

Memorandum

To: Dam Site 15A Ad-Hoc Consultant Selection Subcommittee

Re: Contract for Engineering Services with HDR

Date: October 6, 2009

From: Lori Ann Laster, Stormwater Management Engineer

On August 25, 2009, the Subcommittee interviewed and selected HDR with which to negotiate a professional services contract to provide design services for Dam Site 15A. Since that time, District staff and representatives from HDR have worked together to prepare the enclosed agreement, detailed scope, and time and cost estimate for this project. Due to the complexity of this project, work tasks are planned to be divided in to three phases. Phase 1 is presented in the attached detailed scope and provides the preliminary design and permitting phase for Dam Site 15A. Scope and fees for Phase 2, final design and land rights acquisition, and Phase 3, construction administration, will be presented at a later date.

In summary, HDR will be responsible for the following ten tasks:

- Project Management, including quarterly updates to be posted to the District's website and monthly coordination meetings,
- Preparing a community-based watershed management plan,
- Development of a conceptual recreation plan to allow for public access of the lake,
- Preparing a transportation plan for the realignment of Ida Street and location of 180th Street and Cleveland Boulevard,
- Preparing a Section 404 permit application,
- Evaluation of dam alternatives,
- Performing a geotechnical investigation,
- Preparing a preliminary design of the dam,
- Right-of-way assistance, and
- Providing technical assistance for grant applications.

The total fee for this work was negotiated at \$620,300, and is broken down between different tasks in the attached agreement and scope. We are currently working on an Interlocal Agreement with the City of Omaha with the intent that they will be able to contribute the recreation planning efforts.

- **Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute a professional services contract with HDR to provide engineering services for Dam Site 15A for a maximum fee of \$620,300, subject to changes deemed necessary by the General Manager and approval as to form by District legal counsel.**

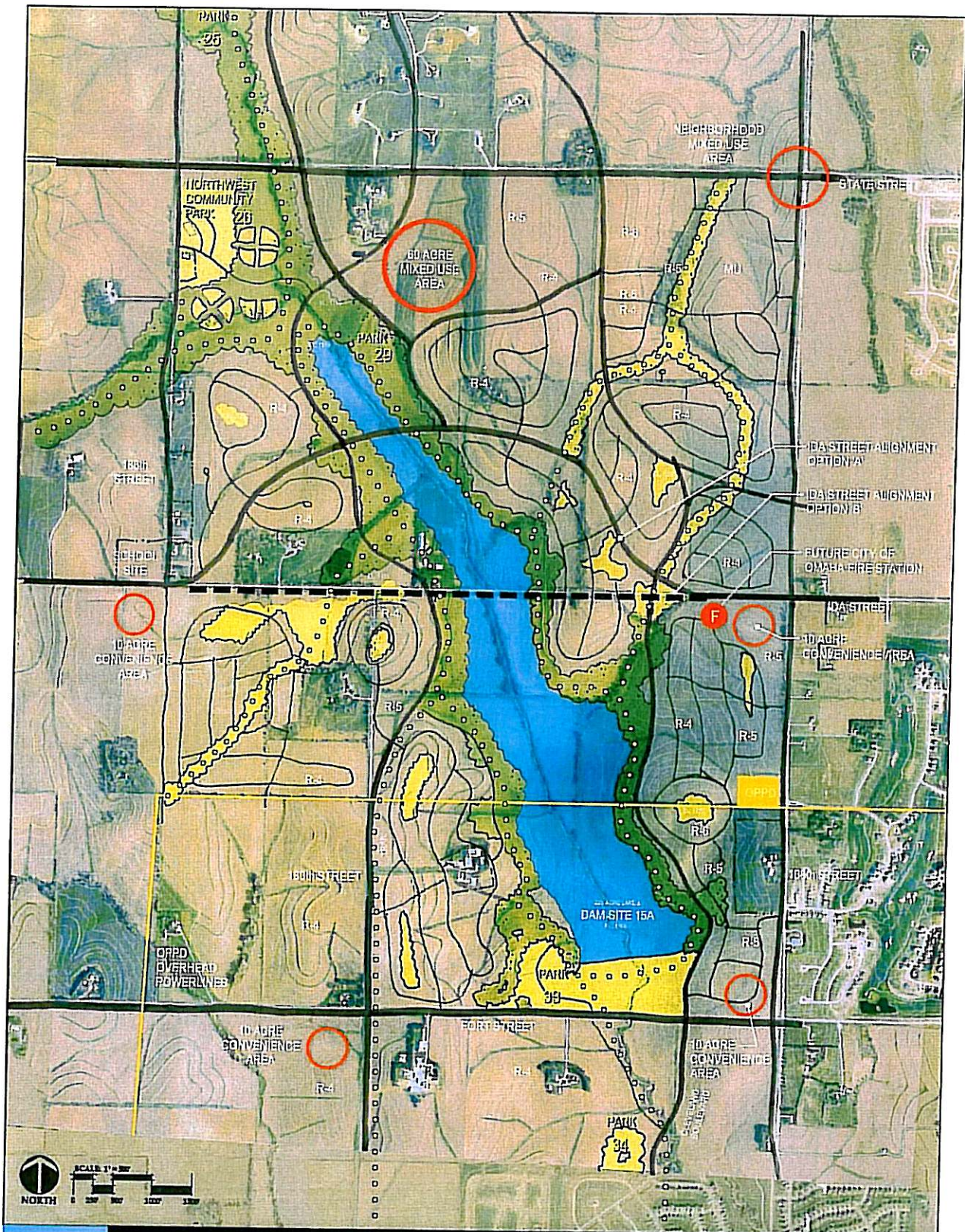


Figure 4

Dam Site 15A Omaha, Nebraska

FINAL MASTER PLAN

Bedm... Omaha, Nebraska...
 Bedm... Omaha, Nebraska...
 Bedm... Omaha, Nebraska...



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

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

As Modified by the Parties Hereto (all changes shown in redline/strike-out format)

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.

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

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

TABLE OF CONTENTS

	<u>Page</u>
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.....	1
ARTICLE 4 - INVOICES AND PAYMENTS.....	2
4.01 Invoices	2
4.02 Payments.....	2
ARTICLE 5 - OPINIONS OF COST	2
5.01 Opinions of Probable Construction Cost.....	2
5.02 Reserved.....	2
5.03 Opinions of Total Project Costs	2
ARTICLE 6 - GENERAL CONSIDERATIONS	2
6.01 Standards of Performance	2
6.02 Design without Construction Phase Services.....	3
6.03 Use of Documents.....	3
6.04 Insurance	4
6.05 Suspension and Termination.....	4
6.06 Controlling Law.....	5
6.07 Successors, Assigns, and Beneficiaries.....	5
6.08 Dispute Resolution.....	6
6.09 Environmental Condition of Site	6
6.10 Indemnification and Mutual Waiver	6
6.11 Miscellaneous Provisions.....	7
ARTICLE 7 - DEFINITIONS	7
7.01 Defined Terms	7
ARTICLE 8 - EXHIBITS AND SPECIAL PROVISIONS	8
8.01 Exhibits Included	8
8.02 Total Agreement	9
8.03 Designated Representatives	9

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of _____, 2009 ("Effective Date") between

Papio-Missouri River Natural Resources District ("P-MRNRD") ("Owner") and

HDR Engineering, Inc. ("HDR") ("Engineer").

Owner intends to design and construct a flood control facility designated as Dam Site 15A. The project will be completed in phases. Phase I includes feasibility and preliminary design of the facility. Phase II includes final design and bidding assistance. Phase III is construction contract administration.

("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 thirtieth 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. Owner shall promptly notify Engineer of the disputed item and request either clarification or that remedial action be taken. After a disputed item has been settled, Engineer shall include the disputed item on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only.

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 Reserved

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.

G. 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.

H. 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.

I. 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.

J. 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.

K. 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. Upon payment due for services performed prior to the effective date of termination, Engineer shall deliver or otherwise make available to Owner all documents, data, drawings, specifications, reports, estimates, summaries, notes, and other information and materials as may have been produced or accumulated by Engineer in performing this Agreement.

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 each is 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, claims arising out of this Agreement or 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. One or more waivers by either party of any provision, term, condition or covenant shall not be constructed as a waiver of a subsequent breach of the same by the other party

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, 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 ____ pages.

B. Exhibit B, "Owner's Responsibilities," consisting of 2 pages.

C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of ____ pages.

D. Exhibit D, Reserved.

E. Exhibit E, Reserved.

F. Exhibit F, Reserved.

G. Exhibit G, "Insurance," consisting of 1 pages.

H. Exhibit H, "Dispute Resolution," consisting of 1 pages.

I. Exhibit I, "Allocation of Risks," consisting of 1 pages.

J. Exhibit J, Reserved.

K. Exhibit K, Reserved..

8.02 Total Agreement

A. This Agreement (consisting of pages 1 to 10 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

By: _____

Title: _____

Date Signed: _____

Address for giving notices:

8901 S. 154th Street

Omaha, NE 68138-3621

Designated Representative (see paragraph 8.03.A):

John Winkler

Title: General Manager

Phone Number: 402-444-6222

Facsimile Number: 402-895-6543

E-Mail Address: jwinkler@papionrd.org

Engineer:

HDR ENGINEERING, INC.

By: _____

Title: _____

Date Signed: _____

Engineer License or Certificate No. _____

State of: _____

Address for giving notices:

8404 Indian Hills Drive

Omaha, NE 68114

Designated Representative (see paragraph 8.03.A):

Matthew Tondl, P.E.

Title: Senior Vice President

Phone Number: 402-399-1070

Facsimile Number: 402-399-1111

E-Mail Address: Matt.Tondl@hdrinc.com

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

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

Engineer's Services

Article I 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 I – BASIC SERVICES

HDR Engineering, Inc. was selected by the P-MRNRD to provide planning, permitting, preliminary and final design and construction contract administration services for Dam Site 15A. Dam Site 15A is a proposed regional detention basin to be located on North Branch of West Papillion Creek located in Douglas County and is located near 168th and Fort in Omaha, Nebraska. The contributing drainage area at the proposed retention basin is approximately 11.1 square miles. The drainage area of Dam Site 15A is primarily agricultural land with minimal development.

To more concisely respond to project requirements, a phased approach is proposed. In Phase I, a planning study and preliminary design will be conducted. After the preliminary details of the project have been determined through Phase I, the Phase II scope of services, generally including preparing final design documents and providing bidding assistance will be developed and associated fees negotiated. Following completion of Phase II, the Phase III scope of services detailing construction contract administration services will be developed and associated fees negotiated.

A1.01 Preliminary Design Phase

This Scope of Services is to document Phase I professional services to the Papio-Missouri River NRD (P-MRNRD) for a planning study and preliminary design of Dam Site 15A (Project).

The Phase I scope of work is segmented into 10 task series:

- Task Series 100 – Project Management
- Task Series 200 – Community Based Watershed Plan
- Task Series 300 – Recreation Planning and Design
- Task Series 400 – Transportation Planning
- Task Series 500 – USACE Section 404 Permit
- Task Series 600 – Dam Alternatives
- Task Series 700 – Geotechnical Investigation and Evaluation
- Task Series 800 – Conceptual Design Elements
- Task Series 900 – Right-of-Way Services
- Task Series 1000 – Technical Assistance on Grant Funding

The HDR Team proposes to provide the following professional services over an anticipated twelve (12) – month project period from the time of contract authorization.

TASK SERIES 100 – PROJECT MANAGEMENT

Task Objective: Develop effective project communication; confirm that Project elements are being completed. Discover and disseminate project information to improve quality and efficiency.

HDR Activities: **Task 110 Project Management.** Conduct general project management tasks. Includes development of project initiation forms including the development of a project guide, monthly invoicing, monthly progress report, project close out activities and other project administrative activities.

Task 120 Coordination Meetings. Coordination meetings will be conducted with P-MRNRD

(and City of Omaha and Douglas County officials, as necessary) during the Project.

- 120.1 Kickoff Meeting. Meet with P-MRNRD personnel to discuss project details and review the project scope.
- 120.2 P-MRNRD Coordination Meetings. Meet with P-MRNRD personnel to review and discuss Project progress. Assume a total of 12 meetings through the duration of the project.
- 120.3 Board/Subcommittee Presentation. Conduct a presentation to the P-MRNRD Board/Subcommittee to provide the results of the Phase I study efforts. A PowerPoint presentation will be prepared. One preparation meeting with P-MRNRD staff for the presentation is assumed.

Task 130 Quarterly Updates. The HDR Team will create an electronic quarterly 2-page update on the Project to be posted on the P-MRNRD website. Original material will be developed by HDR.

Task Deliverables:

- Monthly invoices and progress reports
- PowerPoint presentation for P-MRNRD Board/Subcommittee Presentation
- Quarterly updates

Key Understandings:

- The duration of the project is 12 months.
- Meetings will be held at the offices of the P-MRNRD and attended by 2 HDR professionals.
- Twelve (12) coordination meetings are assumed.
- One (1) P-MRNRD Board/Subcommittee meeting presentation is assumed.

TASK 200 COMMUNITY-BASED WATERSHED PLANNING

Task Objective: The objective of this task is the development of a community-based watershed plan. The community-based watershed plan will be developed for the Dam Site 15A drainage area.

HDR Activities: **Task 210 Data Collection and Analysis.** HDR will collect, organize, and analyze the background data and supporting materials. This information may include:

- Zoning and Land use (existing and future) maps
- Douglas County Comprehensive Development Plan including its Stormwater Best Management Practices
- TMDLs for Papillion Creek reservoirs
- Nutrient loadings based on literature values, agricultural management practices, nutrient and pesticide application and water quality data. Include water quality data on other Papillion Creek reservoirs
- Runoff inflow data for similar sized reservoirs located within the Papillion Creek Watershed

Task 220 Planning Grants. Explore the opportunity of securing a watershed planning grant from NDEQ. Consult with NDEQ and assist in the preparation of a grant application.

Task 230 Field Reconnaissance. Conduct a field-reconnaissance with P-MRNRD and City staff of Dam Site 15A drainage basin. The purpose of this tour is to help familiarize participants with the project area, identify pertinent community features (both liked and disliked), discuss opportunities, and photo document key features for future reference.

Task 240 Coordination Meetings. Coordinate with NDEQ and City of Omaha on community-based plan. Meetings will be held to address project issues during the development of the plan. Three (3) meetings are included in this scope of services.

Task 250 Watershed Committees. P-MRNRD will create with HDR input a Technical Advisory Committee and a Citizen Watershed Committee. The Technical Advisory Committee consists of subject matter experts, while the Citizen Watershed Committee consists of representatives from

various stakeholder groups and are concerned with environmental issues, water quality and watershed management strategies. P-MRNRD will contact potential committee members for participation.

- 250.1 Committee Membership. Assist P-MRNRD and Omaha in developing a list of individual to be included in the Committees. P-MRNRD to contact potential participants.
- 250.2 Citizen Watershed Committee Communication and Meetings. An initial list of potential participants will be developed with assistance from P-MRNRD. Following formation of the Citizen Watershed Committee, an initial meeting will be held to clearly define the project scope and goals, as well as the Committee's role in the process. Continuous communication with the Committee will be maintained and total of four (4) separate meetings are planned through the duration of the project.
- 250.3 Technical Advisory Team and Meetings. Identify subject matter specialists from various agencies which may include NRCS, NDEQ, NGPC, county extension, Douglas County and City of Omaha staff. Conduct four (4) meetings with Technical Advisory Team to discuss methodology to evaluate resource concerns and provide technical input on resource concerns and watershed strategies.

Task 260 Public Workshops.

- 260.1 Visioning Workshop. Working in collaboration with the P-MRNRD and City of Omaha, HDR will conduct a workshop that will inform the public about the development of a community-based watershed plan and to allow participants to describe their "vision" for the area to other workshop participants. HDR staff will facilitate the iterative visioning process to define the consensus-based vision for the project area.
 - o Workshop Materials. Create agenda, PowerPoint presentation, and associated materials for the workshop.
 - o Workshop Facilitation. Facilitate and attend workshop and document public input.
 - o Workshop Summary. Results of the workshop will be compiled and summarized.
- 260.2 Alternative/Recreation Workshop. This workshop will focus on presenting alternative watershed strategies and on presenting proposed recreation improvements. The alternative strategies will address nonpoint source pollution controls to achieve the goals and objectives formulated with the Technical Advisory and Citizen Watershed Committees. Alternatives include best management practices, low impact development standards, and other features to be incorporated into the community-based watershed plan. Recreational elements will be discussed. Activities include:
 - o Workshop Materials. Create agenda, PowerPoint presentation, and associated materials for the workshop.
 - o Workshop Facilitation. Facilitate and attend workshop and document public input.
 - o Workshop Summary. Results of the workshop will be compiled and summarized.

Task 270 Watershed Evaluation. Evaluate the watershed resources and assess the watershed strategies.

- 270.1 Resource Inventory. Compile information on natural and human resources within the Drainage Basin to provide a quantitative explanation of the Drainage Basin.
- 270.2 Water Quality Evaluation. The purpose of the water quality evaluation is to assess the watershed plans ability to develop a sustainable resource that meets the priorities and goals identified in the planning process.
 - 270.2.1 Reservoir Hydrologic Budget. Determine watershed yield based on average annual values for rainfall, evaporation, groundwater/seepage, and inflow. Inflow will be based on analyzing inflow records from other Papillion Creek reservoirs and from sampled data.
 - 270.2.2 Sediment Loading. Determine at-reservoir sediment yield from upland erosion and channel bank sources using RUSLE, or other appropriate estimating technique.
 - 270.2.3 Nutrient Loading. Use literature values for nutrient runoff coefficients loading based on existing and future land use conditions. Develop nutrient budget for drainage area using Iowa DNR's technique of using the three load estimates (Loading Function Method, EPA Export Coefficient Method, and WILMS

Export Coefficient Method)

270.2.4 Reservoir Response Modeling. Determine reservoir's eutrophication response to nutrient loading in terms of Carlson's Trophic State Index through the use of Eleven Lake Equations in IDNR's Lake Phosphorus Spreadsheet.

270.2.5 Reservoir Water Quality Evaluation. Evaluate the model to determine if the reservoir will meet the Title 117 water quality standards with respect to the anticipated designated use of the water body as well as the community's water quality goals.

270.3 Alternative BMP Evaluation. Identify appropriate BMPs provided in the Douglas County Comprehensive Plan as recommended stormwater management strategies. Evaluate proposed BMPs based on literature values for removal effectiveness. Alternatives will be integrated into a watershed plan and the plan's effectiveness to meet the goals assessed. The results of the alternative evaluation will be presented and discussed with the Technical Advisory Committee and Citizen Watershed Committee.

Task 280 Watershed Management Plan.

280.1 Draft Community-Based Watershed Management Plan. Prepare a draft watershed plan.

280.2 Final Community-Based Watershed Management Plan. Prepare a final community-based watershed plan.

Task Deliverables:

- Draft and Final Community-Based Watershed Plan for Dam Site 15A.

Key Understandings:

- P-MRNRD to arrange location for public workshops.
- P-MRNRD will be responsible for providing addresses, preparing invitations, and mailings for public workshops.
- P-MRNRD to provide copies of any handout materials. Display boards will not be created.
- P-MRNRD will coordinate a water quality sampling program to define baseline water quality conditions.
- Opinions of the likelihood of meeting water quality goals will be formed on the evaluation of available input data and the results from the models and methodology employed.
- Water quality modeling is limited to nutrients (phosphorus). No bacteria, no toxics or metals, or mercury evaluation is proposed.

TASK 300 RECREATION PLANNING & DESIGN

Task Objective: The objective of this task is to develop a conceptual design for future public recreation improvements in relationship to Dam Site 15A. These services will focus on the community park, the trail system, and green space uses around the reservoir. These tasks will be principally performed by HDR sub-consultant Community ReDesigned (CrD).

HDR Activities: Task 310 Recreation Meeting. CrD will review the current Suburban Park System Master Plan with P-MRNRD staff and the City of Omaha Department of Parks, Recreation & Public Property and confirm the program elements set forth for recreation facilities surrounding Dam Site 15A.

Task 320 Recreation Benefits. Determine potential recreational benefits of Project. Assess recreational facilities within the area and identify recreation needs within the area. It is anticipated that this analysis would use the benefit-transfer methodology and USACE capacity model.

Task 330 Draft Conceptual Design

330.1 Draft Conceptual Design of Community Park, Trail System & Greenspace. The community park, multi-use trail and public greenspace uses surrounding the lake will be conceptually defined. Elements and features of community park defined. Alignment and connections of trail system developed. Identification of the limits of the public greenspace to harmonize with future development yet provides 'urban filtering' for ecological purposes will be determined. These plans will be at an approximate 15% design level. In addition to the 15% design level of the community park, trail system, and greenspace, a concept of uses for the two neighborhood parks will be developed that will

- be used to primarily define space requirements.
- 330.2 Opinion of Cost. Prepare opinion of probable construction costs for items outlined in Tasks 330.1.

Task 340 Preliminary Review. Review the work products of Tasks 330 with the P-MRNRD, City of Omaha PR&PP, and other agencies as required. Gain input.

Task 350 Final Conceptual Design

- 350.1 Final Conceptual Design of Community Park, Trail and Greenspace. Following input sessions, refine conceptual design. These plans will be approximately 15% level of design.
- 350.2 Opinion of Cost. Prepare updated opinion of probable construction costs for items outlined in Tasks 350.1.

Task 360 Design Guidelines. Refine design and development guidelines for the approximate one-half mile portion of H.W.S Cleveland Boulevard designed for a 'scenic motorway' overlooking the lake. It is anticipated that this will represent minor changes to the existing design guidelines for applicability to this location.

Task Deliverables:

- Draft Conceptual Design Plans and Cost Opinions
- Final Conceptual Design Plans and Cost Opinions
- Design Documentation
- Exhibits of Community Park, Trail System, and Green Space Conc. Designs
- HWS Cleveland Blvd design standard guidelines

Key Understandings:

- Meetings will be held at P-MRNRD or City of Omaha
- Conceptual Design will be at approximately 15% design level
- Recreation facility planning will focus on community park, trail and green space usage surrounding pool of Dam Site 15A.
- Two (2) Color 24" x 36" exhibits of recreation features are anticipated.

TASK 400 TRANSPORTATION PLANNING

Task Objective: The objective of this task is to perform more detailed planning for the transportation network, assess potential impacts to the transportation network by the project, and develop conceptual design of mitigation measures for impacts.

HDR Activities: **Task 410 Data Collection and Review.** This task includes the collection, organization, and analysis of background data and supporting materials provided by the P-MRNRD, Douglas County, MAPA, NDOR and other sources. Traffic counts will not be taken as a part of this study.

- Available GIS information including aerial photography, 3D contours, parcel information, and utilities.
- All pertinent reports on planning, traffic studies, and development.
- Available traffic counts, traffic projections and crash data.
- As-built plans.

Task 420 Field Reconnaissance. This task includes one (1) site visit for field observation to support conceptual roadway development. Field reconnaissance activities include observation of the existing roadway network and drainage features in and immediately adjacent to the study area, utility verification, and documentation of the visit, including a photo log. Assumed roadway alignment study limits are Fort Street to ½ mile north of State Street and 186th Street to 168th Street.

Task 430 Transportation Coordination Meetings. Five (5) meetings are included in this scope of services to coordinate with P-MRNRD, MAPA, City of Omaha and Douglas County to discuss

project impacts to existing and proposed infrastructure and determine alignment and characteristics of Ida Street, 180th Street and HWS Cleveland Blvd.

Task 440 Traffic Verification. HDR will review existing traffic count information, control and access along the transportation network in the study area. Year 2035 average daily traffic projections will be obtained from MAPA (Metropolitan Area Planning Agency). ADT will be the basis of traffic analyses; peak hour analysis will not be included. Operational evaluations will not be conducted as part of this study, rather the intent of the analysis is to determine current and ultimate roadway capacity requirements.

Task 450 Roadway and Bridge Evaluation.

450.1 **Conceptual Roadway Alternatives.** Develop the two roadway alternatives for Ida Street from 168th Street to 186th Street described in the "Dam Site 15A Revised Conceptual Design Evaluation" prepared May 2007. Alternative "A" is Ida Street relocated approximately 1/3 mile to the north, with tie-in to existing Ida Street prior to the intersections of 168th Street and 186th Street (approximately 8,500 ft) and will include a bridge over the pool. Alternative "B" follows the existing Ida Street alignment between 168th Street and 186th Street with a raised profile (approximately 1,100 ft) and bridge over the pool.

Alignments for both roads will be based on design standards for expandability to a 4-lane urban arterial. Typical roadway sections will incorporate planned future trails.

For each Ida Street alternative, one (1) conceptual roadway alternative will be developed for each of the two north-south intersecting roads: 180th Street (from Fort Street to State Street) and Cleveland Boulevard (from Fort Street to proposed Ida Street).

This task includes developing conceptual horizontal and vertical alignments for Ida Street (2 alignments), 180th Street (2 alignments) and Cleveland Boulevard (2 alignments). Effort to create the Plan and Profile sheets is included in this task. Design will utilize the Nebraska Minimum Design Standards prepared by Board of Public Roads and Classification Standards.

The alternatives will develop intersection configurations at the following locations:

- Ida Street and 186th Street
- Ida Street and 180th Street
- Ida Street and Cleveland Boulevard
- Ida Street and 168th Street

450.2 **Conceptual Bridge Alternatives.** Develop 2 bridge conceptual layouts, one (1) for each Ida Street roadway alternative.

450.3 **Geometrics / Typical Sections.** This task will include developing conceptual roadway geometrics including curb returns at the four (4) intersections listed in 450.2. As part of this effort, turning radii will be checked using the design vehicle's turning template. This task also includes effort to develop three (3) roadway typical sections and (1) bridge typical section.

450.4 **Roadway Cross-Sections.** This task will include developing cross sections at 200' intervals and at select locations to provide clarity and define ROW footprint. Included in this task is the development of approximate limits of construction and earthwork quantities. Preparation of earthwork quantities by construction phases is not included. The existing ground terrain will be created from LiDAR data.

450.5 **Rights-of-Way Boundary.** Delineate conceptual rights-of-way acquisition per affected parcel. The existing right-of-way lines will be taken from GIS information with no title research.

450.6 **Utilities Coordination / Verification.** This task includes coordination of the roadway improvements with the utilities to identify conflicts. HDR will utilize utility information provided in the "Dam Site 15A Revised Conceptual Design Evaluation" report. No meetings with affected utilities within the roadway corridor are included.

- 450.7 Conceptual Plan Development. Prepare electronic CADD files. The concept work will be completed using MicroStation and Geopak. The conceptual plan set will be 11"x17" sheets submitted in PDF.
- 450.8 Quantities/Estimates. The effort identified in this task includes quantity calculations and the engineer's estimate of probable cost.

Task 460 Roadway Concept Memorandum. A concept study memorandum will be developed to document the design standards and assumptions. The alternatives will compare bridge alternatives, cost, geometrics, traffic analysis, and constructability. HDR will document the findings.

- 460.1 Draft Transportation Memorandum. Prepare a draft transportation memorandum.
- 460.2 Final Transportation Memorandum. Incorporate P-MRNRD comments and prepare a final transportation memorandum.

Task Deliverables:

- Concept Study Memorandum
- Conceptual Plans, PDF format, 11"x17"

Key Understandings:

- It is not anticipated that FHWA funding will be pursued for transportation system improvements
- The conceptual layouts will be based on available LiDAR data and GIS information.
- CADD standards and cell libraries in Micro Station format will follow NDOR practices.
- The intent of this transportation task is to define:
 - HWS Cleveland preferred alignment
 - 180th preferred alignment, including tie-in at State Street
 - Define two potential Ida Street Alignments
 - Define intersections along Ida Street
 - ROW impacts
 - Costs associated with each alignment alternative

TASK 500 USACE SECTION 404 PERMIT

Task Objective: Secure necessary Section 404 approvals for Dam Site 15A in accordance with the Clean Water Act.

Activities: Task 510 Data Collection and Evaluation. Environmental data collected for the project area proposed for Dam Site 15A include:

- Data on recorded archaeological and historic/architectural sites (coordinated through the Nebraska State Historical Society, State Historic Preservation Office).
- Data on threatened or endangered species known locations (coordinated through the USFWS and Nebraska Game and Parks Commission)
- Soil survey data
- National Wetland Inventory (NWI) mapping
- Surface water quality impaired streams inventory from NDEQ

Task 520 USACE/Agency Coordination. Coordinate with United States Army Corps of Engineers (USACE) and other Federal, state and local agencies.

- 520.1 Agency Scoping Meeting. Prepare background document describing the project and requesting information on impacts to their resources to obtain input from federal/state agencies, tribes, and special interest groups. Prepare contact mailing list of agencies and send background document along with invitation to a scoping meeting. Prepare for and facilitate an agency scoping meeting. Prepare meeting notes.
- 520.2 USACE Project Coordination. Meet with USACE at key points during permit development. This would include after development of purpose and need, alternative screening criteria, initial screening, and draft stage of the Section 404 permit application. A total of 3 meetings are assumed.
- 520.3 Agency Coordination. Coordinate as needed with other agencies on project specific

issues. Assumes only telephone calls and effort is limited to 8 hours of senior scientist and 24 hours of scientist.

Task 530 Section 404 Individual Permit. HDR will seek project approval under an individual Section 404 permit from the USACE; however, will evaluate the potential for the project to qualify for Nationwide Permit #43. Regional conditions for permits that have channel impacts require an analysis to determine that no other practicable alternatives are available. To address this need; either under Nationwide Permit #43 or through and Individual Permit, a Section 404 permit application will be prepared.

530.1 **Section 404 Permit Application.** Based on initial identification of permitting issues, HDR will develop a permit application for the Project. This document will include an alternatives analysis to identify potential alternatives that are practicable according to the 404(b)(1) Guidelines. HDR will coordinate the development of the Section 404 permit application with USACE.

530.1.1 **Project Need and Purpose.** HDR will identify the need for the project and the primary and secondary purposes of the Project. This will be done in a manner to best justify the location of the project while limiting the alternatives analysis to the minimum required by the USACE.

530.1.2 **Screening Criteria.** Establish the screening criteria to evaluate alternatives for the project. The screening criteria will establish the practicability of the alternatives as described in Subpart B §230.10 (a) of the Guidelines. A practicable alternative is considered "available and capable of being done after taking into consideration cost, existing technology, and logistics while also fulfilling the basic purpose of the proposed activity".

530.1.3 **Range of Alternatives.** In addition to the proposed alternative (as defined and established in Task Series 400), alternatives may include, but not limited to:

- low impact development strategies
- multiple small detention basins
- levees and channel improvements
- floodplain acquisition
- dry regional detention basin

530.1.4 **Alternative Screening.** Apply screening criteria to each of the alternatives for determination of alternative practicability.

530.1.5 **Factual Determinations.** Apply Section 230.11(a)-(h) to evaluate the potential short- or long-term effects of the practicable alternatives on the aquatic environment. Indirect and cumulative impacts will be considered.

530.1.6 **Applicants Preferred Alternative.** Summarize the findings of the project and identify the alternative for which the P-MRNRD is applying for.

530.2 **Wetlands and Waters of the U.S. Survey.** The HDR Team will identify wetlands and jurisdictional waters of the U.S. on Dam Site 15A project lands.

530.2.1 **Wetland Determination.** A wetland determination will be performed using NWI mapping and NRCS aerial photography with site verification to preliminarily identify potential wetland impacts to aid in initial determination of impacts.

530.2.2 **Wetland Delineation.** Investigate the study area for the presence of Clean Water Act jurisdictional waters (including wetlands). Delineate and characterize the type, size, and location of waters of U.S. A formal wetland delineation [in accordance with the USACE 1987 Wetland Delineation Manual] shall be provided for areas within the normal pool area and limits of construction of the structure(s).

530.2.3 **Stream Functional Assessment.** Perform a stream functional assessment of all impacted stream and associated riparian areas for assessment of stream impacts and potential mitigation requirements. Use of the Omaha District method for evaluation of existing stream conditions will be applied (based on Kansas Stream Mitigation Methodology).

530.3 **Cultural Resources (Section 106) Compliance.** The Section 404 permit requires Section 106 compliance. This will be achieved through a record search of previously documented cultural resources identified within the Project area and a Phase I cultural resources

530.4 survey (pedestrian survey) of the areas of ground disturbance as well as inundated areas.
Section 401 Water Quality Certification. Submit Section 401 Water Quality Certification application to the State of Nebraska.

Task 540 Environmental Mitigation Concept Design. HDR will coordinate with USACE to incorporate wetland, channel mitigation and tree mitigation concepts required to obtain the Section 404 permit. It is assumed that wetland, channel, and tree mitigation will be on-site. The concept plans will depict the type, size and location of the mitigated resource.

Task 550 Section 404 Application Preparation. HDR will prepare and submit a Preconstruction Notification (PCN) application based on coordination and meetings with the USACE, and mitigation concept design.

Task 560 Section 404 Iterative Comment/Response. HDR to respond to USACE and public comments during review of the Section 404 application. HDR will assist P-MRRND in responding to USACE and public comments during the permitting process. Responding to USACE comments is an iterative process and the level of effort to address comments is unknown. Level of effort estimated in responding to USACE and public comments purposes of this scope and fee development is limited to 20 hours of a senior professional and 60 hours of a mid-level professional.

Task Deliverables:

- Project Background Document
- Pre-application meeting agenda and minutes
- USACE meeting agenda's and minutes
- Phase I Cultural Resources Survey and Report
- Section 404 Permit Application

Key Understandings:

- Right of entry with landowners to conduct cultural resources and wetland surveys will be coordinated by P-MRNRD.
- Rob Bozell, as a subconsultant to HDR, will conduct the cultural resources work.
- Cumulative effects of environmental and social resource concerns of the project will be assessed in relation to other past, present and reasonably foreseeable projects within the study area of the project.
- Scope and fee are based on assumption that project will not require an Environmental Impact Statement (EIS) or an Environmental Assessment (EA).
- It is assumed that no threatened or endangered species surveys will be required.
- Any wetland, stream, or tree impacts will be mitigated on-site.
- Responding to USACE comments is limited to 20 hours of a senior professional and 60 hours of a mid-level professional.

TASK 600 DAM ALTERNATIVES

Task Objective: Develop hydrologic model for use in evaluating and optimizing dam features for Dam Site 15A. Impacts of varying pool levels will also be determined.

Activities:

Task 610 Data Collection and Evaluation.

610.1 Data Collection. Data to be evaluated includes:

- Dam Site 15A Conceptual Report (HDR, May 2007)
- LiDAR data for West Papillion Creek Subwatershed flown by Horizons in 2004.
- Aerial photography for Douglas County flown by Horizons in 2007-08.

610.2 Stage-Storage Data Verification. Verify the stage-area-storage relationship for the dam and reservoir using HDR's hydrologic model from the 2007 Dam Site 15A Conceptual Report and LiDAR topographic mapping. Evaluate impact of grading changes to stage-storage data for the main dam and reservoir and any wetland and channel mitigations.

Task 620 Hydrologic Model Development. HEC-HMS will be used to route design

hydrographs through the proposed regional detention basins and water quality basins. The calibrated model prepared during the West Papillion Flood Hazard Update and used for the 2007 Dam Site 15A Detention Evaluation will serve as the basis for model development. The principal spillway hydrograph, auxiliary spillway hydrograph, and freeboard hydrographs will be determined per NRCS Technical Release No. 60 (TR-60) for high hazard structures. In addition, 10-, 50-, 100-, and 500-yr hydrographs will be defined. One storm-centering will be used in the hydrologic analysis.

- 620.1 Site-Specific PMP. Define the probable maximum precipitation event as defined by the December 2008 Study entitled "Site-Specific Probable Maximum Precipitation (PMP) Study for Nebraska". Determine a revised auxiliary spillway and freeboard hydrographs.
- 620.2 HEC-HMS Model Update. Key hydrologic parameters such as land use and percent impervious areas will be updated to future conditions that correspond to anticipated future development conditions and coordinated with the conceptual land use plan developed in Task 260 for Dam Site 15A.

Task 630 Dam Elements Refinement The May 2007 Study on Dam Site 15A recommended an operating pool elevation of 1,169 ft which maximizes normal pool surface area, while minimizing infrastructure and real estate impacts and maintaining a conservative, average sustainability of 3.0 percent.

- 630.1 Dam Features for Alternatives. Variations in principal and auxiliary spillway configurations will be investigated to further maximize the normal pool surface area and minimize impacts to infrastructure, land and environmental resources. Variations in spillway design, such as fuseplugs or two-stage spillways will be investigated. Rating curves for principal and auxiliary spillways will be developed for use in reservoir routing.
- 630.2 Reservoir Routing. HEC-HMS model will be used to route hydrographs through Dam Site 15A. Top of dam elevations will be established through these routings based on NRCS TR-60 and State of Nebraska Dam Safety criteria.
- 630.3 Reservoir Sedimentation. Data on watershed sediment yield developed in Task Series 200 will be used to estimate delivery rate and life cycle.
- 630.4 Impact Evaluation. Infrastructure impacts for each design hydrograph will be determined for each alternative. Potential mitigation measures for impacted infrastructure (levees, relocations, etc.) will be investigated.

Task 640 Water Quality Basins. Potential locations for water quality basins upstream of the reservoir will be identified and screened. Potential sites will be assessed based on sediment storage provided, residence time for water quality enhancement, portion of watershed afforded treatment by the site, and compatibility with surrounding infrastructure and land use.

- 640.1 Potential Water Quality Sites Identification. Identify potential locations for water quality basins upstream of Dam Site 15A. Possible sites include 1) upstream (north) of State Street 2) upstream (west) of 186th Street and 3) on 186th Street south of Rainwood Road. A maximum of 3 locations will be evaluated.
- 640.2 Stage-Storage Data. Stage-area curves will be developed for each water quality basin from the LiDAR data.
- 640.3 Water Quality Sites Selection. Using the estimated reservoir sedimentation rate and life cycle analysis performed in Task 630.3, determine which of the potential water quality sites are necessary.
- 640.4 Water Quality Basin Sizing. Size and develop rating curves for the principal and auxiliary spillways.
- 640.5 Maintenance Intervals. Compute the trap efficiencies of the proposed sediment basins to quantify sediment deposition in cubic yards and percentage of basin volume. Using this information, establish the required maintenance intervals for removal of sediment from the proposed water quality basins.

Task 650 Draft Report Section. Prepare preliminary and final draft of dam alternatives section of the design report.

- 650.1 Preliminary Draft Report Section. Document analysis in a preliminary draft dam alternative section of the design report.

650.2 Final Draft Report Section. Document analysis in a final draft dam alternative section of the design report. Incorporate review comments.

Task Deliverables:

- Draft and final dam alternatives section of design report.

Key Understandings:

- The hydrologic analysis will be performed using the existing calibrated HEC-HMS model developed for the West Papillion Creek Flood Hazard Update.
- The probable maximum precipitation event will be defined by the December 2008 Study entitled "Site-Specific Probable Maximum Precipitation (PMP) Study for Nebraska".
- A maximum of two (2) dam spillway configurations will be evaluated.
- A maximum of three (3) water quality basins will be evaluated for trapping sediment.

TASK 700 GEOTECHNICAL INVESTIGATION AND EVALUATION

Task Objective: Conduct subsurface geotechnical investigation and conduct geotechnical evaluation of embankment. It is intended that the geotechnical design elements will be advanced to approximately the 90% level in this Phase.

Activities: Task 710 Data Collection and Analysis. Data to be evaluated includes:

- Available geotechnical data from adjacent roadway projects and USACE geotechnical evaluation of Dam Site 15.

Task 720 Subsurface Investigation Plan. HDR to conduct a geotechnical investigation to evaluate the subsurface conditions along the main dam centerline, the principal spillway, auxiliary spillway and borrow areas. HDR to prepare a boring plan showing the location of the borings and a laboratory testing program assigning tests to specific samples. Four (4) of the borings will be maintained as observation wells.

- A total of 1,550 feet of drilled to non-yielding material (glacial till or bedrock) and 200 feet of cone penetrometer tests.

Testing requirements include:

- Atterberg Limits (silts and clays, per D 4318). A total of 50 tests are assumed.
- Grain size analyses with hydrometer (sands, silts and sands per D 422). A total of 40 tests are assumed.
- Moisture/Density tests (tube and bag samples, per D 2166, D 698). A total of 90 moisture and 60 dry density tests are assumed.
- Proctor compaction test. A total of 4 tests are assumed.
- Unconfined Compressive Strength tests (tube samples, per D 2166). A total of 8 tests are assumed.
- Triaxial compression tests (UU and CU-bar) (tube samples, per D 2850). A total of 12 UU and 12 CU-bar tests are assumed.
- Consolidation tests (tube samples, per D 2435). A total of 12 tests are assumed.
- Pin-hole dispersion tests. A total of 5 tests are assumed.

Task 730 Subsurface Investigation Exploration. Thiele Geotech to conduct field drilling and sampling, conduct laboratory tests and prepare geotechnical material data report. Geotechnical data report includes boring logs and laboratory test data. E&A will survey top of boring hole elevations.

Task 740 Preliminary Geotechnical Design and Analysis.

Preliminary geotechnical design will be performed. The design includes:

- Review field and lab data.

- Prepare geologic cross-sections
- Select design foundation section and shear strengths
- Select trial embankment sections (with internal drainage, if needed)
- Run slope stability analyses for end of construction case
- Run seepage analyses (does not include reservoir water balance)
- Evaluate foundation underseepage
- Evaluate seepage through the embankment
- Run slope stability analyses for rapid drawdown, steady state seepage and earthquake cases
- Run settlement analyses along:
 - Embankment centerline
 - Principal spillway (vertical and horizontal joint extensibility)

Task 750 Final Geotechnical Design and Analysis. Final geotechnical design will be performed. The design includes:

- Specify final embankment section
- Specify, size, and locate the chimney drain, horizontal blanket drain and drain outlets, if needed
- Refine upstream slope geometry, if needed
- Evaluate principal spillway alignment, stability and settlement
- Evaluate auxiliary spillway stability
- Evaluate slope stability of embankment closure section

Task 760 Geotechnical Investigation and Evaluation Documentation. Prepare geotechnical evaluation report documenting the results of the geotechnical investigation and design.

760.1 **Draft Geotechnical Investigation and Design Report.** Document geotechnical evaluation.

760.2 **Final Geotechnical Investigation and Design Report.** Incorporate review comments and revise geotechnical report.

Task Deliverables:

- Draft and Final Geotechnical Investigation and Design Reports

Key Understandings:

- Thiele Geotech, as a subconsultant to HDR, will conduct field investigation tasks.
- E&A, as a subconsultant to HDR, will survey top of boring hole elevations.
- Geotechnical investigation and design will be completed to approximately to a 90 percent level.
- The final geotechnical report will be ready for inclusion in the NDNR dam safety permit application. Preparation of NDNR dam safety permit is not included in this Phase I scope of services and will be prepared in Phase II.
- Instrumentation and upstream face slope protection will be evaluated during Phase II.
- It is intended that the subsurface investigation in Phase I be adequate for completion of design. Should additional subsurface information be required to complete design, it will be documented and included in Phase II services.

TASK 800 CONCEPTUAL DESIGN ELEMENTS

Task Objective: To define major design elements and prepare set of drawings to approximately a 30% level.

Activities:

Task 810 Data Collection and Evaluation.

810.1 **Data Collection.** Collect necessary data. Data to be evaluated includes:

- Existing GIS mapping including aerials, topographic data, and parcels
- Private and public utilities (existing and proposed data available at time of evaluation) potentially impacted by the Project including: communication lines, sanitary sewer lines, OPPD power lines, gas lines, and fiber-optic lines.

810.2 **Topographic Survey.** Conduct a topographic survey of the proposed detention basin embankment/spillway footprint based on the conceptual design report (HDR, May 2007) and create a topographic map. Include a limited topographic survey, including drainage

structure information (approx. 200 feet upstream and downstream of the existing drainage structure centerline), of 2 potential water quality basins (one along 186th Street and one along State Street) and 1 additional drainage structure location (186th Street south of Rainwood Road).

- 810.3 Topographic Base Map. Topographic survey will be supplemented with LiDAR topographic data.

Task 820 Utility Coordination and Planning

- 820.1 Utility Confirmation. A letter will be prepared requesting public and private utilities for information of each respective utility within the Dam Site 15A area.
- 820.2 Utility Coordination. Conduct a meeting with private and public utilities to discuss the project and the impact to its utility. Follow-up meeting with phone calls.
- 820.3 Utility Infrastructure Coverages. Create GIS coverages for utility information.
- 820.4 Sanitary Sewer Conceptual Plan. Define the type, size, and location of the future sanitary sewer trunk line in the vicinity of the proposed dam embankment that would extend upstream along North Branch West Papillion Creek from the existing sanitary sewer trunk line at Fort Street.
- 820.5 OPPD Power Line Alternatives. Coordinate with OPPD in regards to potential impacts to distribution and transmission power lines. Potential impacts/relocation of distribution power lines includes those along Ida, State, and 186th Street. The two transmission lines between 168th and 180th Streets and 0.5 mile south of Ida Street will be investigated with OPPD officials regarding access to and vertical clearance with power lines on their existing alignment relative to proposed pool elevations. It is assumed that OPPD will lead the design efforts.

Task 830 In-Lake Fisheries/Recreation Area Conceptual Design.

- 830.1 In-Lake Fisheries/Recreation Design. Coordinate with Nebraska Game and Parks on in-lake fisheries and recreation design elements. Recreation design in this task is limited to locating lake access points (docks), fishing piers, etc to the extent necessary to pursue potential grant funding.
- 830.2 In-Lake Fisheries Conceptual Design. Define the in-lake fisheries features and typical sections.

Task 840 Drawing Production - Develop conceptual design of retention basin Dam Site 15A and associated water quality basins. A preliminary drawing list of sheets includes:

- Title Sheet (1 sheet)
- General Notes, Legend, Abbreviations, Hydrologic/Hydraulic Data (1 sheet)
- Topographic Maps of Reservoir Areas (2 sheets)
- Plan View of Main Structure Site (1 sheet)
- Plan View of Water Quality Basins (2 sheets)
- Profile of Principal Spillway (1 sheet)
- Main Dam Grading Plan and Embankment Drain Plan (1"= 50', 3 sheets)
- Main Dam Drain Details (e.g. embankment drain detail and toe drain detail, 1 sheet)
- In-Reservoir Fish Habitat (1 sheet)
- Structural Details (e.g. riser, stilling basin, 3 sheets)
- Miscellaneous Details (1 sheet)

Task 850 Conceptual Opinion of Probable Construction Costs. Develop conceptual level opinion of probable construction costs for the construction of Dam Site 15A. Included in the cost estimate will be dam construction costs and infrastructure relocation costs.

Task 860 Design Analysis Documentation. Prepare a design analysis report for the construction elements section of the report.

- 860.1 Draft Design Analysis Report. Document technical analysis in a technical report.
- 860.2 Final Design Analysis Report. Revise draft technical report. Incorporate review comments.

Task Deliverables:

- Conceptual Design Drawings (approximately 30% level)
- Draft and Final Design Report

Key Understandings:

- Preliminary design will be for one (1) recommended alternative
- Appropriate utility companies will be invited to a group meeting. Individual coordination, either via telephone or meetings, may be necessary. It is assumed that no more than one additional day of meetings will be required.
- Utility meetings will be attended by 2 HDR representatives.
- Two representatives from HDR will conduct follow-up meetings.
- Drawings will be provided in 11" x 17" format.
- Technical specifications will not be prepared during Phase I.
- No roadway or bridge design will be conducted in Phase I.
- One (1) electronic copy and one (1) hard copy of Draft and Final Design Analysis s will be provided to P-MRNRD.
- P-MRNRD will be responsible for report reproduction.

TASK 900 RIGHT-OF-WAY ASSISTANCE

Task Objective:

To determine right-of-way (ROW) requirements based on a preliminary design and determine legal descriptions in support of public hearings and appraisal/title searches to be conducted by P-MRNRD.

Task 910 Coordination and Consultation. Coordinate with City of Omaha, and Douglas County to define the ROW requirements, discuss the maximum pool design and the impacts on public facilities. A total of 2 meetings are assumed.

Task 920 Acquisition and ROW Plan Development. This task includes defining the preliminary acquisition/boundary plans preparing preliminary ROW plans for up to 30 parcels, and performing limited baseline survey in support of the final acquisition/boundary survey to be conducted in Phase II.

- 920.1 **Real Property Work Maps.** Prepare property work maps based on the proposed outline of Project area necessary for the construction of the dam, reservoir and public areas. Coordinate with P-MRNRD and determine boundary extents for acquisition.
- 920.2 **Preliminary Acquisition/Boundary Plans.** Conduct field survey to locate section corners and establish initial control. Develop preliminary ROW map plans based on GIS information and supplement with dimensional control provided by recorded subdivision plats and other recorded surveys and documentation at the Douglas County Surveyor's office, Douglas County Register of Deeds Office, and topographic survey. Items depicted on these plans include: limits of maximum pool based on the top of proposed dam elevation and other construction outside this limit to aid P-MRNRD personnel with appraisals along with acquisition and easement negotiations. Determine acreages for acquisition and provide legal descriptions for acquisition.

Task Deliverables:

- Real Property Work Maps based on proposed limits of construction
- Preliminary Acquisition/Boundary Plans for initial public ROW hearings and subsequent appraisal and fee title searches activities.
-
-

Key Understandings:

- P-MRNRD will provide title documentation for the properties affected by this project
- P-MRNRD is responsible for securing appraisals along with acquisition and easement negotiations.
- No permanent monuments will be set (to be performed during Phase II)

- It is assumed that the number of revisions to the preliminary boundary is limited to 1 per parcel.
- Database search report obtained from Environmental Data Resources (EDR) on regulated material sites (which includes, but is not limited to: underground storage tanks, leaking underground storage tanks RCRA sites, CERCLA sites, landfills, spills, hazardous material information reporting system (HMIRS), and TSCA sites) by P-MRNRD

TASK 1000 TECHNICAL ASSISTANCE ON GRANT APPLICATION

Task Objective: Provide technical information to P-MRNRD on grant funding applications.

Activities: **Task 1010 Funding Opportunities Identification.** Identify and summarize potential funding opportunities for P-MRNRD to evaluation as potential outside sources of project funding.

Task 1020 Technical Assistance. Provide technical information to P-MRNRD in support of the preparation of grant applications. For purposes of developing the fee estimate, the grant applications are assumed to include Nebraska Game and Parks' Sport Fisheries and Motor Boat Access Grant Funding, Nebraska Environmental Trust funding, and NDEQ Section 319 Funding.

Task Deliverables:

- One-page list of possible funding opportunities
- Supporting technical information for funding applications

Key Understandings:

- One-page list of possible funding opportunities

A1.02 Phase II – Final Design and Bidding Assistance

A. After acceptance by Owner of Phase I documents, and upon written authorization from Owner, Engineer shall prepare scope of services and estimate of Engineer's fee for Phase II:

A1.03 Phase III – Construction Contract Administration

A. Upon successful completion of Phase II services and upon written authorization from Owner, Engineer shall develop scope of services and estimate of Engineer's fee for Phase III.

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 Study and Report Phase alternative solutions beyond those identified in paragraph A1.01.A.4.
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.5, 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 A1.05.B.

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

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

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 or deems appropriate, Contractor raises, or Engineer reasonably requests, including but not limited to the review of Contract Documents supplied by Engineer.
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.

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

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

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 (other than Resident Project Representative and Post-Construction) – Direct Labor Costs Times a Factor Method of Payment

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A, except for services of Engineer's Resident Project Representative and Post-Construction Phase services, if any, as follows:

1. An amount equal to Engineer's Direct Labor Costs times a factor of 3.15 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 shall not exceed the amount of \$620,300 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 \$620,300 being intended by the parties as the maximum amount of money to be due to the Engineer under this Agreement

2. The fee schedule is attached to this Exhibit C as Appendix 1

3. Engineer's Reimbursable Expenses Schedule is attached to this Exhibit C as Appendix 2.

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 ____) 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 2 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, plus 10% of all such expenses.

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, plus 10% thereof.

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.

D. 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.

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

C2.05 Compensation For Additional Services – Direct Labor Costs Times a Factor Method of Payment

A. Owner shall pay Engineer for Additional Services as follows:

1. *General.* For services of Engineer's employees engaged directly on the Project pursuant to paragraph A2.01 or A2.02 of Exhibit A of the Agreement, except for services as a consultant or witness under paragraph A2.01.A.20, an amount equal to Engineer's Direct Labor Costs times a factor of 3.15, plus related Reimbursable Expenses and Engineer's Consultant's charges, if any.

B. Compensation For Reimbursable Expenses

1. For those Reimbursable Expenses that are not accounted for in the compensation for Basic Services under paragraph C2.01 and are directly related to the provision of Additional Services, Owner shall pay Engineer at the rates set forth in Appendix 2 to this Exhibit C.

2. 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.

3. The amounts payable to Engineer for Reimbursable Expenses, if any, will be the Additional Services-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to such Additional Services, plus 10% of all such expenses.

C. Other Provisions Concerning Payment For Additional Services

1. 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, plus 10% thereof.

2. *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.

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.

**EXHIBIT "C" APPENDIX 1
PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT
PRELIMINARY DESIGN OF DAM SITE 15A
FEE ESTIMATE**

HDR Engineering, Inc. Estimated Hour/Costs																	Expenses				HDR		Sub-Consultant Estimated Costs				Est. Total Cost
TASKS																	Total Labor Cost				Travel		Total Expenses [1]		Total Sub-Consultant		Est. Total Cost
Project Manager	Specialist	Senior Staff	Mid-Level	Junior	Tech Support	Checklist	Total Hours	Tech. Fee	Printing	Travel	Meals	Total Expenses [1]	ELA	Sub-Consultant Resources	R. Donovan	Total Sub-Consultant [2]											
TASK SERIES 100 - PROJECT MANAGEMENT																											
Task 110	Project Management																										
Task 120	Coordination Meetings																										
Subtask 120.1	Kick-off Meeting																										
Subtask 120.2	Building Construction Meetings (12)																										
Subtask 120.3	Building Construction Meetings (12)																										
Task 130	Quarterly Updates (4)																										
Subtask 130.1	Quarterly Updates (4)																										
Estimated Task Hours Subtotal																											
Estimated Task Cost Subtotal																											
TASK SERIES 200 - COMMUNITY-BASED WATER-SHED PLAN																											
Task 210	Data Collection and Analysis																										
Task 220	Planning Grants																										
Task 230	Field Investigation																										
Task 240	Field Investigation																										
Task 250	Waterhead Construction																										
Subtask 250.1	Community Meetings																										
Subtask 250.2	Community Meetings																										
Subtask 250.3	Community Meetings																										
Task 260	Technical Advisory Team and Meetings (4)																										
Task 270	Public Workshops																										
Subtask 270.1	Public Workshops																										
Subtask 270.2	Public Workshops																										
Subtask 270.3	Public Workshops																										
Task 280	Waterhead Construction																										
Subtask 280.1	Waterhead Construction																										
Subtask 280.2	Waterhead Construction																										
Subtask 280.3	Waterhead Construction																										
Task 290	Waterhead Construction																										
Subtask 290.1	Waterhead Construction																										
Subtask 290.2	Waterhead Construction																										
Subtask 290.3	Waterhead Construction																										
Task 300	Waterhead Construction																										
Subtask 300.1	Waterhead Construction																										
Subtask 300.2	Waterhead Construction																										
Subtask 300.3	Waterhead Construction																										
Task 310	Waterhead Construction																										
Subtask 310.1	Waterhead Construction																										
Subtask 310.2	Waterhead Construction																										
Subtask 310.3	Waterhead Construction																										
Task 320	Waterhead Construction																										
Subtask 320.1	Waterhead Construction																										
Subtask 320.2	Waterhead Construction																										
Subtask 320.3	Waterhead Construction																										
Task 330	Waterhead Construction																										
Subtask 330.1	Waterhead Construction																										
Subtask 330.2	Waterhead Construction																										
Subtask 330.3	Waterhead Construction																										
Task 340	Waterhead Construction																										
Subtask 340.1	Waterhead Construction																										
Subtask 340.2	Waterhead Construction																										
Subtask 340.3	Waterhead Construction																										
Task 350	Waterhead Construction																										
Subtask 350.1	Waterhead Construction																										
Subtask 350.2	Waterhead Construction																										
Subtask 350.3	Waterhead Construction																										
Task 360	Waterhead Construction																										
Subtask 360.1	Waterhead Construction																										
Subtask 360.2	Waterhead Construction																										
Subtask 360.3	Waterhead Construction																										
Task 370	Waterhead Construction																										
Subtask 370.1	Waterhead Construction																										
Subtask 370.2	Waterhead Construction																										
Subtask 370.3	Waterhead Construction																										
Task 380	Waterhead Construction																										
Subtask 380.1	Waterhead Construction																										
Subtask 380.2	Waterhead Construction																										
Subtask 380.3	Waterhead Construction																										
Task 390	Waterhead Construction																										
Subtask 390.1	Waterhead Construction																										
Subtask 390.2	Waterhead Construction																										
Subtask 390.3	Waterhead Construction																										
Task 400	Waterhead Construction																										
Subtask 400.1	Waterhead Construction																										
Subtask 400.2	Waterhead Construction																										
Subtask 400.3	Waterhead Construction																										
Task 410	Waterhead Construction																										
Subtask 410.1	Waterhead Construction																										
Subtask 410.2	Waterhead Construction																										
Subtask 410.3	Waterhead Construction																										
Task 420	Waterhead Construction																										
Subtask 420.1	Waterhead Construction																										
Subtask 420.2	Waterhead Construction																										
Subtask 420.3	Waterhead Construction																										
Task 430	Waterhead Construction																										
Subtask 430.1	Waterhead Construction																										
Subtask 430.2	Waterhead Construction																										
Subtask 430.3	Waterhead Construction																										
Task 440	Waterhead Construction																										
Subtask 440.1	Waterhead Construction																										
Subtask 440.2	Waterhead Construction																										
Subtask 440.3	Waterhead Construction																										
Task 450	Waterhead Construction																										
Subtask 450.1	Waterhead Construction																										
Subtask 450.2	Waterhead Construction																										
Subtask 450.3	Waterhead Construction																										
Task 460	Waterhead Construction																										
Subtask 460.1	Waterhead Construction																										
Subtask 460.2	Waterhead Construction																										
Subtask 460.3	Waterhead Construction																										
Task 470	Waterhead Construction																										
Subtask 470.1	Waterhead Construction																										
Subtask 470.2	Waterhead Construction																										
Subtask 470.3	Waterhead Construction																										
Task 480	Waterhead Construction																										
Subtask 480.1	Waterhead Construction																										
Subtask 480.2	Waterhead Construction																										
Subtask 480.3	Waterhead Construction																										
Task 490	Waterhead Construction																										
Subtask 490.1	Waterhead Construction																										
Subtask 490.2	Waterhead Construction																										
Subtask 490.3	Waterhead Construction																										
Estimated Task Hours Subtotal																											
Estimated Task Cost Subtotal																											
TASK SERIES 500 - TRANSPORTATION MEMORANDUM																											
Task 510	Data Collection and Analysis																										
Task 520	Planning Grants																										
Task 530	Field Investigation																										
Task 540	Field Investigation																										
Task 550	Waterhead Construction																										
Subtask 550.1	Community Meetings																										
Subtask 550.2	Community Meetings																										
Subtask 550.3	Community Meetings																										
Task 560	Technical Advisory Team and Meetings (4)																										
Task 570	Public Workshops																										
Subtask 570.1	Public Workshops																										
Subtask 570.2	Public Workshops																										

EXHIBIT "C" APPENDIX 1
PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT
PRELIMINARY DESIGN OF DAM SITE 15A
FEE ESTIMATE

HDR Engineering, Inc. Estimated Hour/Costs													Expenses				HDR Totals		Sub-Consultant Estimated Costs			EL Type	Cost
TASKS													Total Labor Cost	Tech Fee	Travel	Misc	Total Expense [1]	E&A	Thick Client Resources	R. Danvers	Total Sub-Contract [1]		
Project Manager	Specialist	Senior Staff	Mid-Level	Junior	Tech Support	Clientical	Total/Hours																
TASKS SUBS 000 - USACE SECTION 404 PERMIT																							
Task 810 Data Collection and Evaluation																							
Subtask 810.1 USACE/Agency Coordination																							
Subtask 810.2 Agency Permitting Meeting																							
Subtask 810.3 USACE Permit Coordination																							
Subtask 810.4 Agency Coordination																							
Subtask 810.5 Section 404 Individual Permit																							
Section 404 Permit Application																							
Subtask 810.6 Permit Final and Package																							
Subtask 810.7 Permit Final and Package																							
Subtask 810.8 Permit Final and Package																							
Subtask 810.9 Permit Final and Package																							
Subtask 810.10 Permit Final and Package																							
Subtask 810.11 Permit Final and Package																							
Subtask 810.12 Permit Final and Package																							
Subtask 810.13 Permit Final and Package																							
Subtask 810.14 Permit Final and Package																							
Subtask 810.15 Permit Final and Package																							
Subtask 810.16 Permit Final and Package																							
Subtask 810.17 Permit Final and Package																							
Subtask 810.18 Permit Final and Package																							
Subtask 810.19 Permit Final and Package																							
Subtask 810.20 Permit Final and Package																							
Subtask 810.21 Permit Final and Package																							
Subtask 810.22 Permit Final and Package																							
Subtask 810.23 Permit Final and Package																							
Subtask 810.24 Permit Final and Package																							
Subtask 810.25 Permit Final and Package																							
Subtask 810.26 Permit Final and Package																							
Subtask 810.27 Permit Final and Package																							
Subtask 810.28 Permit Final and Package																							
Subtask 810.29 Permit Final and Package																							
Subtask 810.30 Permit Final and Package																							
Subtask 810.31 Permit Final and Package																							
Subtask 810.32 Permit Final and Package																							
Subtask 810.33 Permit Final and Package																							
Subtask 810.34 Permit Final and Package																							
Subtask 810.35 Permit Final and Package																							
Subtask 810.36 Permit Final and Package																							
Subtask 810.37 Permit Final and Package																							
Subtask 810.38 Permit Final and Package																							
Subtask 810.39 Permit Final and Package																							
Subtask 810.40 Permit Final and Package																							
Subtask 810.41 Permit Final and Package																							
Subtask 810.42 Permit Final and Package																							
Subtask 810.43 Permit Final and Package																							
Subtask 810.44 Permit Final and Package																							
Subtask 810.45 Permit Final and Package																							
Subtask 810.46 Permit Final and Package																							
Subtask 810.47 Permit Final and Package																							
Subtask 810.48 Permit Final and Package																							
Subtask 810.49 Permit Final and Package																							
Subtask 810.50 Permit Final and Package																							
Subtask 810.51 Permit Final and Package																							
Subtask 810.52 Permit Final and Package																							
Subtask 810.53 Permit Final and Package																							
Subtask 810.54 Permit Final and Package																							
Subtask 810.55 Permit Final and Package																							
Subtask 810.56 Permit Final and Package																							
Subtask 810.57 Permit Final and Package																							
Subtask 810.58 Permit Final and Package																							
Subtask 810.59 Permit Final and Package																							
Subtask 810.60 Permit Final and Package																							
Subtask 810.61 Permit Final and Package																							
Subtask 810.62 Permit Final and Package																							
Subtask 810.63 Permit Final and Package																							
Subtask 810.64 Permit Final and Package																							
Subtask 810.65 Permit Final and Package																							
Subtask 810.66 Permit Final and Package																							
Subtask 810.67 Permit Final and Package																							
Subtask 810.68 Permit Final and Package																							
Subtask 810.69 Permit Final and Package																							
Subtask 810.70 Permit Final and Package																							
Subtask 810.71 Permit Final and Package																							
Subtask 810.72 Permit Final and Package																							
Subtask 810.73 Permit Final and Package																							
Subtask 810.74 Permit Final and Package																							
Subtask 810.75 Permit Final and Package																							
Subtask 810.76 Permit Final and Package																							
Subtask 810.77 Permit Final and Package																							
Subtask 810.78 Permit Final and Package																							
Subtask 810.79 Permit Final and Package																							
Subtask 810.80 Permit Final and Package																							
Subtask 810.81 Permit Final and Package																							
Subtask 810.82 Permit Final and Package																							
Subtask 810.83 Permit Final and Package																							
Subtask 810.84 Permit Final and Package																							
Subtask 810.85 Permit Final and Package																							
Subtask 810.86 Permit Final and Package																							
Subtask 810.87 Permit Final and Package																							
Subtask 810.88 Permit Final and Package																							
Subtask 810.89 Permit Final and Package																							
Subtask 810.90 Permit Final and Package																							
Subtask 810.91 Permit Final and Package																							
Subtask 810.92 Permit Final and Package																							
Subtask 810.93 Permit Final and Package																							
Subtask 810.94 Permit Final and Package																							
Subtask 810.95 Permit Final and Package																							
Subtask 810.96 Permit Final and Package																							
Subtask 810.97 Permit Final and Package																							
Subtask 810.98 Permit Final and Package																							
Subtask 810.99 Permit Final and Package																							
Subtask 810.100 Permit Final and Package																							
Subtask 810.101 Permit Final and Package																							
Subtask 810.102 Permit Final and Package																							
Subtask 810.103 Permit Final and Package																							
Subtask 810.104 Permit Final and Package																							
Subtask 810.105 Permit Final and Package																							
Subtask 810.106 Permit Final and Package																							
Subtask 810.107 Permit Final and Package																							
Subtask 810.108 Permit Final and Package																							
Subtask 810.109 Permit Final and Package																							
Subtask 810.110 Permit Final and Package																							
Subtask 810.111 Permit Final and Package																							
Subtask 810.112 Permit Final and Package																							
Subtask 810.113 Permit Final and Package																							
Subtask 810.114 Permit Final and Package																							
Subtask 810.115 Permit Final and Package																							
Subtask 810.116 Permit Final and Package																							
Subtask 810.117 Permit Final and Package																							
Subtask 810.118 Permit Final and Package																							
Subtask 810.119 Permit Final and Package																							
Subtask 810.120 Permit Final and Package																							
Subtask 810.121 Permit Final and Package																							
Subtask 810.122 Permit Final and Package																							
Subtask 810.123 Permit Final and Package																							
Subtask 810.124 Permit Final and Package																							
Subtask 810.125 Permit Final and Package																							
Subtask 810.126 Permit Final and Package																							
Subtask 810.127 Permit Final and Package																							
Subtask 810.128 Permit Final and Package																							
Subtask 810.129 Permit Final and Package																							
Subtask 810.130 Permit Final and Package																							
Subtask 810.131 Permit Final and Package																							
Subtask 810.132 Permit Final and Package																							
Subtask 810.133 Permit Final and Package																							
Subtask 810.134 Permit Final and Package																							
Subtask 810.135 Permit Final and Package																							
Subtask 810.136 Permit Final and Package																							
Subtask 810.137 Permit Final and Package																							
Subtask 810.138 Permit Final and Package																							
Subtask 810.139 Permit Final and Package																							
Subtask 810.140 Permit Final and Package																							
Subtask 810.141 Permit Final and Package																							
Subtask 810.142 Permit Final and Package																							
Subtask 810.143 Permit Final and Package																							
Subtask 810.144 Permit Final and Package																							
Subtask 810.145 Permit Final and Package																							
Subtask 810.146 Permit Final and Package																							
Subtask 810.147 Permit Final and Package																							
Subtask 810.148 Permit Final and Package																							
Subtask 810.149 Permit Final and Package																							
Subtask 810.150 Permit Final and Package																							
Subtask 810.151 Permit Final and Package																							
Subtask 810.152 Permit Final and Package																							
Subtask 810.153 Permit Final and Package																							
Subtask 810.154 Permit Final and Package																							
Subtask 810.155 Permit Final and Package																							
Subtask 810.156 Permit Final and Package																							
Subtask 810.157 Permit Final and Package																							
Subtask 810.158 Permit Final and Package																							
Subtask 810.159 Permit Final and Package																							
Subtask 810.160 Permit Final and Package																							
Subtask 810.161 Permit Final and Package																							
Subtask 810.162 Permit Final and Package																							
Subtask 810.163 Permit Final and Package																							
Subtask 810.164 Permit Final and Package																							
Subtask 810.165 Permit Final and Package																							
Subtask 810.166 Permit Final and Package																							
Subtask 810.167 Permit Final and Package																							
Subtask 810.168 Permit Final and Package																							
Subtask 810.169 Permit Final and Package																							
Subtask 810.170 Permit Final and Package																							
Subtask 810.171 Permit Final and Package																							
Subtask 810.172 Permit Final and Package																							
Subtask 810.173 Permit Final and Package																							
Subtask 810.174 Permit Final and Package																							
Subtask 810.175 Permit Final and Package																							
Subtask 810.176 Permit Final and Package																							
Subtask 810.177 Permit Final and Package																							
Subtask 810.178 Permit Final and Package																							
Subtask 810.179 Permit Final and Package																							
Subtask 810.180 Permit Final and Package																							
Subtask 810.181 Permit Final and Package																							
Subtask 810.182 Permit Final and Package																							
Subtask 810.183 Permit Final and Package																							
Subtask 810.184 Permit Final and Package																							
Subtask 810.185 Permit Final and Package																							
Subtask 810.186 Permit Final and Package																							
Subtask 810.187 Permit Final and Package																							
Subtask 810.188 Permit Final and Package																							
Subtask 810.189 Permit Final and Package																							
Subtask 810.190 Permit Final and Package																							
Subtask 810.191 Permit Final and Package																							
Subtask 810.192 Permit Final and Package																							
Subtask 810.193 Permit Final and Package																							
Subtask 810.194 Permit Final and Package																							
Subtask 810.195 Permit Final and Package																							
Subtask 810.196 Permit Final and Package																							
Subtask 810.197 Permit Final and Package																							
Subtask 810.198 Permit Final and Package																							
Subtask 810.199 Permit Final and Package																							
Subtask 810.200 Permit Final and Package																							
Subtask 810.201 Permit Final and Package																							
Subtask 810.202 Permit Final and Package																							
Subtask 810.203 Permit Final and Package																							
Subtask 810.204 Permit Final and Package																							
Subtask 810.205 Permit Final and Package																							
Subtask 810.206 Permit Final and Package																							
Subtask 810.207 Permit Final and Package																							
Subtask 810.208 Permit Final and Package																							
Subtask 810.209 Permit Final and Package																							
Subtask 810.210 Permit Final and Package																							
Subtask 810.211 Permit Final and Package																							
Subtask 810.212 Permit Final and Package																							
Subtask 810.213 Permit Final and Package																							
Subtask 810.214 Permit Final and Package																							
Subtask 810.215 Permit Final and Package																							
Subtask 810.216 Permit Final and Package																							
Subtask 810.217 Permit Final and Package																							
Subtask 810.218 Permit Final and Package																							
Subtask 810.219 Permit Final and Package																							
Subtask 810.220 Permit Final and Package																							
Subtask 810.221 Permit Final and Package																							
Subtask 810.222 Permit Final and Package																							
Subtask 810.223 Permit Final and Package																							
Subtask 810.224 Permit Final and Package																							
Subtask 810.225 Permit Final and Package																							
Subtask 810.226 Permit Final and Package																							
Subtask 810.227 Permit Final and Package																							
Subtask 810.228 Permit Final and Package																							
Subtask 810.229 Permit Final and Package																							
Subtask 810.230 Permit Final and Package																							
Subtask 810.231 Permit Final and Package																							
Subtask 810.232 Permit Final and Package																							
Subtask 810.233 Permit Final and Package																							
Subtask 810.234 Permit Final and Package																							
Subtask 810.235 Permit Final and Package																							
Subtask 810.236 Permit Final and Package																							
Subtask 810.237 Permit Final and Package																							
Subtask 810.238 Permit Final and Package																							
Subtask 810.239 Permit Final and Package																							
Subtask 810.240 Permit Final and Package																							
Subtask 810.241 Permit Final and Package																							
Subtask 810.242 Permit Final and Package																							
Subtask 810.243 Permit Final and Package																							
Subtask 810.244 Permit Final and Package																							
Subtask 810.245 Permit Final and Package																							
Subtask 810.246 Permit Final and Package																							
Subtask 810.247 Permit Final and Package																							
Subtask 810.248 Permit Final and Package																							
Subtask 810.249 Permit Final and Package																							
Subtask 810.250 Permit Final and Package																							
Subtask 810.251 Permit Final and Package																							
Subtask 810.252 Permit Final and Package																							
Subtask 810.253 Permit Final and Package																							
Subtask 810.254 Permit Final and Package																							
Subtask 810.255 Permit Final and Package																							
Subtask 810.256 Permit Final and Package																							
Subtask 810.257 Permit Final and Package																							
Subtask 810.258 Permit Final and Package																							
Subtask 810.259 Permit Final and Package																							
Subtask 810.260 Permit Final and Package																							
Subtask 810.261 Permit Final and Package																							
Subtask 810.262 Permit Final and Package																							
Subtask 810.263 Permit Final and Package																							
Subtask 810.264 Permit Final and Package																							
Subtask 810.265 Permit Final and Package																							
Subtask 810.266 Permit Final and Package																							
Subtask 810.267 Permit Final and Package																							
Subtask 810.268 Permit Final and Package																							
Subtask 810.269 Permit Final and Package																							
Subtask 810.270 Permit Final and Package																							
Subtask 810.271 Permit Final and Package																							
Subtask 810.272 Permit Final and Package																							
Subtask 810.273 Permit Final and Package																							
Subtask 810.274 Permit Final and Package																							
Subtask 810.275 Permit Final and Package																							
Subtask 810.276 Permit Final and Package																							
Subtask 810.277 Permit Final and Package																							
Subtask 810.278 Permit Final and Package																							
Subtask 810.279 Permit Final and Package																							
Subtask 810.280 Permit Final and Package																							
Subtask 810.281 Permit Final and Package																							
Subtask 810.282 Permit Final and Package																							
Subtask 810.283 Permit Final and Package																							
Subtask 810.284 Permit Final and Package																							
Subtask 810.285 Permit Final and Package																							
Subtask 810.286 Permit Final and Package																							
Subtask 810.287 Permit Final and Package																							
Subtask 810.288 Permit Final and Package																							
Subtask 810.289 Permit Final and Package																							
Subtask 810.290 Permit Final and Package																							
Subtask 810.291 Permit Final and Package																							
Subtask 810.292 Permit Final and Package																							
Subtask 810.293 Permit Final and Package																							
Subtask 810.294 Permit Final and Package																							
Subtask 810.295 Permit Final and Package																							
Subtask 810.296 Permit Final and Package																							
Subtask 810.297 Permit Final and Package																							
Subtask 810.298 Permit Final and Package																							
Subtask 810.299 Permit Final and Package																							
Subtask 810.300 Permit Final and Package																							
Subtask 810.301 Permit Final and Package																							
Subtask 810.302 Permit Final and Package																							
Subtask 810.303 Permit Final and Package																							
Subtask 810.304 Permit Final and Package																							
Subtask 810.305 Permit Final and Package																							
Subtask 810.306 Permit Final and Package																							
Subtask 810.307 Permit Final and Package																							
Subtask 810.308 Permit Final and Package																							
Subtask 810.309 Permit Final and Package																							
Subtask 810.310 Permit Final and Package																							
Subtask 810.311 Permit Final and Package																							
Subtask 810.312 Permit Final and Package																							
Subtask 810.313 Permit Final and Package																							
Subtask 810.314 Permit Final and Package																							
Subtask 810.315 Permit Final and Package																							
Subtask 810.316 Permit Final and Package																							
Subtask 810.317 Permit Final and Package																							
Subtask 810.318 Permit Final and Package																							
Subtask 810.319 Permit Final and Package																							
Subtask 810.320 Permit Final and Package																							
Subtask 810.321 Permit Final and Package																							
Subtask 810.322 Permit Final and Package																							
Subtask 810.323 Permit Final and Package																							
Subtask 810.324 Permit Final and Package																							
Subtask 810.325 Permit Final and Package																							
Subtask 810.326 Permit Final and Package																							
Subtask 810.327 Permit Final and Package																							
Subtask 810.328 Permit Final and Package																							
Subtask 810.329 Permit Final and Package																							
Subtask 810.330 Permit Final and Package																							
Subtask 810.331 Permit Final and Package																							
Subtask 810.332 Permit Final and Package																							
Subtask 810.333 Permit Final and Package																							
Subtask 810.334 Permit Final and Package																							
Subtask 810.335 Permit Final and Package																							
Subtask 810.336 Permit Final and Package																							
Subtask 810.337 Permit Final and Package																							
Subtask 810.338 Permit Final and Package																							
Subtask 810.339 Permit Final and Package																							
Subtask 810.340 Permit Final and Package																							
Subtask 810.341 Permit Final and Package																							
Subtask 810.342 Permit Final and Package																							
Subtask 810.343 Permit Final and Package																							
Subtask 810.344 Permit Final and Package																							
Subtask 810.345 Permit Final and Package																							
Subtask 810.346 Permit Final and Package																							
Subtask 810.347 Permit Final and Package																							
Subtask 810.348 Permit Final and Package																							
Subtask 810.349 Permit Final and Package																							
Subtask 810.350 Permit Final and Package																							
Subtask 810.351 Permit Final and Package																							
Subtask 810.352 Permit Final and Package																							
Subtask 810.353 Permit Final and Package																							
Subtask 810.354 Permit Final and Package																							
Subtask 810.355 Permit Final and Package																							
Subtask 810.356 Permit Final and Package																							
Subtask 810.357 Permit Final and Package																							
Subtask 810.358 Permit Final and Package																							
Subtask 810.359 Permit Final and Package																							
Subtask 810.360 Permit Final and Package																							
Subtask 810.361 Permit Final and Package																							
Subtask 810.362 Permit Final and Package																							
Subtask 810.363 Permit Final and Package																							
Subtask 810.364 Permit Final and Package																							
Subtask 810.365 Permit Final and Package																							
Subtask 810.366 Permit Final and Package																							
Subtask 810.367 Permit Final and Package																							
Subtask 810.368 Permit Final and Package																							
Subtask 810.369 Permit Final and Package																							
Subtask 810.370 Permit Final and Package																							
Subtask 810.371 Permit Final and Package																							
Subtask 810.372 Permit Final and Package																							
Subtask 810.373 Permit Final and Package																							
Subtask 810.374 Permit Final and Package																							
Subtask 810.375 Permit Final and Package																							
Subtask 810.376 Permit Final and Package																							
Subtask 810.377 Permit Final and Package																							
Subtask 810.378 Permit Final and Package																							
Subtask 810.379 Permit Final and Package																							
Subtask 810.380 Permit Final and Package																							
Subtask 810.381 Permit Final and Package																							
Subtask 810.382 Permit Final and Package																							
Subtask 810.383 Permit Final and Package																							
Subtask 810.384 Permit Final and Package																							
Subtask 810.385 Permit Final and Package																							
Subtask 810.386 Permit Final and Package																							
Subtask 810.387 Permit Final and Package																							
Subtask 810.388 Permit Final and Package																							
Subtask 810.389 Permit Final and Package																							
Subtask 810.390 Permit Final and Package																							
Subtask 810.391 Permit Final and Package																							
Subtask 810.392 Permit Final and Package																							
Subtask 810.393 Permit Final and Package																							
Subtask 810.394 Permit Final and Package																							
Subtask 810.395 Permit Final and Package																							
Subtask 810.396 Permit Final and Package																							
Subtask 810.397 Permit Final and Package																							
Subtask 810.398 Permit Final and Package																							
Subtask 810.399 Permit Final and Package																							
Subtask 810.400 Permit Final and Package																							
Subtask 810.401 Permit Final and Package																							
Subtask 810.402 Permit Final and Package																							
Subtask 810.403 Permit Final and Package																							
Subtask 810.404 Permit Final and Package																							
Subtask 810.405 Permit Final and Package																							
Subtask 810.406 Permit Final and Package																							
Subtask 810.407 Permit Final and Package																							
Subtask 810.408 Permit Final and Package																							
Subtask 810.409 Permit Final and Package																							
Subtask 810.410 Permit Final and Package																							
Subtask 810.411 Permit Final and Package																							
Subtask 810.412 Permit Final and Package																							
Subtask 810.413 Permit Final and Package																							
Subtask 810.414 Permit Final and Package																							
Subtask 810.415 Permit Final and Package																							
Subtask 810.416 Permit Final and Package																							
Subtask 810.417 Permit Final and Package																							
Subtask 810.418 Permit Final and Package																							
Subtask 810.419 Permit Final and Package																							
Subtask 810.420 Permit Final and Package																							
Subtask 810.421 Permit Final and Package																							
Subtask 810.422 Permit Final and Package																							
Subtask 810.423 Permit Final and Package																							
Subtask 810.424 Permit Final and Package																							
Subtask 810.425 Permit Final and Package																							
Subtask 810.426 Permit Final and Package																							
Subtask 810.427 Permit Final and Package																							
Subtask 810.428 Permit Final and Package																							
Subtask 810.429 Permit Final and Package																							
Subtask 810.430 Permit Final and Package																							
Subtask 810.431 Permit Final and Package																							
Subtask 810.432 Permit Final and Package																							
Subtask 810.433 Permit Final and Package																							
Subtask 810.434 Permit Final and Package																							
Subtask 810.435 Permit Final and Package																							
Subtask 810.436 Permit Final and Package																							
Subtask 810.437 Permit Final and Package																							
Subtask 810.438 Permit Final and Package																							
Subtask 810.439 Permit Final and Package																							
Subtask 810.440 Permit Final and Package																							
Subtask 810.441 Permit Final and Package																							
Subtask 810.442 Permit Final and Package																							
Subtask 810.443 Permit Final and Package																							
Subtask 810.444 Permit Final and Package																							
Subtask 810.445 Permit Final and Package																							
Subtask 810.446 Permit Final and Package																							
Subtask 810.447 Permit Final and Package																							
Subtask 810.448 Permit Final and Package																							
Subtask 810.449 Permit Final and Package																							
Subtask																							

This is Appendix 2 to EXHIBIT C, consisting of ____ pages,
referred to in and part of the Agreement between Owner and
Engineer for Professional Services dated ____, ____.

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/black and white	\$0.10/page
8"x11" Copies/Color	\$1.50/page
11"x17" Copies/ Black and White	\$0.10/page
11"x17" Copies/Color	\$1.50/page
Plan sheets, Black and White	\$0.135/sq ft.
Plan sheets, Color	\$100/sheet.
Presentation Boards (plot and mount)	\$150.00 each
Mileage	\$0.55/mile
Technology Fee	\$3.70/direct labor hour
Film and film processing	cost
Report Binders with Custom Index Tabs	\$15.00/each
Rental of Terrasync Data Collector	\$80.00/day

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

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

RESERVED

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

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

RESERVED

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

This is **EXHIBIT F**, consisting of _____ pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____, _____.

RESERVED

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

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

Insurance

Paragraph 6.05 of the Agreement is amended and supplemented to include the following agreement of the parties.

G6.05 Insurance

A. The limits of liability for the insurance required by paragraph 6.05.A and 6.05.B of the Agreement are as follows:

The ENGINEER shall purchase, and maintain until the expiration of two years after completion of the Project policies of insurance with the following minimum requirements:

- a) Workmen's Compensation and Employers Liability
 - i) Workers' Compensation: statutory minimum
 - ii) Longshore and Harbor Workers' Compensation Act endorsement and Admiralty Law endorsements (required if the work involves maritime operations).
 - iii) Employer's Liability: \$250,000.00 per accident.
- b) Professional malpractice
 - i) \$1,000,000.00 each claim
 - ii) \$2,000,000.00 aggregate
- c) Commercial General Liability – ISO Occurrence Form
 - i) \$1,000,000.00 each occurrence
 - ii) \$2,000,000.00 general aggregate
 - iii) \$2,000,000.00 products – completed operations aggregate
 - iv) \$1,000,000.00 personal & advertising injury
 - v) \$300,000.00 fire damage
 - vi) \$5,000.00 medical expense
- d) Business Auto Liability - Owned, Non-Owned & Hired vehicles \$1,000,000.00 combined single limit
- e) General Provisions:
 - i) All policies shall provide 30 days written notice to the OWNER prior to termination or material change by endorsement in the coverage provided.
 - ii) The OWNER reserves the right to approve the ENGINEER'S insurers.
 - iii) Workers Compensation and Commercial General Liability policies shall be endorsed to provide Waiver of Subrogation in favor of the OWNER.
 - iv) The Commercial General Liability policy shall be endorsed to include the OWNER as Additional Insured (form CG 20 10) and shall be endorsed to have any annual aggregate apply on a per-project basis.

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

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

Dispute Resolution

Paragraph 6.09 of the Agreement is amended and supplemented to include the following agreement of the parties:

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.

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

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

Allocation of Risks

Paragraph 6.11 of the Agreement is amended and supplemented to include the following agreement of the parties:

16.11.B Limitation of Engineer's Liability

1. *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 6.11.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.

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

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

Special Provisions

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

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