Kentucky Transportation Cabinet
Expedited Bridge Replacement Study

PROJECT INFORMATION

County: Fleming
Road Name: Metcalf Mill Road
Route Number: KY 560

Bridge ID: 035B00085N
Bridge MP: 3.832

Highway Plan Project Description:
REPLACE BRIDGE ON KY 560 OVER JOHNSON CREEK; (STRUCTURALLY DEFICIENT, SR = 65.5) 035B00085N

Milepoint: 3.832

- [x] Roadway classified as collector or local.
- [x] ADT less than 1,500.
- [x] Bridge replacement at current location or adjacent to existing bridge.
- [x] Temporary Traffic Control maintained on existing structure: part-width construction or adjacent temporary traffic control.
- [x] Existing structure's hydraulic performance is adequate.
- [x] Proposed project is not in a FEMA Zone AE regulatory area. Although the project is in a FEMA Zone AE, Central Office Drainage Branch has reviewed the site and approved its inclusion.

Categorical Exclusion Level 1

Potential for Effects Resulting from Project ☐ None ☑ Low ☐ High

(If effects potential is low or high, describe how project meets CE criteria and means to address outstanding issues)

A Biological Assessment for freshwater mussels, Short's goldenrod and running buffalo clover will be required next summer. It is expected that even with the seasonal restrictions for each species, that USFWS concurrence could be received prior to construction the following year. Additionally, an IBPCMOA, which could include payment into the IBCF and/or tree clearing restrictions, will be required prior to construction. An archaeology survey and PA Attachment may be required prior to R/W. None of these outstanding issues are expected to preclude the project from qualifying for a CE Level 1.

- [x] Reevaluation required prior to construction

The project described above has been determined to meet the Categorical Exclusion criteria established in 23 CFR 771.17 and the FHWA/KYTC Categorical Exclusion Agreement.

Approved by: Karen Mg Gw — District Environmental Coordinator — 15 Oct 2013 — Date

- [x] Yes, this project meets the conditions for being an Expedited Bridge Replacement Project.

Recommended by: _____ District TEBM for Project Development

Approved by: _____ Director, Division of Planning

Programming Information

Item No: _____ *Federal Project No.:* _____

Program No.: _____ *UPN:* (Function) (County #) (Route) (MP to & from)

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Expedited Bridge Replacement Study

I. PROJECT DATA

County: Fleming
Road Name: Metcalf Mill Road
Route Number: KY 560

Bridge ID: 035B00085N
Bridge MP: 3.832

Functional Class.: ☑ Local ☐ Collector ☐ Urban ☑ Rural

Route on ☐ NHS

Truck Class.: A **% Trucks:** _____ **Terrain:** Mountainous

ADT (current): 315 (12) (Year)

MPO Area: Not Applicable

Existing Bike Accommodations: Shared Lane **Ped:** ☐ Sidewalk

Roadway Data:	**Existing**
No. of Lanes	2
Lane Width	10'
Shoulder Width	6'
Max. Superelevation	6%
Minimum Radius	229.18'
Maximum Grade	14.27%
Minimum Sight Dist.	150'
Sidewalk Width(urban)	NA
Clear-zone	Unknown

Bridge Data:

Bridge Number	035B00085N	Existing Rdwy. Plans available?
Sufficiency Rating	36.4	☑ Yes ☐ No
Total Length	154.25'	Year of Plans: 1988
Width, curb to curb	26.9'	
Span Lengths	47.5'-58.1'-47.5'	
Year Built	1988	Existing Geotech data available?
Posted Weight Limit	14 Tons Gross	☑ Yes ☐ No
Structurally Deficient?	Yes	
Functionally Obsolete?	No	

Notes:
Existing structure is a three-span PPC box beam bridge with concrete abutments founded on steel piling and piers founded on spread footers.

II. PROJECT SUMMARY

A. Purpose, Need & Project Estimate

In order to maintain connectivity, the purpose of the project is to replace the deficient bridge.

