-equal" items; and services after the award of the Construction Contract in evaluating and determining the acceptability of a substitution which is found to be inappropriate for the Project or an excessive number of substitutions.
  3. Services resulting from significant delays, changes, or price increases occurring as a direct or indirect result of materials, equipment, or energy shortages.
  4. Additional or extended services during construction made necessary by (1) emergencies or acts of God endangering the Work, (2) the presence at the Site of any Constituent of



Concern, (3) Work damaged by fire or other cause during construction, (4) a significant amount of defective, neglected, or delayed work by Contractor, (5) acceleration of the progress schedule involving services beyond normal working hours, or (6) default by Contractor.

5. Services (other than Basic Services during the Post-Construction Phase) in connection with any partial utilization of any part of the Work by Owner prior to Substantial Completion.
6. Evaluating an unreasonable claim or an excessive number of claims submitted by Contractor or others in connection with the Work.
7. Services during the Construction Phase rendered after the date stated in construction contract, as yet to be determined.

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

This is **EXHIBIT B**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

**Owner's Responsibilities**

---

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties.

B2.01 *In addition to other responsibilities of Owner as set forth in this Agreement, Owner shall at its expense:*

- A. Provide Engineer with all criteria and full information as to Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which Owner will require to be included in the Drawings and Specifications; and furnish copies of Owner's standard forms, conditions, and related documents for Engineer to include in the Bidding Documents, when applicable.
- B. Furnish to Engineer any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site.
- C. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, furnish or otherwise make available such additional Project related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services. Such additional information or data would generally include the following:
  1. Property descriptions.
  2. Zoning, deed, and other land use restrictions.
  3. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
  4. Explorations and tests of subsurface conditions at or contiguous to the Site, drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site, or hydrographic surveys, with appropriate professional interpretation thereof.
  5. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental or cultural studies as to the Project, the Site, and adjacent areas.
  6. Data or consultations as required for the Project but not otherwise identified in the Agreement or the Exhibits thereto.

- D. Give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of the presence at the Site of any Constituent of Concern, or of any other development that affects the scope or time of performance of Engineer's services, or any defect or nonconformance in Engineer's services, the Work, or in the performance of any Contractor.
- E. Authorize Engineer to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement as required.
- F. Arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under the Agreement.
- G. Examine all alternate solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, insurance counselor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
- H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by Engineer and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.
- I. Provide, as required for the Project:
  - 1. Accounting, bond and financial advisory, independent cost estimating, and insurance counseling services.
  - 2. Legal services with regard to issues pertaining to the Project as Owner requires, Contractor raises, or Engineer reasonably requests.
  - 3. Such auditing services as Owner requires to ascertain how or for what purpose Contractor has used the moneys paid.
  - 4. Placement and payment for advertisement for Bids in appropriate publications.
- J. Advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructibility review.
- K. Furnish to Engineer data as to Owner's anticipated costs for services to be provided by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) for Owner so that Engineer may assist Owner in collating the various cost categories which comprise Total Project Costs.
- L. If Owner designates a construction manager or an individual or entity other than, or in addition to, Engineer to represent Owner at the Site, define and set forth as an attachment to this Exhibit B the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.

- M. If more than one prime contract is to be awarded for the Work designed or specified by Engineer, designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of Engineer as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.
- N. Attend the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Substantial Completion and final payment inspections.
- O. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of Samples, materials, and equipment required by the Contract Documents, or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof.
- P. Provide Engineer with the findings and reports generated by the entities providing services to Owner pursuant to this paragraph.
- ~~Q. Perform or provide the following additional services: \_\_\_\_\_.~~

1.

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

This is **EXHIBIT C**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

**Payments to Engineer for Services and Reimbursable Expenses**

---

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties:

**ARTICLE 2 – OWNER’S RESPONSIBILITIES**

*C2.01 Compensation for Basic Services – Direct Labor Costs Times a Factor Method of Payment*

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A as follows:

1. An amount equal to Engineer’s Direct Labor Costs times a factor of 3.02 for the services of Engineer’s employees engaged on the Project, plus Reimbursable Expenses, provided however, and notwithstanding anything to the contrary contained in this Agreement, the total amount of money due to ENGINEER for such services and for Reimbursable Expenses and Engineer’s Consultant’s charges (if any) shall not exceed the amount of \$359,736 unless an additional payment for the services, expenses or charges resulting in such excess is authorized in writing by OWNER in advance of such services, expenses or charges being furnished, expended, or incurred, the amount of \$359,736 being intended by parties as the maximum amount of money to be due to Engineer under this Agreement.
2. Engineer’s Reimbursable Expenses Schedule is attached to this Exhibit C as Appendix 1.
3. The total compensation for services under Paragraph C2.01 is estimated to be \$330,878 which is detailed in Attachment 1 to Exhibit C.
4. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total compensation amount unless approved in writing by Owner.
5. The total estimated compensation for Engineer’s services included in the breakdown by phases as noted in Paragraph C2.01.A.3, incorporates all labor, overhead, profit, Reimbursable Expenses, and Engineer’s Consultant’s charges.
6. The portion of the amounts billed for Engineer’s services which are related to services rendered on a Direct Labor Costs times a Factor basis will be billed based on the applicable Direct Labor Costs for the cumulative hours charged to the Project by Engineer’s principals and employees multiplied by the above-designated factor, plus Reimbursable Expenses and Engineer’s Consultant’s charges incurred during the billing period.



7. Direct Labor Costs means salaries and wages paid to employees but does not include payroll related costs or benefits.
8. The Direct Labor Costs and the factor applied to Direct Labor Costs will be adjusted annually (as of date of execution of contract) to reflect equitable changes to the compensation payable to Engineer.

#### C2.02 *Compensation for Reimbursable Expenses*

- A. Owner shall pay Engineer for all Reimbursable Expenses at the rates set forth in Appendix 1 to this Exhibit C.
- B. Reimbursable Expenses include the following categories: transportation and subsistence incidental thereto; obtaining bids or proposals from Contractor(s); providing and maintaining field office facilities including furnishings and utilities; toll telephone calls and mobile phone charges; reproduction of reports, Drawings, Specifications, Bidding Documents, and similar Project-related items in addition to those required under Exhibit A, and, if authorized in advance by Owner, overtime work requiring higher than regular rates. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for computer time and the use of other highly specialized equipment.
- C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of 1.0.
- D. The Reimbursable Expenses Schedule will be adjusted annually (as of date of execution of contract) to reflect equitable changes in the compensation payable to Engineer.

#### C2.03 *Other Provisions Concerning Payment*

- A. Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of 1.0.
- B. Factors. The external Reimbursable Expenses and Engineer's Consultant's factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.
- C. Estimated Compensation Amounts
  1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
  2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that a compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof. Promptly thereafter Owner and Engineer shall review the matter of services remaining to be performed and compensation for such services. Owner shall either agree to such compensation exceeding

said estimated amount or Owner and Engineer shall agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, the Engineer shall be paid for all services rendered hereunder.

3. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

This is **Appendix 1 to EXHIBIT C**, consisting of 1 page, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

### **Reimbursable Expenses Schedule**

---

Current agreements for engineering services stipulate that the Reimbursable Expenses are subject to review and adjustment per Exhibit C. Reimbursable expenses for services performed on the date of the Agreement are:

8"x11" Copies/ B&W	<u>\$0.10</u> /page
8"x11" Copies/ Color	<u>\$0.10</u> /page
11" x 17" Copies / B&W	<u>\$0.10</u> /page
11" x 17" Copies / Color	<u>\$0.10</u> /page
Presentation Boards (plot and mount)	\$150/board
Blue Print Copies	<u>\$0.20</u> /sq. ft.
Mileage (auto)	<u>\$0.55</u> /mile
GPS Camera	\$3/photo Not to Exceed \$100/day
Voice Conferencing	\$0.10/minute
Meals and Lodging	at cost

\* All other direct costs will be invoiced at actual cost plus G&A of 13.46%

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

This is **EXHIBIT D**, consisting of 5 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

**Duties, Responsibilities, and Limitations of Authority of Resident Project Representative**

Paragraph 1.01.A of the Agreement is amended and supplemented to include the following agreement of the parties:

**D1.01 Resident Project Representative**

- A. Engineer shall furnish a Resident Project Representative ("RPR"), assistants, and other field staff to assist Engineer in observing progress and quality of the Work. The RPR, assistants, and other field staff under this Exhibit D may provide full time representation or may provide representation to a lesser degree.
- B. Through such additional observations of Contractor's work in progress and field checks of materials and equipment by the RPR and assistants, Engineer shall endeavor to provide further protection for Owner against defects and deficiencies in the Work. However, Engineer shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over the Contractor's Work nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's performing and furnishing the Work, or responsibility for Contractor's failure to furnish and perform the Work in accordance with the Contract Documents. In addition, the specific terms set forth in section A.1.05 of Exhibit A of the Agreement are applicable.
- C. The duties and responsibilities of the RPR are as follows:
  - 1. *General:* RPR is Engineer's agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Contractor's work in progress shall in general be with Engineer and Contractor, keeping Owner advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner with the knowledge of and under the direction of Engineer.
  - 2. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

3. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
4. *Liaison:*
  - a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent, assist in providing information regarding the intent of the Contract Documents.
  - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
  - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. *Shop Drawings and Samples:*
  - a. Record date of receipt of Samples and approved Shop Drawings.
  - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. *Review of Work and Rejection of Defective Work:*
  - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR



believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. *Inspections, Tests, and System Startups:*

- a. Consult with Engineer in advance of scheduled major inspections, tests, and systems startups of important phases of the Work.
- b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- c. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections, and report to Engineer.

10. *Records:*

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents including all Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing and Sample submittals received from and delivered to Contractor, and other Project-related documents.
- b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- c. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, subcontractors, and major suppliers of materials and equipment.
- d. Maintain records for use in preparing Project documentation.
- e. Upon completion of the Work, furnish original set of all RPR Project documentation to Engineer.

11. *Reports:*

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
  - c. Furnish to Engineer and Owner copies of all inspection, test, and system start-up reports.
  - d. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Constituent of Concern.
12. *Payment Requests*: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. *Certificates, Operation and Maintenance Manuals*: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
14. Completion:
- a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.
  - b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.
  - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.
- D. Resident Project Representative shall not:
- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
  - 2. Exceed limitations of Engineer's authority as set forth in the Agreement or the Contract Documents.
  - 3. Undertake any of the responsibilities of Contractor, subcontractors, suppliers, or Contractor's superintendent.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.
5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

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

This is **EXHIBIT E**, consisting of 3 pages, referred to in  
and part of the **Agreement between Owner and Engineer**  
**for Professional Services** dated 10 Feb, 2011.

---

NOTICE OF ACCEPTABILITY OF WORK

---

PROJECT:

OWNER:

OWNER'S CONSTRUCTION CONTRACT IDENTIFICATION:

EFFECTIVE DATE OF THE CONSTRUCTION AGREEMENT:

CONSTRUCTION CONTRACT DATE:

ENGINEER:

---

To:

OWNER

And To:

CONTRACTOR

From:

ENGINEER

---

The Engineer hereby gives notice to the above Owner and Contractor that the completed Work furnished and performed by Contractor under the above Contract is acceptable, expressly subject to the provisions of the related Contract Documents, the Agreement between Owner and Engineer for Professional Services dated \_\_\_\_\_, \_\_\_\_\_, and the terms and conditions set forth on the reverse side of this Notice.

By: \_\_\_\_\_

Title: \_\_\_\_\_  
\_\_\_\_\_

Dated

:



(Reverse side of Notice)

**CONDITIONS OF NOTICE OF ACCEPTABILITY OF WORK**

The Notice of Acceptability of Work ("Notice") on the front side of this sheet is expressly made subject to the following terms and conditions to which all persons who receive said Notice and rely thereon agree:

1. This Notice is given with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the professional judgment of Engineer.
3. This Notice is given as to the best of Engineer's knowledge, information, and belief as of the date hereof.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's work) under Engineer's Agreement with Owner and under the Construction Contract referred to on the front side of this Notice, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Agreement and Construction Contract.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract referred to on the front side of this Notice, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents.

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

This is **EXHIBIT G**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

---

**Insurance**

---

Paragraph 6.04 of the Agreement is amended and supplemented to include the following agreement of the parties.

G6.04 *Insurance*

The Engineer shall purchase, and maintain until the expiration of two years after completion of the Engineer's services under the Agreement the following policies of insurance (required by paragraph 6.04 of the Agreement) with minimum requirements as follows:

- Workmens Compensation and Employers Liability
  - Workers' Compensation: statutory minimum
  - Longshore and Harbor Workers' Compensation Act endorsement and Admiralty Law endorsements (required only if the work involves maritime operations).
  - Employer's Liability: \$250,000.00 per accident.
- Professional malpractice
  - \$1,000,000.00 each claim
  - \$2,000,000.00 aggregate
- Commercial General Liability – ISO Occurrence Form
  - \$1,000,000.00 each occurrence
  - \$2,000,000.00 general aggregate
  - \$2,000,000.00 products – completed operations aggregate
  - \$1,000,000.00 personal & advertising injury
  - \$300,000.00 fire damage
  - \$5,000.00 medical expense
- Business Auto Liability - Owned, Non-Owned & Hired vehicles \$1,000,000.00 combined single limit.
- General Provisions:
  - All policies shall be endorsed to have any annual aggregate apply on a per-project basis or, instead of obtaining such endorsements, the Engineer shall purchase and maintain and until the expiration of two years after completion of the Engineer's services, a policy of umbrella insurance with limits of at least \$1,000,000.
  - All policies shall be endorsed to provide 30 days written notice to the NRD prior to termination or change in the coverage provided.
  - The NRD reserves the right to approve the Engineer's insurers.

- Workers Compensation and Commercial General Liability policies shall be endorsed to provide Waiver of Subrogation in favor of the NRD.
- The Commercial General Liability policy shall be endorsed to include the NRD as Additional Insured (form CG 20 10)
- Prior to commencement of the Engineer's services and from time to time thereafter at NRD's request, the Engineer shall submit certificates in form acceptable to the NRD evidencing that all such insurance policies are in effect.

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

This is **EXHIBIT H**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated 10 Feb, 2011.

**Dispute Resolution**

---

Paragraph 6.08 of the Agreement is amended and supplemented to include the following agreement of the parties:

[NOTE: Select one of the two alternatives provided]

*H6.09 Dispute Resolution*

- A. Mediation. Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("Disputes") to mediation by [to be determined]. If such mediation is unsuccessful in resolving a Dispute, then (a) the parties may mutually agree to a dispute resolution of their choice, or (b) either party may seek to have the Dispute resolved by a court of competent jurisdiction.

[or]

~~A. Arbitration. All Disputes between Owner and Engineer shall be settled by arbitration in accordance with the [here insert the name of a specified arbitration service or organization] rules effective at the Effective Date of the Agreement, subject to the conditions stated below. This agreement to arbitrate and any other agreement or consent to arbitrate entered into in accordance with this Paragraph H6.08.A will be specifically enforceable under prevailing law of any court having jurisdiction.~~

- ~~1. Notice of the demand for arbitration must be filed in writing with the other party to the Agreement and with the [specified arbitration service or organization]. The demand must be made within a reasonable time after the Dispute has arisen. In no event may the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such Dispute would be barred by the applicable statute of limitations.~~
- ~~2. All demands for arbitration and all answering statements thereto which include any monetary claims must contain a statement that the total sum or value in controversy as alleged by the party making such demand or answering statement is not more than \$\_\_\_\_\_ (exclusive of interest and costs). The arbitrators will not have jurisdiction, power, or authority to consider, or make findings (except in denial of their own jurisdiction) concerning any Dispute if the amount in controversy in such Dispute is more than \$\_\_\_\_\_ (exclusive of interest and costs), or to render a monetary award in response thereto against any party which totals more than \$\_\_\_\_\_ (exclusive of interest and costs). Disputes that are~~

~~not subject to arbitration under this paragraph may be resolved in any court of competent jurisdiction.~~

- ~~3. The award rendered by the arbitrators shall be in writing, and shall include: (i) a precise breakdown of the award; and (ii) a written explanation of the award specifically citing the Agreement provisions deemed applicable and relied on in making the award.~~
- ~~4. The award rendered by the arbitrators will be consistent with the Agreement of the parties and final, and judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to appeal or modification.~~
- ~~5. If a Dispute in question between Owner and Engineer involves the work of a Contractor, subcontractor, or consultants to the Owner or Engineer (each a "Joinable Party"), either Owner or Engineer may join each Joinable Party as a party to the arbitration between Owner and Engineer hereunder, and Engineer or Owner, as appropriate, shall include in each contract with each such Joinable Party a specific provision whereby such Joinable Party consents to being joined in an arbitration between Owner and Engineer involving the work of such Joinable Party. Nothing in this Paragraph H6.08.A.5 nor in the provision of such contract consenting to joinder shall create any claim, right, or cause of action in favor of the Joinable Party and against Owner or Engineer that does not otherwise exist.~~



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

This is **EXHIBIT I**, consisting of 3 pages, referred to in  
and part of the **Agreement between Owner and Engineer  
for Professional Services** dated 10 Feb, 2011.

**Allocation of Risks**

---

Paragraph 6.10 of the Agreement is amended and supplemented to include the following agreement of the parties:

**16.10.B Limitation of Engineer's Liability**

~~[NOTE: Select one of the three alternatives listed below for 16.11  
B.1]~~

- ~~1. *Engineer's Liability Limited to Amount of Engineer's Compensation.* To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them, to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract, or warranty express or implied, of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them, shall not exceed the total compensation received by Engineer under this Agreement.~~

~~[or]~~

- ~~1. *Engineer's Liability Limited to Amount of Insurance Proceeds.* Engineer shall procure and maintain insurance as required by and set forth in Exhibit G to this Agreement. Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them, to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract, or warranty express or implied, of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them (hereafter "Owner's Claims"), shall not exceed the total insurance proceeds paid on behalf of or to Engineer by Engineer's insurers in settlement or satisfaction of Owner's Claims under the terms and conditions of Engineer's insurance policies applicable thereto (excluding fees, costs and expenses of investigation,~~

claims adjustment, defense, and appeal). If no such insurance coverage is provided with respect to Owner's Claims, then the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them to Owner and anyone claiming by, through, or under Owner for any and all such uninsured Owner's claims shall not exceed \$\_\_\_\_\_.

~~[or]~~

1. ~~Engineer's Liability Limited to the Amount of \$\_\_\_\_\_. Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them, to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract, or warranty express or implied of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them, shall not exceed the total amount of \$\_\_\_\_\_.~~

~~[NOTE: If appropriate and desired, include I6.10.B.2 below]~~

2. *Exclusion of Special, Incidental, Indirect, and Consequential Damages.* To the fullest extent permitted by law, and notwithstanding any other provision in the Agreement, consistent with the terms of Paragraph 6.10.E the Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, or any of them, shall not be liable to Owner or anyone claiming by, through, or under Owner for any special, incidental, indirect, or consequential damages whatsoever arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, professional errors or omissions, strict liability, breach of contract, or warranties, express or implied, of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them, and including but not limited to:

~~[NOTE: list here particular types of damages that may be of special concern because of the nature of the project or specific circumstances, e.g., cost of replacement power, loss of use of equipment or of the facility, loss of profits or revenue, loss of financing, regulatory fines, etc. If the parties prefer to leave the language general, then end the sentence after the phrase "or any of them."]~~

~~[NOTE: the above exclusion of consequential and other damages can be converted to a limitation on the amount of such damages, following the format of Paragraph I6.10.B.1 above, by providing that "Engineer's total liability for such damages shall not exceed \$\_\_\_\_\_."]~~

~~[NOTE: If appropriate and desired, include I6.10.B.3 below]~~

~~[NOTE: The foregoing provisions may be included as a supplement to Paragraph 6.10.E, which contains a mutual waiver of damages applicable to the benefit of both Owner and Engineer.]~~

3. ~~Agreement Not to Claim for Cost of Certain Change Orders.~~ Owner recognizes and expects that certain Change Orders may be required to be issued as the result in whole or part of imprecision, incompleteness, errors, omissions, ambiguities, or inconsistencies in the Drawings, Specifications, and other design documentation furnished by Engineer or in the other professional services performed or furnished by Engineer under this Agreement ("Covered Change Orders"). Accordingly, Owner agrees not to sue and otherwise to make no claim directly or indirectly against Engineer on the basis of professional negligence, breach of contract, or otherwise with respect to the costs of approved Covered Change Orders unless the costs of such approved Covered Change Orders exceed \_\_\_\_% of Construction Cost, and then only for an amount in excess of such percentage. Any responsibility of Engineer for the costs of Covered Change Orders in excess of such percentage will be determined on the basis of applicable contractual obligations and professional liability standards. For purposes of this paragraph, the cost of Covered Change Orders will not include any costs that Owner would have incurred if the Covered Change Order work had been included originally without any imprecision, incompleteness, error, omission, ambiguity, or inconsistency in the Contract Documents and without any other error or omission of Engineer related thereto. Nothing in this provision creates a presumption that, or changes the professional liability standard for determining if, Engineer is liable for the cost of Covered Change Orders in excess of the percentage of Construction Cost stated above or for any other Change Order. Wherever used in this paragraph, the term Engineer includes Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants.

~~[NOTE: The parties may wish to consider the additional limitation contained in the following sentence.~~

~~Owner further agrees not to sue and otherwise to make no claim directly or indirectly against Engineer with respect to any Covered Change Order not in excess of such percentage stated above, and Owner agrees to hold Engineer harmless from and against any suit or claim made by the Contractor relating to any such Covered Change Order.]~~

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

This is **EXHIBIT J**, consisting of 1 pages, referred to in  
and part of the **Agreement between Owner and Engineer**  
**for Professional Services** dated 10 Feb, 2011.

**Special Provisions**

---

Paragraph(s) \_\_\_\_\_ of the Agreement is/are amended to include the following agreement(s) of the parties:

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 10 Feb, 2011.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT**

1. Background Data:

- a. Effective Date of Owner-Engineer Agreement: \_\_\_\_\_
- b. Owner: \_\_\_\_\_
- c. Engineer: \_\_\_\_\_
- d. Project: \_\_\_\_\_

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

- \_\_\_\_\_ Additional Services to be performed by Engineer
- \_\_\_\_\_ Modifications to Services of Engineer
- \_\_\_\_\_ Modifications to Responsibilities of Owner
- \_\_\_\_\_ Modifications 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"  
[List other Attachments, if any]

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 \_\_\_\_\_.



OWNER:

ENGINEER:

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date  
Signed: \_\_\_\_\_

Date Signed: \_\_\_\_\_

This is **Attachment 1**, consisting of 1 page, to Amendment  
No. \_\_, dated \_\_, \_\_.

### **Modifications**

---

[Include the following paragraphs that are appropriate and delete those not applicable to this amendment. Refer to paragraph numbers used in the Agreement or a previous amendment for clarity with respect to the modifications to be made. Use paragraph numbers in this document for ease of reference herein and in future correspondence or amendments.]

1. Engineer shall perform the following 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:
3. The responsibilities of Owner are modified as follows:
4. For the Additional Services or the modifications to services set forth above, Owner shall pay Engineer the following additional or modified compensation:
5. The schedule for rendering services is modified as follows:
6. Other portions of the Agreement (including previous amendments, if any) are modified as follows: