DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
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CENWD-RBT

14 DEC 2012

MEMORANDUM FOR Commander, Kansas City District

SUBJECT: Review Plan (RP) Approval for Highway C Weldon Fork Bridge, Grundy County, Missouri – Section 14 Emergency Streambank Stabilization Definite Project Report

1. References:

a. RP for Highway C Weldon Fork Bridge, Grundy County, Missouri – Section 14 Emergency Streambank Stabilization Definite Project Report, 4 December 2012 (Encl).

b. EC 1165-2-209 Change 1, Civil Works Review Policy, 31 January 2012.

2. Reference 1.a. above has been prepared in accordance with reference 1.b. above.

3. The RP has been coordinated with the Business Technical Division, Northwestern Division, U.S. Army Corps of Engineers, which is the lead office and point of contact to execute this plan. The Review Plan includes District Quality Control and Agency Technical Review and has been coordinated with Business Technical Division as the Review Management Office (RMO). The RMO Point of Contact is Steve Bredthauer, 503-808-4053.

4. I hereby approve this RP, which is subject to change as circumstances require, consistent with the study development process and the Project Management Business Process. Subsequent revisions to this RP or its execution will require written approval from this office.

5. For further information, please contact Mr. Jeremy Weber at (503) 808-3858.

Encl

ANTHONY C. FUNKHOUSER, P.E.
COL, EN
Commanding

CF: CENWD-PDD

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REVIEW PLAN

USING THE NWD MODEL REVIEW PLAN

for

Continuing Authorities Program

Section 14, 107, 111, 204, 206, 208, 1135 and projects directed by guidance to use CAP procedures

HIGHWAY C WELDON FORK BRIDGE
GRUNDY COUNTY, MISSOURI

SECTION 14 EMERGENCY STREAMBANK STABILIZATION
DEFINITE PROJECT REPORT (DPR)
Kansas City District

4 Dec 2012

MSC Approval Date: *14 December 2012*
Last Revision Date: *none*
Project P2 Number: 333681

US Army Corps of Engineers ®

REVIEW PLAN
USING THE NWD MODEL REVIEW PLAN

HIGHWAY C WELDON FORK BRIDGE DPR
GRUNDY COUNTY, MISSOURI

SECTION 14 EMERGENCY STREAMBANK STABILIZATION PROJECT

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Highway C Weldon Fork Bridge Grundy County, Missouri, Section 14, Definite Project Report (DPR).

Section 14 of the Flood Control Act of 1946, as amended, authorizes the US Army Corps of Engineers (USACE) to study, design and construct emergency streambank and shoreline works to protect public services including (but not limited to) streets, bridges, schools, water and sewer lines, National Register sites, and churches from damage or loss by natural erosion. It is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Additional Information on this program can be found in Engineering Regulation 1105-2-100, Planning Guidance Notebook, Appendix F Amendment #2.

b. Applicability. This review plan is based on the NWD Model Review Plan for Section 14, 107, 111, 204, 206, 208, 1135 and authorities directed by guidance to follow CAP procedures, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in EC 1165-2-209 Civil Works Review Policy.

c. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
(2) EC 1105-2-412, Model Certification, 31 May 2005
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
(5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(6) Continuing Authority Program Planning Process Improvements, Director of Civil Works' Policy Memorandum #1, 19 Jan 2011

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this review plan. The RMO for Section 14 projects is the Northwestern Division (NWD). NWD will coordinate and approve the review plan and manage the Agency Technical Review (ATR). The Kansas City District will post the approved review plan on its public website and provide the appropriate NWD District Support Planner with the link. A copy of the approved review plan (and any updates) will be provided to the Flood Risk Management Planning of Expertise (FRM-PCX) to keep the PCX apprised of requirements and review schedules.

3. PROJECT INFORMATION

a. Decision Document. The Highway C Weldon Fork Bridge Grundy County, Missouri, Section 14 project decision document will be prepared in accordance with ER 1105-2-100, Appendix F. The approval level of the decision document (if policy compliant) is NWD. An Environmental Assessment (EA) will be completed during Design and Implementation (DI) as defined by the Project Management Plan and the model Project Partnership Agreement, History and applicability found at http://www.usace.army.mil/Missions/CivilWorks/ProjectPartnershipAgreements/model_cap.aspx.

b. Study/Project Description: The Highway C Weldon Fork Bridge, Grundy County Missouri Section 14 Emergency Streambank Stabilization Project addresses bank instability and slope stability problems of Weldon Fork Grand River and roadway embankments in the vicinity of Missouri Highway C, owned/operated/maintained by Missouri Department of Transportation (MoDOT) – Northwest District. Erosion along the Weldon Fork Grand River banks has put the roadway and bridge in danger. The Weldon Fork Grand River flow and soil conditions at this location have caused river bank instability and potential abutment slope stability problems. A series of high flow events is likely to erode the banks further and put the bridge and roadway embankment in a state of immediate risk.

Types of measures to be considered include Longitudinal Peaked Stone Toe Protection (LPTSP) with Bendway Weirs and Stone Slope Revetment, Straight Dikes and Stone Slope Revetment, out from bank LPSTP and Stone Slope Revetment, and L-Head Dikes and Stone Slope Revetment, which are all typical solutions for this type of erosion issue. With a range in total project cost of $1,300,000 to 1,600,000 that will be cost shared with the Non-Federal Sponsor, Missouri Department of Transportation (MODOT).

There are no existing or anticipated policy waivers required for this project. This project is not likely to involve significant threat to human life nor is it likely to contain influential scientific information or be a highly influential scientific assessment. This project is not likely to have significant economic, environmental, and social affects to the nation as listed in EC 1105-2-410 Para 8f. Due to the information presented and in accordance with EC 1165-2-209 Appendix D Para 1 a Type 1 IEPR is not required.

c. In-Kind Contributions. No in-kind products are anticipated.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC prior to ATR. The Kansas City District shall manage DQC.

5. AGENCY TECHNICAL REVIEW (ATR)

One ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.), however additional ATRs may be performed if deemed warranted. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel. The ATR team lead will be from outside NWD.

a. Required ATR Team Expertise

ATR Team Members/Disciplines	***Expertise Required***
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section 14 decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in Section 14 riverine projects. The overall objective for the reviewer will be to verify that the decision document and is completed and consistent with established policies and procedures and that all assumptions are clearly justified and valid. The planning reviewer will serve as the ATR Lead.
Economics	The Economics reviewer will have a thorough understanding of socioeconomic analysis in CAP and flood risk management type projects.
Cost Engineer	The cost engineer reviewer will be certified and assigned by the cost DX.
Hydraulic Engineering	The hydraulic engineering reviewer will have a thorough understanding of streambank protection methods as well as flow related causes of bank erosion.
Civil / Geotechnical Engineering	The Civil / Geotechnical engineering reviewer will have a thorough understanding of streambank protection methods. For the Section 14 program, engineers familiar with streambank protection and related site design can be utilized in combined roles due to the small and specialized nature of projects that have lower risk than a traditional flood risk project.

b. Charge Document. The district will prepare the charge document which clearly identifies the review requirements. This document must be completed prior to requesting an ATR team.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-2-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

6. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

7. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

For CAP projects, ATR of the costs may be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost DX. The pre-certified list of cost personnel has been established and is maintained by the Cost DX. The cost ATR member will coordinate with the Cost DX for execution of cost ATR and cost certification. The Cost DX will be responsible for final cost certification and may be delegated at the discretion of the Cost DX. The cost estimates will be prepared in accordance with and reviewed for compliance with ER 1110-1-1300, Cost Engineering Policy and General Requirements, guidance / procedures applicable to CAP projects as provided at the Cost DX Web Page http://www.nww.usace.army.mil/Missions/CostEngineering.aspx, and other applicable references.

8. MODEL CERTIFICATION AND APPROVAL

Approval of planning models under EC 1105-2-412 is not required for CAP projects. MSC commanders remain responsible for assuring the quality of the analyses used in these projects. ATR will be used to ensure that models and analyses are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports.

a. **EC 1105-2-412.** This EC does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC and ATR.

b. **Planning and Engineering Models.** The following models are anticipated to be used in the development of the decision document: None.

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	
HEC-RAS	Hydraulic modeling of stream flow	Approved

9. REVIEW SCHEDULES AND COSTS

ATR Schedule and Cost. The ATR will commence in June 2012 and conclude in August 2012 with a total cost of $10,500.

10. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments. The NEPA document Public Notice will be released during DI. Both Federal and State agencies and public input of the document will be solicited over a 30-day comment period. It is unlikely the project will be controversial and should not

cause significant public dispute as to the size, nature, or effects of the project or to the economic or environmental costs or benefits for the project.

11. REVIEW PLAN APPROVAL AND UPDATES

The NWD Commander is responsibe for approving this review plan and ensuring that use of the NWD Model Review Plan is appropriate for the specific project covered by the plan. The review plan is a living document and may change as the study progresses. The Kansas City District is responsible for keeping the review plan up to date. Minor changes to the review plan since the last approval are documented in Attachment 3. Significant changes to the review plan (such as changes to the scope and/or level of review) should be re-approved by the NWD following the process used for initially approving the plan. Significant changes may result in the NWD determining that use of the NWD Model Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209. The latest version of the review plan, along with the Commander's approval memorandum, will be posted on the home district's webpage.

12. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

- CPT Damon Slaughter, Project Manager, Kansas City District 816-389-3711
- John Grothaus, CAP Program Manager, Kansas City District 816-389-3110
- Jeremy Weber, Jeremy.j.weber@usace.army.mil, 503-808-3858

ATTACHMENT 1: TEAM ROSTERS

PRODUCT DELIVERY TEAM (PDT)

Discipline	Name	Office Symbol/Agency	Telephone Number
Project Manager & Plan Formulation	[redacted]	[redacted]	[redacted]
Project Manager, A-E Services PDT	[redacted]	[redacted]	[redacted]
Environmental Resources Specialist	[redacted]	[redacted]	[redacted]
Cultural Resources	[redacted]	[redacted]	[redacted]
Hydraulic Engineer, A-E Services PDT	[redacted]	[redacted]	[redacted]
Geotechnical Engineer, A-E Services PDT	[redacted]	[redacted]	[redacted]
Cost Estimator	[redacted]	[redacted]	[redacted]
Real Estate	[redacted]	[redacted]	[redacted]
Economist	[redacted]	[redacted]	[redacted]

DISTRICT QUALITY CONTROL (DQC) TEAM

Discipline	Name	Office Symbol/Agency	Telephone Number
Plan Formulation	[redacted]	[redacted]	[redacted]
Environmental Resources Specialist	[redacted]	[redacted]	[redacted]
Hydraulic Engineer	[redacted]	[redacted]	[redacted]
Geotechnical Engineer	[redacted]	[redacted]	[redacted]
Real Estate	[redacted]	[redacted]	[redacted]
Cost Estimator	[redacted]	[redacted]	[redacted]
Economist	[redacted]	[redacted]	[redacted]

ATR TEAM

Discipline	Name	Office Symbol/Agency	Telephone Number
ATR Lead & Plan Formulation	[redacted]	[redacted]	[redacted]
Hydraulic Engineer	[redacted]	[redacted]	[redacted]
Cost Estimator	[redacted]	[redacted]	[redacted]
Civil/Geotechnical Engineering	[redacted]	[redacted]	[redacted]
Economist	[redacted]	[redacted]	[redacted]

ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the Highway C, Weldon Fork Bridge, Grundy County, Missouri, Section 14 Definite Project Report (DPR). The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks™.

[redacted] Date

ATR Team Leader
CESWT-PE-P

[redacted] Date

Project Manager
CENWK-PM-PF

[redacted] Date

Review Management Office Representative
CENWD-PDD

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

[redacted] Date

Continuing Authorities Program Manager
CENWK-PM-P

[redacted] Date

Chief, Planning Branch
CENWK-PM-P

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NER	National Ecosystem Restoration
ASA(CW)	Assistant Secretary of the Army for Civil Works	NEPA	National Environmental Policy Act
ATR	Agency Technical Review	NHPA	National Historic Preservation Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
CWA	Clean Water Act	OMB	Office and Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement, and Rehabilitation
DQC	District Quality Control/Quality Assurance	OEO	Outside Eligible Organization
DX	Directory of Expertise	OSE	Other Social Effects
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PAC	Post Authorization Change
EO	Executive Order	PMP	Project Management Plan
ER	Engineer Regulation	PL	Public Law
FDR	Flood Damage Reduction	POH	U.S. Army Corps of Engineers, Honolulu District
FEMA	Federal Emergency Management Agency	POD	U.S. Army Corps of Engineers, Pacific Ocean Division
FRM	Flood Risk Management	QMP	Quality Management Plan
FSM	Feasibility Scoping Meeting	QA	Quality Assurance
GRR	General Reevaluation Report	QC	Quality Control
HEP	Habitat Equivalency Protocol	RED	Regional Economic Development
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMC	Risk Management Center
IEPR	Independent External Peer Review	RMO	Review Management Organization
ITR	Independent Technical Review	RTS	Regional Technical Specialist
IWR	Institute of Water Resources	SAR	Safety Assurance Review
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
NED	National Economic Development	WRDA	Water Resources Development Act