Project Estimate

Phase	Estimate
Design	$ 400,000
R/W	$ 100,000
Utilites	$ 100,000
Const	$ 1,000,000
TOTAL	**$ 1,600,000**

B. Project Approach

This bridge was built in 1988. The primary structural issue with this bridge is the condition of the PPC box beams. The substructure is in good condition according the the most recent bridge inspection report (6-3-13). Consideration should be made to replace superstructure only. If superstructure only is replaced, existing width may allow partial-width replacement while leaving one lane open to traffic at all times. Otherwise, new bridge would likely be constructed at the same location of existing bridge. Due to the size of the waterway, an on-site diversion would likely not be considered. Consideration should be considered for either partial-width construction or total road closure.

III. Photos and/or Maps

IV. Categorical Exclusion Level 1
Summary

Effects Potential (scale of effects and potential to influence project schedule)

None	Potential to significantly affect Air Quality
Low	Potential to significantly affect any cultural or archaeological resources
None	Potential to affect historic properties or other Section 4(f) resources
	☐ can be addressed through standard practices (programmatic agreements, deminimis, etc.)
Low	Potential to significantly impact any federally listed, threatened or endangered species
None	Potential to significantly effect properties with hazardous materials concerns
None	Potential to significantly impact Waters of the U.S. or Commonwealth
None	Potential to significantly affect traffic noise
None	Potential to require relocations or other significant socioeconomic impacts (travel patterns, land use, or planned growth)

A. Air Quality

Project is in: ☑ Attainment area ☐ Nonattainment or Maintenance Area ☐ PM 2.5 County

☑ No potential to significantly affect Air Quality (attach PM 2.5 and MSAT documentation, as appropriate or note below intent to complete prior to construction)

This project is considered an exempt project per 40 CFR 93.126 (Safety - Reconstructing Bridge) and also because it has no meaningful impact on traffic volumes or traffic mix, and therefore, has no potential for meaningful MSAT impacts. The present ADT is 315. Air toxics analysis is an emerging field and current scientific techniques, tools, and data are not sufficient to accurately estimate human health impacts that would result from a transportation project in a way that would be useful to decision-makers. Appendix C of FHWA's "Interim Guidance on Air Toxic Analysis in NEPA Documents" should be consulted for further information.

B. Archaeology

	Yes	No
1) Is all area to be affected by the project previously disturbed or within existing ROW? (If YES, STOP- Bridge is unlikely to adversely affect archaeological resources)	☐	☑
2) Are known archaeological sites present (project may potentially affect archaeological resources; Discuss with SME and provide comment below)	☐	☑

☐ No effect to archaeological resources

☑ Archaeological resources may be present; investigation to be completed during detailed design. Impacts to archaeological resources are not expected and should not impede project development.

☐ Archaeological impacts are of such potential complexity project schedule is likely to be adversely affected.

An archaeology survey and PA Attachment might be required prior to R/W if the DEA Archaeologist deems it necessary. Although possible, it is unlikely that a site would be discovered that is worthy of preservation in place or total avoidance.

C. Threatened and Endangered Species

	Yes	No
1) Is the bridge over a KY DOW Special Use Water or within designated critical habitat? (If YES, STOP- Not eligible for EBRP; If NO, continue)	☐	☑
2) Does the county have federally listed fish and mussel species? (If NO, STOP; If YES, continue)	☑	☐
3) Does the bridge cross a stream with perennial flow? (If NO, STOP - No effect for mussels/fish species; If YES, continue)	☑	☐

4) Are any of the mussel/fish species typically found in smaller rivers and streams? (If NO, STOP; if YES, requires SME review to conduct Habitat Assessment) ☑ ☐

Additional Information required for possible effects assessment:

1) Will the bridge be replaced in the same location as existing?

2) Will the new bridge clear-span the stream?

- [x] Biological concerns unlikely to impede project development (For all appropriate species, conduct Habitat Assessment/Biological Assessment prior to construction)
- [ ] Biological concerns are of such complexity that project schedule is likely to be adversely impacted

A Habitat Assessment conducted by the DEA Biologist on September 23, 2013, revealed that marginal habitat is present for threatened and/or endangered mussel species. Therefore, a Biological Assessment will be required for the listed freshwater mussel species, as well as, Short's goldenrod and running buffalo clover. Even with the seasonal restrictions for these species, it is expected that the field work could be completed next summer, with USFWS concurrence received the following year, prior to construction. There is a nice riparian corridor at the site which likely contains potential habitat for Indiana bat. An IBPCMOA, which could include a payment into the IBCF and/or tree clearing restrictions, will be completed prior to construction.

D. Hazardous Materials

	Yes	No
1) Are potentially contaminated sites present?	☐	☑
2) Does bridge require inspection for asbestos containing materials?	☑	☐

- [x] Hazardous materials concerns are non-existent or routine in nature, will be addressed during detailed design and should not impede project development.
- [ ] Hazardous materials concerns are of such complexity that the project schedule is likely to be adversely affected.

Bridge is prestressed box beams.

E. Permitting

Check all that may apply: ☑ Waters of the US ☐ MS4 area ☐ Floodplain Impacts ☐ Navigable Waters Impacted

Are 401/404 Permits likely to be required? ☑ Yes ☐ No Impacts to: ☐ Wetlands ☑ Stream/Lake/Pond

☑ ACE LON ☐ ACE NW ☐ General WQC ☐ TVA

	Yes	No
1) Will the project affect more than 300 lf of stream? (If YES, STOP- Not eligible for EBRP; If NO, continue)	☐	☑
2) Will the project effect more than ½ acre of potential wetland? (If YES, STOP- Not eligible for EBRP; If NO, water related impacts not likely to impede project development)	☐	☑

- [x] Will not significantly impact Waters of the U.S. or Commonwealth. Stream and wetland impacts, if any, are routine in nature and will not require individual permits; Any required permits will be acquired during detailed design. Project development should not be impeded.
- [ ] Stream and/or wetland impacts exceed nationwide and general WQC thresholds. Project schedule is likely to be adversely impacted (Not eligible for EBRP).

F. Noise

	Yes	No
1) Are existing or planned noise sensitive receptors adjacent to the proposed project? (If NO, STOP- No effect for Noise Impacts; If YES continue)	☑	☐
2) Is this considered a "Type I Project" according to the KYTC Noise Analysis and Abatement Policy?	☐	☑

- [x] No noise related impacts predicted for the project
- [ ] Noise related impacts are unlikely but will be further assessed during detailed design prior to construction. Further assessment should not impede project development.
- [ ] Noise related impacts are of such complexity that project schedule is likely to be adversely affected.

Noise levels are not expected to increase or change with the replacement of the existing structure.

G. Socioeconomic Yes No

1) Are there any relocations required for construction of the project? (If YES, STOP- Does not meet criteria for EBRP; If NO Continue)	☐	☑
2) Will project require more than approximately one acre of fee simple R/W? (If YES, STOP- Project Does not meet criteria for EBRP; If NO, continue)	☐	☑

	Yes	No
3) Is ROW required from any federal agency?	☐	☑
4) Will project cause disproportionately high and adverse effects on any minority or low-income population in accordance with the provision of E.O. 12898 and FHWA Order 6640.23	☐	☑
5) Will project significantly affect land use, travel patterns or planned growth?	☐	☑

☑ Will have no significant Socioeconomic impacts

☐ Socioeconomic impacts are unlikely but will be further assessed during detailed design prior to construction. Further assessment should not impede project development.

☐ Socioeconomic impacts are of such complexity that project schedule may be adversely affected.

H. Section 106, 4(f) or 6(f) Resources

The following are present on the project:

	Yes	No
1) Does the project affect a park, wildlife refuge or recreation area (If YES, STOP- Not eligible for EBRP; If NO continue)	☐	☑
2) Is the bridge a truss (If YES, STOP- Not eligible for EBRP; if NO continue)	☐	☑
3) Is the bridge or do any of the surrounding properties appear to be greater than 50 years old? (If YES continue; If NO, STOP: No Effect to Historic Properties)	☐	☑
4) Was the bridge constructed after 1945? (If YES continue; If No, STOP- project will require SME review; If YES, continue)	☐	☐
5) Is the bridge of a common type covered by the FHWA Program Comment? (If YES continue; If NO, STOP-project will require SME review)	☐	☐
6) Are there any buildings or potentially important features (wells, barns, cemeteries, etc.) of the surrounding property that are more than 50 years old that will be impacted by the project (If YES, STOP - project will require SME review; If NO, STOP: No Effect/No Adverse Effect to historic properties)	☐	☐

☑ No potential to affect cultural historic resources, Section 4(f) or Section 6(f) resources

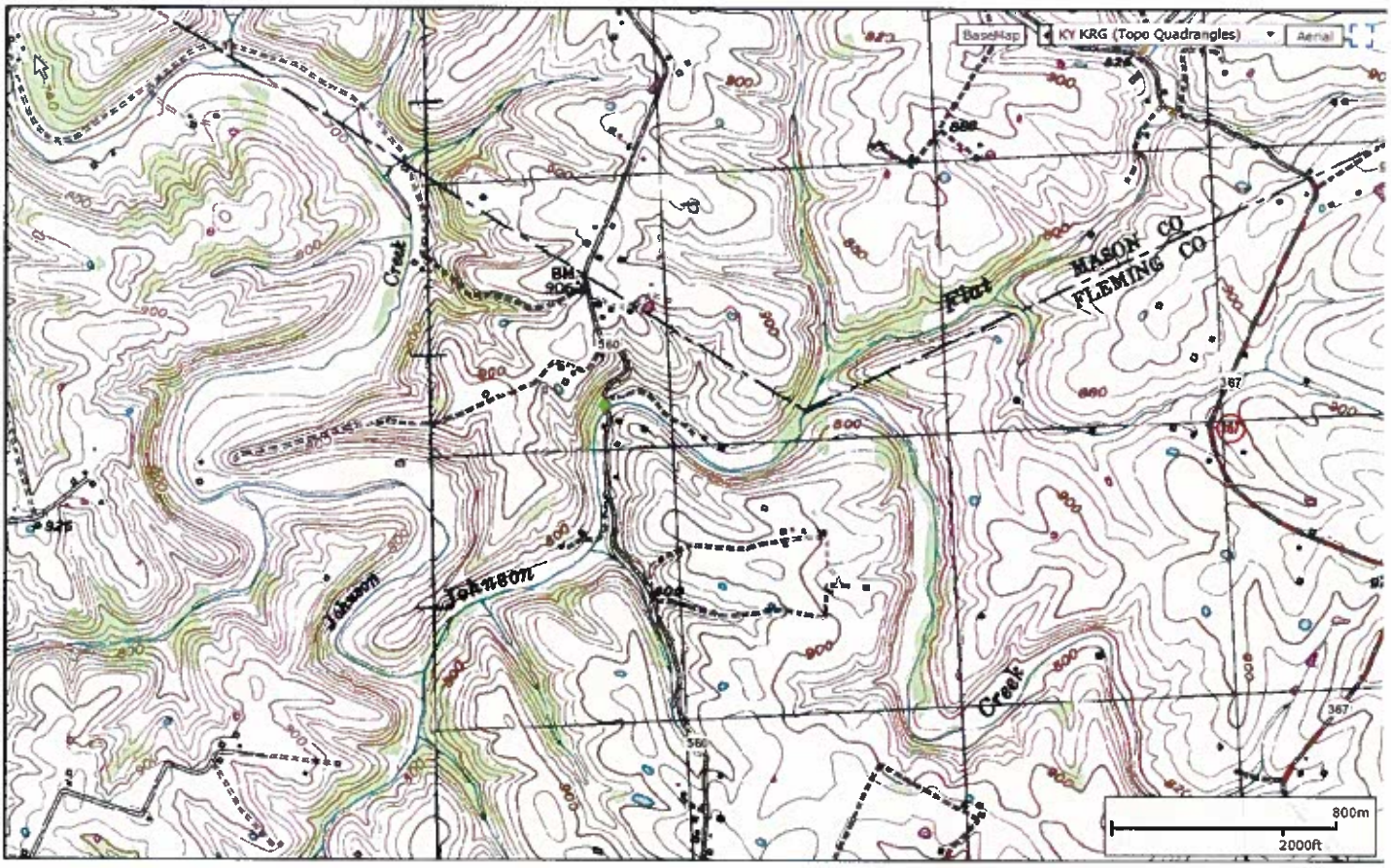
☐ No Potential to affect Section 4(f) or Section 6(f) resources other than cultural historic resources, which can be addressed through standard practices (Programmatic 4(f), deminimis, etc.) and should not impede project development

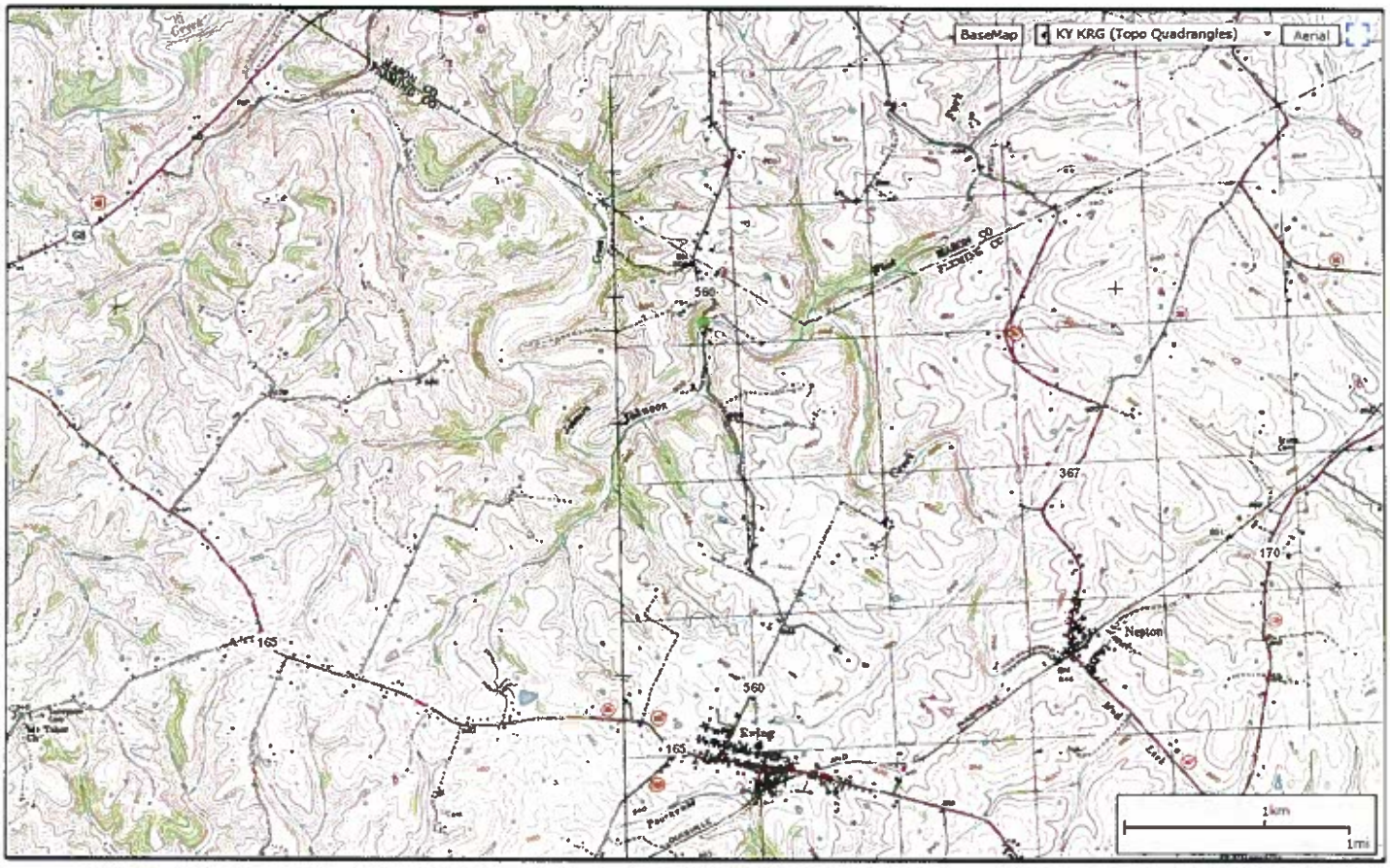
☐ Affects to cultural historic resources are of such complexity that the project schedule may be adversely affected

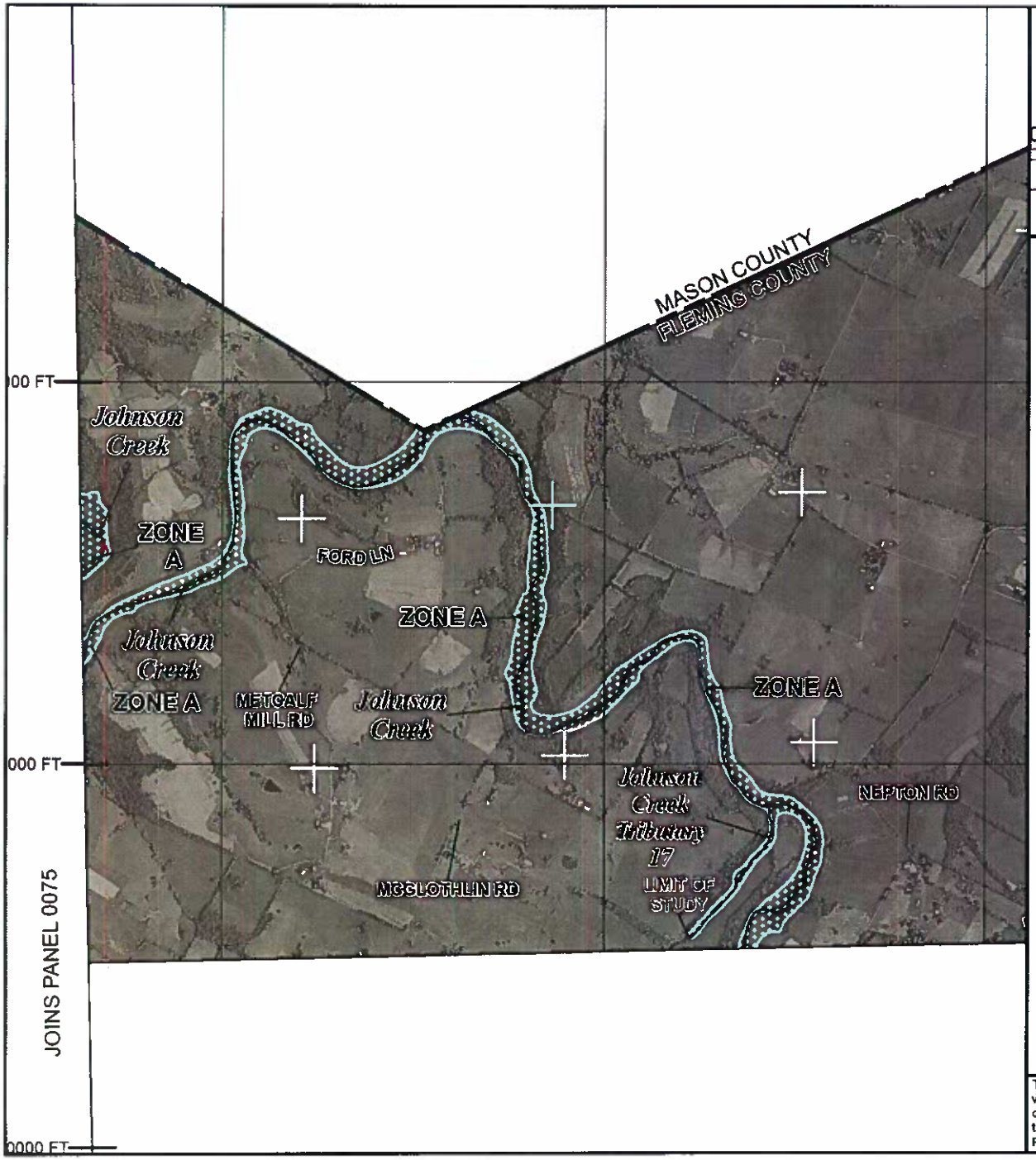
V. Additional Photos and/or Maps

BaseMap
2012 1-meter (NAIP, Statewid
Aerial
560
400m
1000ft

BaseMap
KY KRG (Topo Quadrangles)
Aerial
560
367
560
367
800m
2000ft


BaseMap
KY KRG (Topo Quadrangles)
Aerial
MASON CO
FLEMING CO
Flat
Creek
Johnson
Creek
800m
2000ft


BaseMap
KY KRG (Topo Quadrangles)
Aerial
Johnson
Nepton
Ewing
1km
1mi



MAP SCALE 1" = 2000'

00 0 2000 4000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0100C

FIRM
FLOOD INSURANCE RATE MAP

FLEMING COUNTY, KENTUCKY
AND INCORPORATED AREAS

PANEL 100 OF 350
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FLEMING COUNTY	210335	0100	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

EFFECTIVE DATE	MAP NUMBER
MAY 20, 2010	21069C0100C

Kentucky

State of Kentucky
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov