

Memorandum

To: Washington County Floodplain Mapping Ad-Hoc Consultant Selection Subcommittee

Re: Contract for Engineering Services with Kirkham Michael/AMEC

Date: September 30, 2008

From: Amanda Grint, Water Resources Engineer

On August 28, 2008, the Subcommittee interviewed and selected Kirkham Michael/AMEC with which to negotiate a professional services contract to update flood hazard data and prepare Digital Flood Insurance Rate Maps (DFIRM) for Washington County. Since that time, District staff and representatives from Kirkham Michael have worked together to prepare the enclosed agreement, detailed scope, and time and cost estimate for this project.

In summary, Kirkham Michael will be responsible for providing project management, incorporating recent flood studies prepared by the Corps of Engineers and Department of Natural Resources, and preparing preliminary DFIRM maps conforming with FEMA standards. According to the schedule, preliminary DFIRM maps will be ready by the end of May 2009. The total fee for this work was negotiated at \$204,483.00 and is broken down between different tasks in the attached agreement and scope.

In conclusion, services provided by Kirkham Michael for this floodplain mapping project are estimated to cost \$204,483.00 and be completed by May 2009. A FEMA grant in the amount of \$169,100 has been secured for this project, and the District will be responsible for the remaining \$35,383.00.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute a professional services contract with Kirkham Michael to prepare floodplain maps for Washington County for a not to exceed fee of \$204,483.00, subject to changes deemed necessary by the General Manager and approval as to form by District legal counsel.

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

Issued and Published Jointly by



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

AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

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

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STANDARD FORM OF AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of _____, _____ (“Effective Date”) between

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

Kirkham Michael & Associates, Inc. ("Engineer").

Owner intends to Update Flood Hazard Data and Digital Flood Insurance Rate Maps for Washington County, Nebraska

(“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.

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

to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 - OPINIONS OF COST

5.01 ~~Opinions of Probable Construction Cost~~

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

5.02 ~~Designing to Construction Cost Limit~~

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

5.03 ~~Opinions of Total Project Costs~~

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

ARTICLE 6 - GENERAL CONSIDERATIONS

6.01 Standards of Performance

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services.

B. Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct any such deficiencies in

technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in Owner-furnished information.

C. Engineer may employ such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.

D. Subject to the standard of care set forth in paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

E. Engineer and Owner shall comply with applicable Laws and Regulations and Owner-mandated standards that Owner has provided to Engineer in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, and compensation.

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.

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, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

3. Owner agrees that the substance of the provisions of this paragraph 6.07.C shall appear in the Contract Documents.

6.08 Dispute Resolution

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

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

6.09 Environmental Condition of Site

A. Owner has disclosed to Engineer in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location.

B. Owner represents to Engineer that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at the Site.

C. If Engineer encounters an undisclosed Constituent of Concern, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.

D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to Constituents of Concern. If Engineer or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations.

E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance

of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days notice.

F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.10 Indemnification and Mutual Waiver

A. *Indemnification by Engineer.* To the fullest extent permitted by law, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, partners, agents, consultants, and employees from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), ~~including the loss of use resulting therefrom~~, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, partners, employees, or Consultants. The indemnification provision of the preceding sentence is subject to and limited by the provisions agreed to by Owner and Engineer in Exhibit I, "Allocation of Risks," if any.

B. *Indemnification by Owner.* To the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer, Engineer's officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself), ~~including the loss of use resulting therefrom~~, but only to the extent caused by any negligent act or omission of Owner or Owner's officers, directors, partners, agents, consultants, or employees, or others retained by or under contract to the Owner with respect to this Agreement or to the Project.

C. *Environmental Indemnification.* In addition to the indemnity provided under paragraph 6.10.B of this Agreement, and to the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer and its officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

D. *Percentage Share of Negligence.* To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

E. *Mutual Waiver.* To the fullest extent permitted by law, Owner and Engineer waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

6.11 Miscellaneous Provisions

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

B. *Survival.* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

C. *Severability.* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, who agree that the Agreement

shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

D. *Waiver.* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

E. *Accrual of Claims.* To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 - DEFINITIONS

7.01 Defined Terms

A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above or in the exhibits; in the following provisions; or in the "Standard General Conditions of the Construction Contract," prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition):

1. *Additional Services*--The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 2, of this Agreement.

2. *Basic Services*--The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 1, of this Agreement.

3. *Construction Cost*--The cost to Owner of those portions of the entire Project designed or specified by Engineer. Construction Cost does not include costs of services of Engineer or other design professionals and consultants, cost of land, 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 32 pages.

B. Exhibit B, "Owner's Responsibilities," consisting of 1 page.

C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of 3 pages plus Appendix A (1 page) and Appendix B (1 page).

~~D. Exhibit D, "Duties, Responsibilities and Limitations of Authority of Resident Project Representative," consisting of _____ pages. NA~~

~~E. Exhibit E, "Notice of Acceptability of Work," consisting of _____ pages. NA~~

~~F. Exhibit F, "Construction Cost Limit," consisting of _____ pages. NA~~

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

~~H. Exhibit H, "Dispute Resolution," consisting of _____ pages. NA~~

~~I. Exhibit I, "Allocation of Risks," consisting of _____ pages. NA~~

~~J. Exhibit J, "Special Provisions," consisting of _____ pages. NA~~

~~K. Exhibit K, "Amendment to Standard Form of Agreement," consisting of _____ pages. NA~~

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:

Marlin Petermann, P.E.

Title: Assistant General Manager

Date Signed: _____

Address for giving notices:

8901 South 154th Street

Omaha, NE 68138-3621

Designated Representative (see paragraph 8.03.A):

Amanda Grint, P.E.

Title: Stormwater Management Engineer

Phone Number: 402-444-6222

Facsimile Number: 402-895-6543

E-Mail Address: agrint@pacionrd.org

Engineer:

Kirkham Michael & Associates, Inc.

By:

Roger M. Helgott, P.E.

Title: President

Date Signed: Oct. 2, 2002

Engineer License or Certificate No. E-3933

State of: Nebraska

Address for giving notices:

12700 West Dodge Road

P.O. Box 542030

Omaha, NE 68154-8030

Designated Representative (see paragraph 8.03.A):

Michael R. Preston

Title: Project Manager

Phone Number: 402-255-3834

Facsimile Number: 402-255-3850

E-Mail Address: mpreston@kirkham.com

**Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska**

EXHIBIT A

Engineer's Services
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Exhibit A – Counties that will include UMRSFSS-based data

Exhibit B – Summary of Deliverables provided to Mapping Partners

Attachment 1 – Papio-Missouri River Natural Resources District
Update Flood Hazard Data and Digital Flood Insurance Rate Maps
For Washington County, Nebraska
Issued October 2, 2008, Rev. 0

Papio-Missouri River Natural Resources District
Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska

EXHIBIT A

Engineer's Services

The Flood Map Project described in this Statement of Work (SOW) shall be completed in accordance with the general contract terms between Kirkham Michael, hereinafter referred to as the Study Contractor (SC) and the Papio-Missouri River Natural Resources District, hereinafter referred to as Papio-Missouri River (NRD), as well as the specifications and guidelines of this Mapping Activity Statement (MAS) No. 4.

SECTION 1—OBJECTIVE AND SCOPE

The objective of the Flood Map Project documented in this MAS is to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) Report for Washington County. All processes and deliverables shall be completed in accordance to the Federal Emergency Management Agency's (FEMA's) *Guidelines and Specifications for Flood Hazard Mapping Partners* (G&S) and effective Procedure Memoranda (PMs). The DFIRM and FIS Report will be produced in the FEMA County-wide format. In addition, the Mapping Partners involved in this project will develop new and/or updated flood hazard data, as summarized in Table 1.1, Flooding Source(s) to be Studied.

The DFIRM and FIS report will be produced in the FEMA County-wide format in the North American Vertical Datum of 1988 (NAVD88). (Refer to PM 41 for exceptions).

Table 1.1 - Flooding Source(s) to be Studied

Flooding Source	Reach Limits	Reach Length (Miles)	Detailed Riverine		Redelineation of SFHAs Using Effective Profiles and New Topography	Refine/ Establish Zone A
			Hydrology	Hydraulics		
Missouri River	From Burt/Washington county line to Washington/Douglas county line	42.2 miles	X	X		

This Flood Map Project will be completed by the following Mapping Partner(s):

- Papio-Missouri River NRD;
- Kirkham Michael (SC); and
- National Service Provider (NSP).

The NRD shall notify FEMA and/or its contractor by e-mail of all meetings with community officials at least two weeks prior to the meeting (with as much notice as possible). FEMA and/or its contractor may or may not attend the community meetings.

The activities for this Flood Map Project, including any required Quality Control (QC) reviews as outlined in Procedure Memorandum (PM) 42 and the Mapping Partners that will complete them, are summarized in Table 1.2, Flood Mapping Project Activities. The sections of this MAS that follow the table below describe the specific mapping activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map deliverables.

The SC is assigned the Floodplain Mapping Activity and will incorporate the approximate studies completed by the Nebraska Department of Natural Resources for the counties identified in Table 1.1.

For those counties that include the Missouri and/or Mississippi Rivers, the SC will incorporate data developed from the U.S. Army Corps of Engineers (USACE) Upper Mississippi River System Flow Frequency Study (UMRSFFS) and stored on the MIP. Refer to **Exhibit A** for a listing of counties that will include UMRSFSS-based data and **Exhibit B** for a listing of data. The NRD shall coordinate directly with the Regional Management Center (RMC) to confirm what data is currently, or will be, available on the Mapping Information Platform (MIP).

The SC is responsible for the implementation of a Quality Assurance (QA) Plan for all assigned activities. The NRD will submit a Summary Report that describes and provides the results of all automated or manual QA review steps. The report should include the process for all assigned activities.

The Regional Office has reviewed the counties for accredited levees on the Flood Insurance Rate Map. In coordination with the USACE, the Region has determined the Professional Accredited Levee (PAL) classification for each levee accredited on the Flood Insurance Rate Map (FIRM). No accredited levees were determined for Washington County.

FEMA has developed tools to assist in the development of the flood hazard data studies and DFIRMs for the Cooperative Technical Partner (CTP) to use. Use of the tools is optional. Training and access to the tools should be arranged through the Regional Management Center. The tools available at this time include WISE software and the DFIRM production tools, both available through the MIP.

Independent QC review activities will be performed by FEMA's contractor at the discretion of FEMA.

FEMA will provide download/upload capability for intermediate data submittals through the MIP. A metadata file complying with the FEMA NFIP Metadata Profile Specifications must accompany the uploaded digital data in order to facilitate proper cataloging of the data for search and retrieve capabilities within the MIP. The metadata profile should be obtained from FEMA or its contractor to assure compliance. FEMA has provided the Metadata Manager (MetaMan) Tool in the Citrix environment to convert the .txt metadata files to .xml format. In addition, MetaMan will check the metadata file according to the correct schema for the task for compliance with the FEMA NFIP Metadata Profile.

Table 1.2 Flood Mapping Project Activities

TASK ASSIGNMENTS

QR 7 Valdiate MSC Deliverable Package			X
QR 6 Check LFD			X
QR5 Validate Final DFIRM Database and Map Panels			X
QR4 Validate BFE Notice and CEO Letters			X
Post Preliminary Processing		X	
Distribute Preliminary Map Products		X	
QR3 10% Visual Check			X
QR2 Auto Validation of Preliminary Database			X
Perform Independent QA/QC of Preliminary Map Product		X	
Produce Preliminary Map Products	X		
Quality Review (QR) 1 Auto Validation of Draft DFIRM Database			X
Develop DFIRM Database	X		
Perform Independent QA/QC of Floodplain Mapping		X	
Perform Floodplain Mapping	X		
Perform Independent QA/QC of Hydraulic Analyses			
Perform Hydraulic Analyses			
Perform Independent QA/QC of Hydrologic Analyses			
Perform Hydrologic Analyses			
Acquire Base Map	X		
Perform Independent QA/QC of Topographic Data			
Develop Topographic Data			
Perform Field Survey			
Scoping			
Partner Type	CTP	NSP	NSP Core Task Order
Partner Name	SC Michael Baker Jr.	NSP	
County	Washington	Washington	
State	NE	NE	Washington County

FEMA has developed tools to assist in the development of the flood hazard data studies and DFIRMs for the CTP to use. Use of the tools is optional. Training and access to the tools should be arranged through the RMC. The tools available at this time include WISE software and the DFIRM production tools, both available through the MIP.

Independent QC review activities will be performed by FEMA's contractor at the discretion of FEMA.

FEMA will provide download/upload capability for intermediate data submittals through the MIP. A metadata file complying with the FEMA NFIP Metadata Profile Specifications must accompany the uploaded digital data in order to facilitate proper cataloging of the data for search and retrieve capabilities within the MIP. The metadata profile should be obtained from FEMA or its contractor to assure compliance. FEMA has provided the Metadata Manager (MetaMan) Tool in the Citrix environment to convert the .txt metadata files to .xml format. In addition, MetaMan will check the metadata file according to the correct schema for the task for compliance with the FEMA NFIP Metadata Profile.

Metadata files are to be included with each of the following four activities that must satisfy Data Capture Standards (DCS): Perform Field Survey, Develop Topographic Data, Develop Hydrologic Data, and Develop Hydraulic Data. In addition, a DCS QA Report is required for all DCS tasks. FEMA has provided the DCS Validator Tool in WISE in the Citrix environment to generate the QA Report, and must be used whether or not WISE was used to create the DCS data. The DCS QA Report can be either passing or failing, but a failing report must be validated by the RMC for allowable errors. The task will advance in the MIP studies workflow as long as the report has been uploaded and named correctly.

Metadata files are also to be included with each of the following non-DCS activities: Acquire Base Map Data, Perform Floodplain Mapping, Develop DFIRM Database, Produce Preliminary Map Products, and Produce Map Products. The metadata profiles are available from FEMA. The FEMA NFIP Metadata Profiles follow the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata, but define some specific domains and business rules to make the metadata more useful to FEMA and its mapping partners. The metadata profile should be obtained from FEMA or its contractor to assure compliance.

DFIRM-related tasks require a passing QC Report from FEMA's National DFIRM database auto-validation tool for Quality Review (QR) #1, #2, and #5 as described in PM 42. Training materials for this step are available on the MIP at MIP User Care>Training Materials.

As each activity is completed, the data must be submitted via one of the methods described in the Data Submission Upload and Validation Quick Reference Guide (QRG) which is available on the MIP at MIP User Care>Guides & Documentation.

The SC assigned the activity will respond to any comments generated as a result of the mandatory quality control checks by the NPS. The NSP QC process is nationally funded and required on each flood insurance study. The NSP QC process includes the following activities:

- **Validate Content Submission.** Validation of submitted data for Perform Field Survey, Develop Topographic Data, Develop Hydrologic Data, Develop Hydraulic Data, Acquire Base Map Data, Perform Floodplain Mapping, Develop DFIRM Database, and Produce Preliminary Map Products tasks (including verifying presence of all required deliverables per MAS/SOW).
- **QR #1.** Performed after the Develop DFIRM Database task.
- **QR #s 2 and 3.** Performed after the Produce Preliminary Map Products task.

- **QR #4.** Performed after the Create Base Flood Elevation (BFE) Notices step in the MIP workflow during Post Preliminary Processing.
- **QR #5.** Performed after the Produce Final Map Products task during Post Preliminary Processing.
- **QR #6.** Performed after the Prepare LFD Docket step in the MIP workflow during Post Preliminary Processing.
- **QR #7.** Performed after the Submit MSC Deliverable step in the MIP workflow during Post Preliminary Processing.

In cooperation with the FEMA Project Officer, a Project Management Team (PMT) will be established by the Papio-Missouri River NRD consisting of representatives from the Papio-Missouri River NRD and it's SC, FEMA's regional engineer, the RMC, and other appropriate parties. The PMT will be responsible for coordinating the activities identified in this MAS. The FEMA Region will be provided with documentation identifying the established PMT.

The MIP shall be updated for status reporting of each of the data development activities within the Manage Data Development task, not less than every thirty days, when the activity is complete, and include leverage data. Similarly, the Manage Preliminary Map Production and Manage Post Preliminary Processing tasks shall be updated monthly when the producer is performing work on a task in those modules. The "Manage" tasks will be open and accepting updates for up to 90 days after the completion of the last producer task in each module. The MIP shall also be populated with appropriate leverage information regarding who paid for the data provided and the amount of data used by the Flood Map Project.

Work completed as part of this MAS will be in accordance with the April 2003 *Guidelines and Specifications for Flood Hazard Mapping Partners (G&S)*. The G&S may be downloaded from the FEMA Flood Hazard Mapping website at http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm. Occasionally, the G&S are modified and revised by Procedure Memorandums. Procedure Memorandums 9-11, 13, 15, 17-20, 23, 24, 29, 31- 45, 47 and 49 are incorporated into this MAS. When new Procedure Memorandums are released, the Mapping Partner will coordinate with the Regional Project Officer to determine impacts on work and schedule. http://www.fema.gov/plan/prevent/fhm/gs_memos.shtm

OUTREACH

The outreach activities for a Flood Map Project can best be understood as a process that begins during the Project Scoping phase and continues through the map production and post-preliminary phases.

The overarching goal for conducting outreach is to create a climate of understanding and ownership of the mapping process at the State and local levels. Well-planned outreach activities can reduce political stress, confrontation in the media, and public controversy which can arise from lack of information, misunderstanding, or misinformation. These outreach activities also can assist FEMA and other members of the PMT in responding to congressional inquiries.

The NRD will work with the Regional Project Officer during the initiation of this activity to determine an Outreach Plan for implementation throughout the mapping project. The Regional Project Officer will have access to many outreach tools and materials developed for this process that can be utilized or customized. Volume 1 of the *Guidelines and Specifications for Flood Hazard Mapping Partners* provides specific outreach goals that may be considered.

The Papio-Missouri River NRD and its SC shall attend a final meeting in Washington County following the issuance of the Preliminary FIRM and FIS.

Prior to the initiation of the project, the SC will notify the Chief Executive Officer (CEO) of all incorporated communities and the county of the project scope and schedule. The notification letter shall also include the appointment of the Consultation Coordination Officer (CCO). The FEMA Project Officer will provide the name of the CCO. A hardcopy of the community notification shall be provided to the FEMA Project Officer for inclusion in the Docket File.

All communication with local governments will be done in accordance with 44 CFR Part 66.

Deliverables: Upon determination of an Outreach and Coordination Approach, the NRD shall deliver the following to the FEMA Regional Project Officer:

- A report detailing outreach and coordination activities; and
- Hardcopy of the community notification.

Perform Field Survey – NOT APPLICABLE

Develop Topographic Data

For those counties that include the Missouri and/or Mississippi Rivers, SC will incorporate data developed from the USACE's Upper Mississippi River System Flow Frequency Study (UMRSFFS) and stored on the MIP. Refer to **Exhibit A** for a listing of counties that will include UMRSFSS-based data and **Exhibit B** for a listing of data. SC shall coordinate directly with the RMC to confirm what data is currently, or will be, available on the MIP.

No additional topographic data is to be obtained. Topographic data prepared for the UMRFFS Study for the Missouri River and the tag vector contours (TVC) for Washington County has been processed and satisfied FEMA's Data Capture Standards.

Perform Independent QC Review of Topographic Data – NOT APPLICABLE

Base Map Acquisition and Preparation

Responsible Mapping Partner: SC

Scope: Base Map Acquisition consists of obtaining the digital base map, with aerial photos (raster), for the project and as necessary, preparing the base map for use. SC shall provide the digital base map. The table below contains a summary of the base map selected for each county. The required activities are as follows:

- Obtain digital files (raster or vector) of the base map. In coordination with the partner who performed scoping, insure that the FEMA Geospatial Data Coordination Policy and Implementation Guide is followed.
- Secure necessary permissions from the map source to allow FEMA's use and distribution of hardcopy and digital map products using the digital base map, free of charge.

- Review and supplement the content of the acquired base map to comply with the requirements of the G&S.
- For the base map components that have a mandatory data structure, convert the base map data to the format required in the G&S.
- Certify that the digital data meets the minimum standards and specifications that FEMA requires for DFIRM production.

In addition, SC shall address all concerns or questions regarding the base map that are raised during the Independent QC review performed by NSP or during the NSP's Validate Content Submission Process.

Summary of Base Map

County	Description	Source
Washington	DOQQ	Nebraska Department of Natural Resources (NDNR), Mahendra Bansel (402) 471-3664
Washington	Corporate Boundaries	Contact communities for latest boundaries of: Arlington, Blair, Fort Calhoun, Kennard, Washington, and Washington County.
Washington	ETJ	Contact communities for latest boundaries of: Arlington, Blair, Fort Calhoun, Kennard, Washington, and Washington County.
Washington	Roads	Nebraska Department of Natural Resources, Mahendra Bansel (402) 471-3664

Standards: All Base Map Acquisition work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, SC shall make the following products available to FEMA by uploading the digital data to the MIP so that NSP can access it for an Independent QC. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- Written certification that the digital data meet the minimum standards and specifications;
- Documentation that FEMA can use the digital base map;
- Digital base map files that comply with the G&S requirements
- Digital versions of draft text for inclusion in the FIS report;

- A metadata file complying with the FEMA NFIP Metadata Profile Specifications; and
- Documentation of the Datum, if appropriate.

MIP workflow step equivalent: Acquire Base Map.

Concurrent steps: Validate Content Submission (NSP core Task Order), Perform Independent QC for Base Map (if funded by Region VII).

Perform Independent QC Review of Base Map – NOT APPLICABLE

Perform Hydrologic Analyses – NOT APPLICABLE

Perform Independent QC Review of Hydrologic Analyses – NOT APPLICABLE

Perform Hydraulic Analyses – NOT APPLICABLE

Perform Independent QC Review of Hydraulic Analyses – NOT APPLICABLE

Perform Floodplain Mapping

Responsible Mapping Partner: SC

For those counties that include the Missouri and/or Mississippi Rivers, SC will incorporate data developed from the USACE's Upper Mississippi River System Flow Frequency Study (UMRSFFS) and stored on the MIP. Refer to **Exhibit A** for a listing of counties that will include UMRSFFS-based data and **Exhibit B** for a listing of data. SC shall coordinate directly with the RMC to confirm what data is currently, or will be, available on the MIP.

Scope for Existing Data Studied Areas: SC shall incorporate the Approximate A Zone boundaries for all flooding sources not previously detailed studied and draining greater than 1 square mile, which was performed by Nebraska Department of Natural Resources as described in MAS No. 17 between Nebraska Department of Natural Resources and FEMA. SC will need to complete floodplain mapping activities. SC shall coordinate with FEMA to obtain the data. This data is available on the MIP.

Scope for Non-revised Areas: For all flooding sources except those segments for which updated flood data will be developed, SC shall convert the information shown on the effective FIRM and Flood Boundary and Floodway Map (FBFM) panels for all incorporated and unincorporated areas to digital format in conformance with FEMA DFIRM specifications. SC shall use the acquired base map for the conversion. SC shall not digitize the flood theme for those segments of flooding sources for which updated flood data will be developed.

Scope for Merging Revised and Non-Revised Information: Upon completion of the floodplain mapping activities for the revised and non-revised areas, SC shall merge the digital floodplain data into a single, updated DFIRM. This work is to include tie-in of flood hazard information for areas that were not studied as part of the Flood Map Project documented in this MAS. SC also shall tie in the revised and non-revised Flood Profiles, floodplain boundaries, and regulatory floodway boundaries with contiguous communities that were not studied as part of the Flood Map Project documented in this MAS. SC shall coordinate with FEMA and any additional Mapping Partners responsible for other components of Perform Floodplain Mapping, as necessary, to resolve any potential tie-in issues.

DFIRM Panel Summary

County Name	Number of DFIRM panels
Washington County	71

SC shall incorporate the results of all effective Letters of Map Change (LOMCs) within the revised areas as appropriate. Only those LOMCs visible at the published map scale shall be included.

SC shall address all concerns or questions regarding Floodplain Mapping that are raised by NSP during the Independent QC review, or during the NSP's Validate Content Submission Process.

SC shall compare the effective FIRMs to the in-progress mapping to determine if any studies originally contained within a single jurisdiction will be plotted outside that jurisdiction's political boundaries when mapped in countywide format (this would include incorporating LOMRs). SC shall alert the Regional Office and the NSP using comments in the MIP about any instances where there is a BFE that needs to be published in the Federal Register and receive an appeal period. The communities that will have BFE changes, or will see the BFE for the first time, shall be listed in the Comments box on the Review screen in the Perform Floodplain Mapping task.

Standards: All Floodplain Mapping work shall be performed in accordance with the standards specified in Section 5 - Standards. Mapping quality standards must be consistent with Procedure Memorandum No. 38, dated October 17, 2007. SC will perform self-certification audits for the Floodplain Boundary Standards, as described in PM 38 and all subsequent revisions, for all flood hazard areas.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, and upon completion of floodplain mapping for the counties identified in Table 1.1, SC shall make the following products available to FEMA by uploading the digital data to the MIP so that NSP can access it for the Independent QC review. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal. The mapping for the remaining flooding sources including any non-revised digital panels and all merged revised and non-revised floodplain mapping data is to be submitted for a final QC review at the completion of this activity.

- Digital work map showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, Base Flood Elevations (BFEs), flood insurance risk zone designation labels, and all applicable base map features;
- Draft DFIRM database prepared in accordance with the requirements in G&S;
- DFIRM mapping files prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in the approved QA/QC Plan;
- Any backup or supplemental information including supporting calculations and assumptions used in the mapping required for the Independent QC review of Hydrologic and /or Hydraulic Analyses and Floodplain Mapping;
- An explanation for the use of existing topography for the studied reaches, if appropriate.

- Written summary of the analysis methodologies;
- Digital versions of draft FIS report, Floodway Data Tables and updated profiles including all profiles and tables converted appropriate datum, as well as any other necessary items for the finalization of the preliminary FIS;
- Digital versions of input and output for any computer programs that were used;
- A metadata file complying with the FEMA NFIP Metadata Profile Specifications; and
- If automated GIS-based models are applied, all input data, output data, intermediate data processing products, and GIS data layers shall be submitted.

MIP workflow step equivalent: Perform Floodplain Mapping, Rework Data Development Task (if needed as a result of Independent QC).

Concurrent steps: Validate Content Submission (NSP core Task Order), Perform Independent QC for Floodplain Mapping (if funded by Region VII).

Perform Independent QC Review of Floodplain Mapping

Responsible Mapping Partner: NSP

Scope: NSP shall review the floodplain mapping submitted by SC under Perform Floodplain Mapping to ensure that the results of the analyses performed are accurately represented; the redelineation of existing data on new, updated topography is appropriate; and to ensure that the new DFIRM panels accurately represent the information shown on the effective FIRMs and FBFMs for the unrevised areas that are mapped. If NSP utilizes a contractor to perform the QA, the contractor must be a different contractor than who performed the original floodplain mapping. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, the activities listed below.

- Review the cross sections for proper location and orientation on the work map and agreement with the Floodway Data Table.
- Review the BFEs shown on the work map for proper location and agreement with the results of the hydraulic modeling.
- Review the regulatory floodway widths for agreement with the widths shown in the Floodway Data Table and the results of the hydraulic modeling.
- Review the floodplain boundaries for agreement with the flood elevations shown in the Floodway Data Table, the contour lines, and other topographic information shown on the work maps.
- Review the floodplain widths at cross sections as shown on the work maps to ensure the data matches the Floodway Data Table.
- Review the floodplain boundaries as shown on the work maps to ensure the data matches the Flood Profiles.

- For non-revised floodplain areas, the 1- and 0.2-percent-annual-chance floodplain boundaries agree with the floodplain boundaries shown on the FIRM, the contour lines, other topographic information, and planimetric information shown on the DFIRM base.
- Road and floodplain relationships are maintained for all unrevised areas.
- Review the flood insurance risk zones as shown on the work maps to ensure the data are labeled properly.
- Review the DFIRM mapping files to ensure the data were prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- Review the metadata file to ensure the data includes all required information shown in the FEMA NFIP Metadata Profiles.

Standards: All independent QC work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, NSP shall make the following products available to FEMA by uploading the digital data to MIP, through the Load Studies Data Artifacts portlet under the Data Upload tab under Tools & Links. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- A Summary Report that describes the findings of the QC review, noting any deficiencies in or agreeing with the mapping results;
- Recommendations to resolve any problems that are identified during the Independent QC review; and
- An annotated work map with all questions and/or concerns indicated, if necessary.

MIP workflow step equivalent: Perform Independent QC for Floodplain Mapping.

Concurrent steps: Perform Floodplain Mapping, Validate Content Submission (NSP core Task Order), Rework Data Development Task (if needed as a result of independent QC).

Develop DFIRM Database

Responsible Mapping Partner: SC

Scope: SC shall prepare the database, produced during Perform Floodplain Mapping in accordance with the *Guides and Specifications for Flood Hazard Mapping Partners*, for upload to the MIP. SC shall coordinate with those Mapping Partners responsible for Floodplain Mapping, as necessary, to resolve any problems that are identified during development of the DFIRM Database. The primary purpose of this activity is to ensure that a quality DFIRM database is prepared earlier in the flood study process and well in advance of the Preliminary DFIRM Map Production and Distribution.

Standards: All DFIRM Database work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, SC shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the Technical Support Data Notebook format described in Appendix M of the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- DFIRM database files prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners* and in the format(s) required for the NSP's Validate Content Submission Process; and
- A metadata file complying with the FEMA NFIP Metadata Profile Specifications.

MIP workflow step equivalent: Develop DFIRM Database, Rework Data Development Task (if needed as a result of independent QC).

Concurrent steps: Perform Independent QC for DFIRM Database (if funded by Region VII), NSP QC Check of Draft DFIRM database (FAFS automated), Database, Validate Content Submission (NSP core Task Order).

NSP QC Check of Draft DFIRM database. The SC assigned the Develop DFIRM Database task must upload the draft DFIRM database (currently in .e00 format) and draft DFIRM metadata to FAFS through the MIP. The submission is automatically sent to FAFS for data auto-validation. The detailed logic description for the FAFS QC Pro Auto Screen is available from FEMA or its contractor.

Produce Preliminary Map Products

Responsible Mapping Partner: SC

Scope: SC shall apply the final FEMA DFIRM graphic and database specifications to the DFIRM files produced under Floodplain Mapping. This work shall include adding all required annotation, line pattern, area shading, and map collar information (e.g., map borders, title blocks, legends, notes to user). SC will be preparing the database for this project in the Standard format. The database shall be produced in accordance with the *Guides and Specifications for Flood Hazard Mapping Partners*. SC shall coordinate with those Mapping Partners responsible for the Perform Floodplain Mapping and Develop DFIRM Database tasks to resolve any problems that are identified during development of the Preliminary Map Products.

This task includes the creation of the countywide FIS Report. The FIS Report will include the new study data and portions of the existing community based FIS reports as appropriate. The floodway data tables and profile sheets will be combined as needed to create a continuous table and profile for the subject streams. The elevations shown in the FIS shall be referenced to NAVD 1988 vertical datum.

Only accredited levees, or levees with a provisional accreditation, are to be depicted on the Flood Insurance Rate map. Other levees, including non-accredited levee shown on the effective FIRM, are not to be included.

Floodway data tables and profile sheets for the Missouri River are available from Watershed Concepts. The SC shall incorporate this information into the countywide FIS as appropriate.

The SC shall prepare Preliminary Summary of Map Actions (SOMAs) for all affected communities, if appropriate. The SOMA shall list pertinent information regarding Letter of Map Change (LOMCs) that will be affected by the issuance of the DFIRM (i.e., superseded, incorporated, revalidated).

SC shall address all concerns or questions regarding the Preliminary Map Products that are raised by NSP during the Independent QC review, or during the NSP's Validate Content Submission Process.

When the SC is not responsible for Post-Preliminary Processing, and if they use a different GIS platform than the NSP, then the SC will have additional activities associated with Post-Preliminary Processing finalize the DFIRM and FIS report. These additional activities are described in the Post-Preliminary Processing activity.

Standards: All DFIRM Database, DFIRM Map, and FIS Report work shall be performed in accordance with the standards specified in Section 5 - Standards. All work must pass the automated and visual "National QA/QC" reviews prior to the distribution of the preliminary copies of the DFIRM and FIS report and the Preliminary SOMA.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, SC shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- DFIRM mapping and database files prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners* and in the format(s) required for the NSP QC Process;
- All Digital information used to compile and print panels which can include digital label and annotation files used to create labeling on panels (including all fonts and style files, if applicable) which can comprise cross sections, BFEs, flood insurance zone labels, and all applicable base map features;
- The Flood Insurance Study Report is prepared in the FEMA Countywide Format as documented in the *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale;
- Draft Preliminary SOMA prepared using the SOMA Tool on the MIP;
- A metadata file complying with the FEMA National Flood Insurance Program (NFIP) Metadata Profile Specifications;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM as outlined in approved QA/QC Plan; and
- Passing Quality Review report.

MIP Workflow Step Equivalent: Produce Preliminary Map Products, Rework Data Development Task (if needed as a result of Independent QC).

Concurrent steps: Perform Independent QC for Preliminary Map Products (if funded by Region VII), NSP QC Check of Preliminary DFIRM database (FAFS automated) DFIRM and FIS (NSP visual), Validate Content Submission (NSP core Task Order).

NSP QC Check of Preliminary DFIRM and Flood Insurance Study Report (FIS): The SC assigned the Produce Preliminary Map Products task must upload the Preliminary DFIRM database (currently in .e00 format) and preliminary DFIRM metadata to FAFS through the MIP. The submission is automatically sent to FAFS for data auto-validation. The detailed logic description for the FAFS QC Pro Auto Screen is available from FEMA or its contractor. In addition, the SC must submit the preliminary DFIRM and FIS report to the RMC prior to distribution. The amount of time necessary to complete the review will vary dependent upon study size. The RMC will review the DFIRM panels and the FIS report, and verify that the DFIRM database has passed the automated database check as indicated by a passing notification from HDM in the MIP. The RMC will review a sample—roughly 10 percent—of DFIRM panels. In this review, the RMC will look for significant errors. The SC is responsible for checking all panels and correcting errors identified by the RMC. Any errors identified during this review must be corrected before the Preliminary DFIRM is distributed.

Independent QC Review of Preliminary Map Products

Responsible Mapping Partner: NSP

Scope: Upon completion of the Produce Preliminary Map Products activity, SC shall review the DFIRM spatial database to determine if it meets current FEMA database specifications. In addition, NSP shall review the DFIRM panels to ensure they meet current FEMA graphic specifications. NSP shall coordinate with other Mapping Partners, as necessary, to resolve any problems identified during this QC review. In addition, NSP shall perform a review of the FIS Report including all data tables, Flood Profiles, and other components of the FIS Report. If NSP utilizes a contractor to perform the independent QC, the contractor must be a different contractor than who performed the original analyses. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall ensure that the requirements below are met.

- All required DFIRM features are accurately and legibly labeled and follow the examples shown in the FEMA DFIRM specifications. This includes all flood insurance risk zones, BFEs, cross sections, studied streams, mapped political entities, pertinent notes, and all roads within and adjacent to the 1-percent-annual-chance floodplains.
- All DFIRM features are correctly symbolized with the appropriate symbol, line pattern, or area shading and follow the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- All map collar information is complete, correct, and follows the requirements specified in *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- DFIRM mapping files are in a GIS file and database format as specified in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, and conform to those specifications for content and attribution.
- DFIRM database files are in one of the database formats specified in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, and conform to those specifications for content and attribution.

- The FIS Report is prepared in the FEMA Countywide Format as documented in the *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- Metadata files describing the DFIRM data include all required information shown in the FEMA NFIP Metadata Profile Specifications.

Standards: All DFIRM Database Development work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: : In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, NSP shall make the following products available to FEMA by uploading the digital data to the MIP, through the Load Studies Data Artifacts portlet under the Data Upload tab under Tools & Links. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- A Summary Report that describes the findings of the QA review noting any deficiencies in or agreeing with the mapping results and the results of all automated or manual QA steps taken during the independent QC review;
- Recommendations to resolve any problems that are identified during the independent QC review;
- An annotated copy of the DFIRM with all questions and/or concerns indicated, if necessary.

MIP Workflow Step Equivalent: Perform Independent QA/QC of Preliminary Map Products.

Concurrent steps: Produce Preliminary Map Products, NSP QC Check of Preliminary DFIRM database (FAFS automated) DFIRM and FIS (NSP visual), Validate Content Submission (NSP core Task Order), Rework Data Development Task (if needed as a result of Independent QC).

Distribute Preliminary Map Products

Responsible Mapping Partners: NSP

Scope: Distribute Preliminary Map Products consists of the printing and distribution of the Preliminary copies of the DFIRM and FIS Report for community officials and the general public for review and comment. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. The activities to be performed are summarized below.

The NSP shall notify the other project team members when the Preliminary Date is determined for each county. The Consultation Coordination Officer shall be included in this notification. The notification should be made as soon as the date is determined, but not later than two weeks prior to the Preliminary FIRM date.

Preliminary Transmittal Letter Preparation: The NSP shall prepare transmittal letters for the Preliminary copies of the DFIRM, FIS Report and related enclosures to all affected communities, all other project team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA. This letter may be prepared for FEMA only or for signature by FEMA and the NSP. A template specific to Region VII is available from the RMC.

Preliminary FIRM and FIS County-wide Brochure: Region VII has developed a brochure that will be provided to each community with the Preliminary Transmittal Letter. The NSP shall prepare the brochure for each county. The template is available from the RMC.

Distribution of Preliminary DFIRM and FIS Report: The NSP shall distribute the Preliminary copies of the DFIRM and FIS Report to all affected communities, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA. Per Procedure Memorandum No. 38, dated October 17, 2007, FBS self-certification documentation must be submitted within 30 days of the issuance of the preliminary map products.

Standards: All Preliminary Map Products work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, the NSP shall make the following products available to FEMA. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

- Preliminary transmittal letters shall be prepared and transmitted. These letters and any additional letters requested by FEMA shall be prepared in accordance with the current version of the FEMA *Document Control Procedures Manual* and in conjunction with Guidance provided by the Region and/or its contractor.
- Preliminary copies of the DFIRM and FIS Report, including all updated data tables and Flood Profiles shall be mailed to the CEO and floodplain administrator of each affected community, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.
- Digital files in an Adobe pdf format of each panel and the FIS will be provided to the FEMA Regional Office with the preliminary distribution.
- Preliminary SOMAs, prepared in accordance with FEMA requirements, shall be provided as appropriate.
- Floodplain Boundary Standard (FBS) Self-Certification Documentation submitted to the RMC.
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the final preparation of the preliminary DFIRM shall be provided as outlined in the approved QA/QC Plan.

MIP workflow step equivalent: Distribute Preliminary Map Products, Verify Outreach Activities.

Concurrent steps: None

Post-Preliminary Processing

Responsible Mapping Partners: NSP and FEMA

Scope: This activity consists of finalizing the DFIRM, SOMA, and FIS Report after the Preliminary copies of the DFIRM and FIS Report have been issued to community officials and the public for review

and comment. The activities to be performed are summarized below and are subject to the mandatory quality control checks by the NSP also as described below.

When the SC does not use the DFIRM Tools and is not responsible for Post-Preliminary Processing, then the SC will have additional activities associated with Post-Preliminary Processing finalize the DFIRM and FIS Report.

The CCO will prepare a report following the final coordination meeting. The CCO will forward the report to the NSP.

Initiation of Statutory 90-Day Appeal Period: When required, upon completion of a 30-day community comment period and/or final coordination meeting with the affected communities, NSP shall arrange for and verify that the following activities are completed in accordance with the current version of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* and *Document Control Procedures Manual*:

- The NSP shall prepare and distribute Proposed BFE determination letters to the CEOs and floodplain administrators of affected communities.
- The NSP shall prepare legal notice of BFE changes and verify the notices are published in newspapers with local circulation in accordance with 44 CFR.
- The NSP shall use the BFEs-on-theWeb tool to create BFE notices in accordance with Procedure Memorandum No. 44 – Protocol for Publishing Base Flood Elevation (BFE) Notices on the Web.
- The NSP shall prepare the appropriate notices (Proposed Rules) that are to be published in the *Federal Register*. The NSP shall then deliver those notices to FEMA for publication.

Resolution of Protests: NSP shall review and resolve protests received during the comment or 90-day appeal periods. The activity will include all protests to correct street, stream and other names, corporate boundaries, and floodplain boundary changes due to topographic data. For each protest, the following activities shall be conducted as appropriate:

- Initial processing and acknowledgment of submittal;
- Technical review of submittal to determine validity of protest;
- Preparation of letter(s) requesting additional supporting data; and
- Preparation of a draft resolution letter for co-signature with FEMA and NSP and revised DFIRM and FIS Report materials for FEMA review.

NSP shall mail all associated correspondence upon authorization by FEMA.

Resolution of Appeals: NSP shall review and resolve appeals received during the 90-day appeal period. Appeals that are defined by 67.6(b)(1) or 67.6(b)(3) might be considered a change of scope and should be discussed with the Regional Project Manager before proceeding. For each appeal, the following activities shall be conducted as appropriate:

- Initial processing and acknowledgment of submittal;

- Technical review of submittal to determine validity of appeal;
- Preparation of letter(s) requesting additional supporting data;
- Performance of revised analyses; and
- Preparation of a draft resolution letter for co-signature with FEMA and revised DFIRM and FIS report materials for FEMA review.

NSP shall mail all associated correspondence upon authorization by FEMA.

When the SC is not responsible for Post-Preliminary Processing, and if they use a different GIS platform than the NSP then SC will have additional activities associated with Post-Preliminary Processing finalize the DFIRM and FIS Report.

Resolution of Appeals and Protests: SC shall provide the revised DFIRM and FIS Report to accompany any protest or appeal resolution letter. The NSP shall provide the SC with the DFIRM and FIS Report corrections for their use in revising the products.

Revision of DFIRM and FIS Report: If necessary, the SC shall revise the DFIRM and FIS Report at the direction of the FEMA Regional Project Officer and provide to the NSP in Adobe .pdf format. The NSP shall distribute Revised preliminary copies of the DFIRM and FIS Report to the CEO and floodplain administrator of each affected community, all other project team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

Letters of Map Change: SC shall include all effective LOMCs occurring after the Preliminary Map and up to 30 days prior to the QR#5 review, or approximately 90 days prior to Letter of Final Determination (LFD) for each affected community. The NPS will provide SC with copies of the LOMCs issued between the above-mentioned periods. Only those LOMCs visible at the published map scale shall be included.

Deliverables: The SC shall make the following products available to the NPS for use in preparing for the final submission to the Map Service Center:

- Post script or encapsulated post script files for each DFIRM map panel and Index map panel. These files will be used for film negative production.
- Adobe .pdf files for the FIS Report cover page, any FIS Report photograph pages, and all profile sheets.

Letters of Map Change: NSP shall include all effective LOMCs occurring after the Preliminary Map and up to 30 days prior to the QR#5 review, or approximately 90 days prior to Letter of Final Determination. Only those LOMCs visible at the published map scale shall be included.

Preparation of Special Correspondence: NSP shall support FEMA in responding to comments not received within the 90-day appeal period (referred to as "special correspondence") including drafting responses for FEMA review when appropriate and finalizing responses for co-signature. NSP also shall mail the final correspondence (and enclosures, if appropriate) and distribute appropriate copies of the correspondence and enclosures upon receipt of authorization from FEMA.

Revision of FIRM and FIS Report: If necessary, the NSP shall work together with FEMA to revise the DFIRM and FIS Report and shall distribute revised Preliminary copies of the DFIRM and FIS Report to the CEO and floodplain administrator of each affected community, all other project team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

Final SOMA Preparation: NSP shall prepare Final SOMAs for the affected communities with assistance from FEMA, as appropriate.

Processing of Letter of Final Determination: The NSP shall work with FEMA to establish the effective date for the DFIRM and FIS Report, and shall prepare Letters of Final Determination (LFDs) for each affected community for FEMA review in coordination with the Region and its contractor, and in accordance with the FEMA *Document Control Procedures Manual*. FEMA or its designated contractor shall mail the final signed LFDs and enclosures and distribute appropriate copies of the signed LFDs. All work must pass the automated and visual "National QA/QC" reviews and review of LFD prior to the distribution of the LFD. Per Procedure Memorandum No. 38, dated October 17, 2007, FBS self-certification documentation must be submitted within 30 days of the issuance of the LFD if the floodplain boundaries have been modified during post-preliminary processing.

- The NSP shall prepare the appropriate notices (Final Rules) that are to be published in the *Federal Register*. The NSP shall then deliver those notices to FEMA for publication.

Processing of Final DFIRM and FIS Report for Printing: NSP shall prepare final reproduction materials for the DFIRM and FIS Report and provide these materials to MSC for printing by the United States Government Printing Office. NPS shall also prepare the appropriate paperwork to accompany the DFIRM and FIS Report (including Print Processing Worksheet, Printing Requisition Forms, and Community Map Actions Form) and transmittal letters to the community CEOs.

Proof Copies: The NSP will produce and distribute a digital proof copy of the final DFIRM and FIS delivered to the MSC according to the procedures set forth in *Region VII Procedures for Proof Copy Preparation and Distribution* available from the RMC. The proof copy package includes the following:

- CD or DVD containing digital proof copies of the DFIRM panels and FIS report
- Cover letter addressed to the relevant State NFIP Coordinator

NSP will prepare and distribute the proof copy package to the State NFIP Coordinator, with copies to FEMA Region VII and the RMC, within one week of submitting the final DFIRM and FIS report to the MSC.

Revalidation Letter Processing: NSP shall prepare and distribute letters for FEMA signature to the community CEOs and floodplain administrators to notify the affected communities about LOMCs for which determinations will remain in effect after the DFIRM and FIS report become effective.

Archiving Data: NSP shall ensure that technical and administrative support data are packaged in the FEMA required format and stored properly in the library archives until transmitted to the FEMA Engineering Study Data Package Facility. In addition, the NSP will maintain copies of all data for a period of no less than three years.

Standards: All Post Preliminary DFIRM work shall be performed in accordance with the standards specified in Section 5 - Standards.

Deliverables: In accordance with the *Guidelines and Specifications for Flood Hazard Mapping Partners*, NSP shall make the following products available to FEMA by uploading the digital data to the MIP. Additionally, the Technical Support Data Notebook format described in the *Guidelines and Specifications for Flood Hazard Mapping Partners* must be delivered in accordance with Section 2 – Technical and Administrative Support Data Submittal.

Hard copy documents to be supplied through the Federal Elevation Determination Docket (FEDD) file (sent to FEMA library):

- Documentation that the legal notice(s) were published in accordance with FEMA requirements;
- Documentation that the appropriate *Federal Register* notices (Proposed and Final Rules) were published in accordance with FEMA requirements;
- Draft and final Special Correspondence (and all associated enclosures, backup data, and other related information) for FEMA review and signature, as appropriate;
- Draft and final Appeal and Protest acknowledgment, additional data, and resolution letters (and all associated enclosures, backup data, and other related information) for FEMA review and signature, as appropriate;
- Draft and final LFDs (and all associated enclosures, backup data, and other related information) for FEMA review and signature;
- DFIRM negatives and final FIS Report materials including all updated data tables and Flood Profiles;
- Paperwork for the final DFIRM and FIS Report materials;
- Transmittal letters for the printed DFIRM and FIS Report;
- Proof Copy Distribution Letter;
- LOMC Revalidation Letters, if appropriate;
- Completed, organized, and archived technical and administrative support data; and
- Completed, organized, and archived case files and flood elevation dockets.

Documents to be submitted to the RMC:

- Floodplain Boundary Standard (FBS) Self-Certification Documentation, if required for the study.

Digital files to be submitted through the MIP;

- Digital copies of the final DFIRM database, DFIRM panels and FIS Report; and
- A metadata file complying with the FEMA NFIP Metadata Profiles Specifications.

MIP workflow step equivalent: All steps within Manage Post Preliminary Processing process train.

Concurrent steps: None.

SECTION 2—TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

The Project Team members for this Flood Map Project that have responsibilities for activities included in this MAS shall comply with the data submittal requirements summarized in this section.

All supporting documentation for the activities in this MAS shall be submitted in the Technical Support Data Notebook (TSDN) format in accordance with the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners*. Table 2-1 indicates the sections of the TSDN that apply to each mapping activity.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR is to describe the issue and propose possible resolutions. (For additional information on SPRs, refer to the *Guidelines and Specifications for Flood Hazard Mapping Partners*.)

SECTION 3—PERIOD OF PERFORMANCE

The mapping activities assigned to SC in this MAS will be completed within the period of performance specified in the Agreement Articles of the Cooperative Agreement. The Mapping Activities may be terminated at the option of FEMA or NRD in accordance with the provisions of the April 11, 2003, CTP Partnership Agreement. If these mapping activities are terminated, all products produced to date must be returned and updated into the MIP and the remaining funds from uncompleted activities, provided by FEMA for this MAS, will be returned to FEMA.

SECTION 4—FUNDING/LEVERAGE (NOT APPLICABLE)

Table 2-1. Mapping Activities and Applicable TSDN Sections

TSDN Section	Mapping Activities													
	Scoping	Perform Field Survey	Topographic Development	QA/QC of Topographic Data	Acquire Base Map	Hydrologic Analyses	QA/QC of Hydrology	Hydraulic Analysis	QA/QC of Hydraulic Analyses	Perform Floodplain Mapping	QA/QC of Floodplain Mapping	Develop DFTM Database	Distribute Preliminary Map Products	Post-Preliminary Processing
General Documentation														
Special Problem Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Telephone Conversation Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meeting Minutes/ Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
General Correspondence	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Engineering Analyses														
Hydrologic Analyses		X			X	X	X	X	X	X	X			
Hydraulic Analyses		X			X	X	X	X	X	X	X			
Key to Cross-Section Labeling		X			X	X	X	X	X	X	X			
Key to Transect Labeling		X			X	X	X	X	X	X	X			
Draft FIS Report					X	X	X	X	X					
Mapping Information	X		X	X	X					X	X	X	X	X
Miscellaneous Reference Information	X	X	X	X	X	X	X		X	X	X	X	X	X

SECTION 5—STANDARDS

The standards relevant to this MAS are provided in Tables 5-1 and 5-2. Information on the correct volume and appendix of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* to be referenced for each mapping activity are summarized in Table 5-2 for convenience. However, all mapping partners working on a Flood Map Project are responsible for complying with all appropriate requirements in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and related Procedure Memoranda published by FEMA as of the date of this agreement.

These guidelines may be downloaded from the FEMA Flood Hazard Mapping website at http://www.fema.gov/plan/prevent/fhm/dl_cgs.shtm. The Geospatial Data Coordination Policy and the Geospatial Data Coordination Implementation Guide are located at <https://hazards.fema.gov> under "Tools & Links."

Table 5-1. Applicable Standards for Project Activities

	Activities														
Applicable Standards	Scoping	Perform Field Survey	Topographic Development	QA/QC Review of Topo Data	Acquire Base Map	Hydrologic Analysis	QA/QC Review of Hydrologic Analysis	Hydraulic Analysis	QA/QC Review of Hydraulic Analysis	Perform Floodplain Mapping	QA/QC Review of Floodplain Mapping	Develop DFIRM Database	QA/QC Review of Preliminary Map	Distribute Preliminary Map Products	Post-Preliminary Processing
<i>Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FEMA's Geospatial Data Coordination Policy	X		X		X									X	
FEMA's Geospatial Data Coordination Implementation Guide	X		X		X										
Engineer Manual 1110-2-1003, <i>Hydrographic Surveys</i> (USACE), January 1, 2002	X	X													
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003	X					X	X	X	X						
NFIP Metadata Profile Specifications	X		X	X						X	X	X	X	X	X
<i>Document Control Procedures Manual</i>	X													X	X
<i>44 Code of Federal Regulations Part 66 and 67</i>	X													X	

Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications

Activity Description	Applicable Volume, Section/Subsection, and Appendix
Scoping	Volume 1
Perform Field Survey	Volume 1
	Appendix A
	Appendix F
	Appendices B, C, F, and M
Topographic Development	Volume 1
	Appendix A
	Appendix M
Independent QA/QC Review of Topographic Data	Volume 1,
	Appendix A
	Appendix M
Acquire Base Map	Volume 1
	Appendices A, K, L, and M
Perform Hydrologic Analyses	Volume 1
	Appendix A
	Appendix C
	Appendices E, F, G, H, M

Activity Description	Applicable Volume, Section/Subsection, and Appendix
Perform Independent QA/QC Review of Hydrologic Analyses	Volume 1 Appendix A Appendix C Appendices E, F, G, H, M
Perform Hydraulic Analyses	Volume 1 Appendix A Appendix C Appendices B, E, F, G, H, M
Perform Independent QA/QC Review of Hydraulic Analyses	Volume 1 Appendix A Appendix C Appendices B, E, F, G, H, M Appendix C Appendices B, D, and M Appendix A Appendices B, D, H and M
Perform Floodplain Mapping	Volume 1 Appendix C Appendix D Appendices E, F, G, H, K, L, and M
	Volume 1 Appendix C Appendices K, L, and M
	Volume 1

Activity Description	Applicable Volume, Section/Subsection, and Appendix
Perform Independent QA/QC Review of Floodplain Mapping	Appendix C
	Appendix D
	Appendices E, F, G, H, K, L, and M
Perform Independent QA/QC Review of Preliminary Map Product	Volume 1
	Appendices K, L, and M
Distribute Preliminary Map Products	Volume 1
	Appendices J, K, L, and M
Post-Preliminary Processing	Volume 1
	Appendices J, K, L, and M

SECTION 6—SCHEDULE

The tasks documented in this MAS shall be completed in accordance with the project schedule. The NRD will use the MIP to report progress, entering Cost to Date, Percent Complete to Date, and “As of” date in the “Update Information” section of the Task Information screen for each task. Within three weeks of funds award, the NRD will provide the RMC with the initial schedule for each county for entry into the MIP. The data reported in the MIP will include estimated and actual completion dates, budget and amount spent, and the percent complete of each task identified in the MAS. Each county identified in Table 1-1 will have separate schedule established.

The NRD will update the MIP at least monthly, and when a task is completed.

SECTION 7—CERTIFICATIONS

Field Surveys and Topographic Data Development

A Registered Professional Engineer or Licensed Land Surveyor shall provide an accuracy statement for field surveys and/or topographic data used and shall certify these data meet the accuracy statement provided. Data accuracy should be stated used the Federal Geographic Data Committee National Standards for Spatial Data Accuracy, but the American Society for Photogrammetry and Remote Sensing accuracy reporting standards are acceptable.

Base Map Acquisition and Preparation

- A community official or responsible party shall provide written certification that the digital data meet FEMA minimum standards and specifications.
- The responsible Mapping Partner shall provide documentation that the digital base map can be used by FEMA. Please note that uploading base map data to the MIP does not constitute agreement that the digital base map can be used by FEMA. Documentation that the digital base map can be used by FEMA is still being required.
- Certifications must be made at the time the intermediate data is submitted. For example, if hydrologic data is submitted, certification will be required at the time it is submitted.

Hydrologic Analyses, Hydraulic Analyses, and Floodplain Mapping

- A Registered Professional Engineer shall certify hydrologic and hydraulic analyses and data in accordance with 44 CFR 65.6(f).

Any levee systems to be accredited will be certified in accordance with 44 CFR 65.10.

SECTION 8—TECHNICAL ASSISTANCE AND RESOURCES

Project Team members may obtain copies of FEMA-issued LOMCs, archived engineering backup data, and data collected as part of the Mapping Needs Assessment Process from FEMA and/or your Regional Project Officer.

General technical and programmatic information, such as FEMA 265 and the Quick-2 computer program, can be downloaded from the FEMA website at <http://www.fema.gov/plan/prevent/fhm/index.shtm>. Specific technical and programmatic support may be provided through FEMA and/or its contractor; such

assistance should be requested through the FEMA Project Officer specified in Section 12 – Points of Contact.

Project Team members also may consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or subcontractors, and GIS-based engineering and modeling training.

SECTION 9—CONTRACTORS

Papio-Missouri River NRD intends to use the services of Kirkham Michael as a contractor for this Flood Map Project. Papio-Missouri River NRD shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

Part 13 may be downloaded in PDF or text format from the United States Government Printing Office website at http://www.access.gpo.gov/nara/cfr/waisidx_04/44cfr13_04.html.

SECTION 10—REPORTING

The NRD shall provide progress and financial reports to the FEMA Regional Project Officer and Assistance Officer in accordance with Cooperative Agreement Articles V & VI, and 44 CFR 13.40 and 13.41.

EARNED VALUE REPORTING:

Earned Value Reporting: The MIP Workflow is designed to track the Earned Value of mapping projects. This information is automatically calculated by the MIP, using the Actual cost and schedule of work performed, or “actuals” and comparing them to the expected cost and schedule of work performed, or “baseline”.

Once the FEMA Regional office has issued a task order the NSP will complete the “Obligate Project Funds” screen in the MIP. This step establishes the baseline for the project in the MIP, using the cost and schedule information for each activity.

The MIP study workflow allows the NRD to report on the status of these projects at a task level. The cost and schedule information, updated by the NRD for each contracted task, is compared to the baseline established for those tasks. This information is rolled up to a project level and monitored by the FEMA Region to assess progress and Earned Value.

Earned Value reporting involves the reporting of cost, schedule and performance (physical percent complete) in the MIP by the NRD.

Once the baseline schedule and cost is established in the MIP, the NRD shall input the performance and actual cost to date for each contracted task for each project. This must be completed at least monthly. When a task is completed, including all QA/QC activities in this MAS plus the Quality Control Reviews established in PM 42, the NRD shall enter 100% complete, enter the actual completion cost, and the actual completion date within the Manage Data Development, Manage Preliminary Map Production, or Manage Post Preliminary Processing, as applicable.

Progress reporting shall utilize the MIP to the extent possible. Other progress reports are not anticipated. When the NRD provides deliverables through the MIP, the NRD shall ensure the MIP reflects the status of the related task. The NRD will submit two (2) copies of the MIP Flood Engineering Report and other appropriate reports to the FEMA Assistance Officer for quarterly progress reporting.

The Project Officer, as needed, may request additional information on status on an ad hoc basis.

SECTION 11—PROJECT COORDINATION

Throughout the project, all members of the project team will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities shall include:

- Meetings, teleconferences, and video conferences with FEMA and other project team members on an ad hoc basis;
- Telephone conversations with FEMA and other project team members on an ad hoc basis;
- Updates to the MIP and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- E-mail, facsimile transmissions, and letters, as required.
- Project Team members shall meet with the Regional Management Center and/or FEMA quarterly to review the progress of the project. These meetings will be held via a conference call at a mutually agreeable time to be determined. Typically, the call will occur following the submittal of the quarterly progress report.

SECTION 12—POINTS OF CONTACT

The points of contact for this Flood Map Project are Robert Franke the FEMA Regional Project Officer; Paul Woodward, the Project Manager for CTP; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, any additional FEMA assistance should be requested through the FEMA Regional Project Officer.

Each party has caused this MAS to be executed by its duly authorized representative.

Marlin Petermann, P.E.
Assistant General Manager
Papio-Missouri River NRD


Roger M. Helgoth, P.E.

President
Kirkham Michael and Associates, Inc.

Date

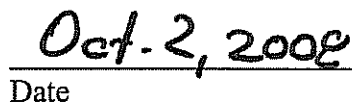

Date

Exhibit A

Counties that will include UMRSFSS-based data

Washington

EXHIBIT B

Summary of Deliverables provided to Mapping Partners

Mapping of the Upper Mississippi River System Flow Frequency Study (UMRSFFS)

Location of Data on the MIP: I:\FEMAR07\MISSOURI_29_StatewideData\UMRSFFS

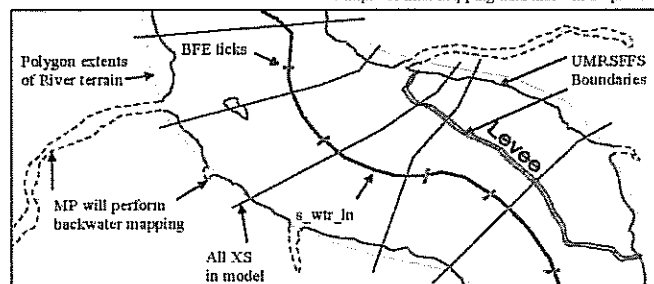
MISSOURI and

MISSISSIPPI RIVERS Note: The horizontal projection for all spatial files will be NAD 1983 StatePlane Missouri West FIPS 2403 Feet

Missouri River
Mississippi River

Deliverable	Details	Estimated Months Available
s_fld_haz_in	<p>**Provided county-by-county</p> <p>**Will contain "cleaned" 100-yr/500-yr boundaries for the river (small islands deleted, etc.) Larger islands will be left to the discretion of the mapping partner to delete/keep based on the panel size</p> <p>**Will not contain limit lines (LOS, LODS)</p> <p>**Will include floodway lines as the Corps provided them. MP may have to adjust the floodway line to be at the landward toe of the levee if the floodway limit is at the levee.</p> <p>**Will not be provided in polygon format</p> <p>**Boundaries will extend to end of river bluff-to-bluff terrain only. MP will have to merge backwater with incoming tribs and "close off" gaps in the boundary with supplemental topo data in the county for areas where the UMRSFFS topo ends (see diagram below)</p> <p>**No assessment of levees will be made. MP will have to decide to cut the mapping off at the levees or keep the floodplain as fully extended based on whether the levee provides protection.</p> <p>**Will be provided as a separate file for each county. The s_fld_haz_in file in each county will be cleaned and clipped just outside of the county boundary. MP will have to clip it to the final county boundary during their mapping process.</p> <p>**Boundary will be FBS-compliant (results of the FBS check will be provided)</p>	<p>All UMR MO River Map Mod counties available by end of May 2008</p> <p>All UMR MS River Map Mod counties available by end of October 2008</p>
s_perimeter	<p>**Provided for entire extents of the river</p> <p>**Terrain DCS file that will be available on the MIP to view extents of terrain</p>	AVAILABLE
s_xs	<p>**Provided for entire extents of the river</p> <p>**MP will have to clip out the cross-sections for their county</p> <p>**The following information will be populated for each cross-section: XS_LN_ID; STREAM_STN; WTR_NM; WSEL_REG; LEN_UNIT; V_DATUM. And other required Appendix L fields (including XS_LTR and XS_LN_TYP) will have to be populated by the MP.</p> <p>**The 500-yr elevation from the UMRSFFS UNET model at each XS will be added into the shapefile as additional information, although this field should be removed before finalizing the s_xs layer in the final DFIRM database.</p> <p>**WSEL_REG will be in NAVD88 and will match the 100-yr elevation from the HEC-RAS model</p>	AVAILABLE
s_wtr_in	<p>**Provided for the entire extents of the river</p> <p>**The modeled stream centerline will be provided as one feature in the s_wtr_in file</p> <p>**Will be populated by defining the WATER_TYP element as PROFILE BASELINE</p> <p>**MP will have to clip out the line for their county</p> <p>**The following fields will be populated: WTR_LN_ID; WATER_TYP; WTR_NM. All other required fields will have to be populated by the MP.</p>	<p>AVAILABLE</p> <p>April 2008</p>
BFE tick shapefile	<p>**Will <i>not</i> be submitted in s_bfe format</p> <p>**Provided county-by-county</p> <p>**Will contain the raw output from WISE, showing the location of natural (whole foot) and significant break BFE lines. Panel edge BFEs will not be provided.</p> <p>**Significant break BFE lines will show both the rounded (ELEV field) and unrounded (ELEV_DEC field) elevations in the attribute table of the shapefile provided.</p> <p>**Lines provided will just be short tick marks to show location. MP will have to select which BFEs to print and will have to extend/orientate the BFEs. MP may also have to create panel edge BFEs once panel layout in their county is finalized.</p>	<p>All UMR counties by end of May 2008</p> <p>All UMR counties by end of Oct 2008</p>
Flood Profiles	<p>**Provided county-by-county</p> <p>**Will show the 10-, 50-, and 500-yr elevations from the UMRSFFS UNET model & the 100-yr elevation from the HEC-RAS model</p> <p>**Will be provided in digital (*.dwg) AutoCAD 2006 format - PDFs will not be provided</p> <p>**Profiles will show all cross-sections in the model so that MP can "pick and choose" which ones to print on the maps</p> <p>**MP will have to edit profiles based on final cross-section lettering selection</p> <p>**Road crossings w/ structure symbols will be included on the profiles</p> <p>**Road names should be verified by the MP using the final base data in their county</p> <p>**MP will have to add in tributary confluence locations, limits of flooding affecting community notes, corporate limits, or other notes on the profiles using county data</p> <p>**MP will have to adjust the profile number (lower right corner of profile) to fit in with the overall county FIS profiles</p> <p>**Profile border will be to FEMA spec</p> <p>**Profiles will be created at either a 1" = 1 river mile or 1" = 2 river miles scale (preference being 1" = 2 miles)</p>	<p>All UMR counties by end of May 2008</p> <p>All UMR counties by end of Oct 2008</p>
Floodway Data Tables (FDTs)	<p>**Provided county-by-county</p> <p>**FDTs will show all cross-sections in the model so that MP can "pick and choose" which ones to print on the maps</p> <p>**MP will have to change FDTs based on final cross-section lettering selection</p> <p>**Elevations provided will be in NAVD88 and will match elevations from the HEC-RAS model</p>	<p>End of May 2008</p> <p>End of Oct 2008</p>
FIS Report text/tables	<p>**Provided county-by-county</p> <p>**FIS report text and tables documenting the UMRSFFS data will be provided</p> <p>**MP will have to incorporate the write-up and tables into the countywide FIS report for their county</p>	<p>End of May 2008</p> <p>End of Oct 2008</p>

Sample of final mapping data that will be provided



[illegible]

Papio-Missouri River Natural Resources District
Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska

EXHIBIT B

Owner's Responsibilities

In addition to other responsibilities of Owner as set forth in this agreement, Owner at its expense:

- A. Furnish to Engineer any other available information pertinent to the project including reports and relative to previous designs, or investigation at or adjacent to the site.
- B. Set up, organize and pay for location and public relations costs for the three open meeting that will be required to perform this project. (Dates for these meetings are found in the project schedule.)
 - a. Initial meeting to collect data
 - b. Meeting to provide information on the current status of the project
 - c. Final meeting to the public to explain the findings from the project
- D. Fulfill the responsibilities of the Cooperating Technical Partners (CTP) partnership and advise the Engineer in a timely fashion regarding agreement milestones.
- E. Provide and maintain in writing the identification of the Point of Contact for the Owner on project coordination and review.

Papio-Missouri River Natural Resources District

**Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska**

EXHIBIT C

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

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A and the Scope of Work, as follows:

1. Engineer’s total compensation for Basic Services under Paragraph C2.01 shall consist of an amount equal to the cumulative hours charged to the Project by each class of Engineer’s employee(s) time’s standard hourly rates for each applicable billing class for all services performed on the Project, plus reimbursable expenses and engineer’s consultant’s charges.
2. Engineer’s standard hourly rate schedule (entitled Kirkham Michael 2008-2009 Billing Rates”) is attached to and incorporated by reference in this Exhibit C as Appendix A.
3. Engineer’s estimate of total compensation for services under Paragraph C2.01 (Basic Services performed on the Project, plus Reimbursable Expenses and Engineer’s Consultant’s charges) is expected to total \$204,483.00, as shown on Exhibit C, Appendix B.
4. Engineer may alter its distribution of compensation and expenses among the individual phases of the work, to be consistent with services actually rendered, however, and notwithstanding any other provision of this Agreement, Engineer’s total compensation under Paragraph C2.01 for Engineer’s Basic Services, reimbursement for Engineer’s Reimbursable Expenses and reimbursement for Engineer’s Consultant’s Charges, shall not exceed the total estimated compensation amount of \$204,483.00, unless the amounts so exceeding such maximum amount are pre-approved in writing by Owner in advance of being incurred.

5. The total estimated compensation for Engineer's services included in the breakdown by phases as noted in Paragraph C2.01 incorporated all labor, overhead, profit, Reimbursable Expenses, and Engineer's Consultant's charges.
6. The amounts billed for Engineer's services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer's Consultant's charges.
7. Owner shall pay Engineer for all Reimbursable Expenses at the rates set forth in this Exhibit C.
8. 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.
9. 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.
10. 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.
11. 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.

C2.02 Compensation For Additional Services – Standard Hourly Rates 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 Exhibit A, except for services as a consultant or witness under Exhibit A, an amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class for all Additional Services performed on the Project,

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 A to this Exhibit C.
2. Reimbursable Expenses include the following categories: transportation and subsistence incidental thereto; 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 authorization 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 Additional Services.
4. The Reimbursable Expense Schedule will be adjusted annually (as of January 1st) to reflect equitable changes in the compensation payable to Engineer.

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.
2. 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.

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 A to this Exhibit C.
2. Reimbursable Expenses include the following categories: transportation and subsistence incidental thereto; 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 authorization 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 Additional Services.
4. The Reimbursable Expense Schedule will be adjusted annually (as of January 1st) to reflect equitable changes in the compensation payable to Engineer.

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.
2. 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.

Papio-Missouri River Natural Resources District

**Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska**

**Exhibit C - Appendix A
Kirkham Michael 2008-2009 Billing Rates**

Project Labor Category	Billing Rates *
Principal/ Sr. Engineer	\$195.00
Quality Manager	\$190.00
Technical Advisor	\$160.00
Project Manager	\$153.00
Data Collection Manager	\$120.00
Senior GIS Analyst	\$81.00
Certified Flood Manager	\$130.00
Map Production Specialists	\$100.00
Project Engineer	\$82.00
GIS Tech	\$72.00
Survey Manager	\$150.00
Project Surveyor	\$96.00
Survey Crew Chief	\$72.00

* Billing Rates are Valid for 2008-2009

Reimbursable Expenses	Billing Rate
Mileage	\$0.58/mile
Cost per Copy, 8.5 x 11, single side, B&W	\$0.06
Cost per Copy, 8.5 x 11, single side, Color	\$0.15
Sub consultants	Cost plus 10%

**Reimbursable Billing Rate times 2 for 2-sided and/or single sided 11x17 and times 4 for double-side 11x17

Papio-Missouri River Natural Resources District
Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska

Exhibit C - Appendix B
Engineer's Estimate of Total Compensation for Services

<u>Washington County, Nebraska</u>	<u>Hours</u>	<u>Fee Breakdown</u>
Acquire Base Map	91	\$9,313
Perform Floodplain Mapping and Develop DFIRM Database and Graphics	1,782	\$173,936
Produce Preliminary Map Products	209	\$21,014
Total Fee for Basic Services:	2,082	\$204,483

Papio-Missouri River Natural Resources District

**Update Flood Hazard Data and Digital Flood Insurance Rate Maps
for Washington, County, Nebraska**

EXHIBIT G

Insurance

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

G6.04 Insurance

A. The limits of liability for the insurance required by paragraph 6.04.A and 6.04.B of the Agreement are as follows:

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: \$100,000.00 per accident

Professional Malpractice

- i) \$1,000,000.00 each claim
- ii) \$2,000,000.00 aggregate

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 and advertising injury
- v) \$ 300,000.00 fire damage
- vi) \$ 5,000.00 medical expense

Business Auto Liability – Owned, Non-Owned and Hired Vehicles

\$1,000,000.00 combined single limit

General Provisions:

- i) All policies shall be endorsed to have any annual aggregate apply on a per project basis or, instead of obtaining such endorsements, the A/E shall purchase and maintain and until the expiration of two years after completion of the project, a policy of umbrella insurance with the limits of at least \$1,000,000.
- ii) All policies shall be endorsed to provide 30 days written notice to the NRD prior to termination or change in the coverage provided.
- iii) The Papio-Missouri River NRD reserves the right to approve the A/E's insurers.
- iv) Workers Compensation and Commercial General Liability policies shall be endorsed to provide Waiver of Subrogation in favor of the Papio-Missouri River NRD.
- v) The Commercial General Liability policy shall be endorsed to include the Papio-Missouri River NRD as Additional Insured (Form CG 20 10).