



TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

November 13, 2012

CALL NO. 102
CONTRACT ID NO. 124036
Addendum # 1

Subject: LOGAN County, HSIP 5069 (009)
Letting November 16, 2012

- (1) Revised - Table of Contents - Page 2 of 146
- (2) ADDED - Special Note - Pages 34(a)-34(ff) of 146
- (3) Revised - Bid Items - Pages 145-146 of 146

Proposal revisions are available at
<http://transportation.ky.gov/Construction-Procurement>

Plan Revisions are available at: <http://www.lynnimaging.com/kytransportation/>

If you have any questions, please contact us at (502) 564-3500.

Sincerely,

A handwritten signature in blue ink that reads "Ryan Griffith".

Ryan Griffith
Director
Division of Construction Procurement

RG:jj

Enclosures



An Equal Opportunity Employer M/F/D

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PART IV	INSURANCE
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TRANSPORTATION CABINET

Department of Highways District 3 Office
900 Morgantown Road
Bowling Green, KY 42101
(270) 746-7898

Steven L. Beshear
Governor

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Secretary

Categorical Exclusion for Minor Projects

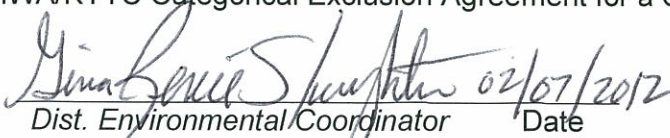
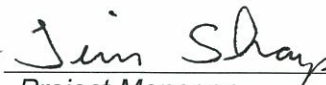
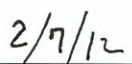
Project Type: *Highway Safety Improvement* **County :** *Logan* **Location:** *KY 100*
Project Description: *guardrail, drainage work and shoulder work*
Termini: *Mile Point 10*

The project as proposed,

- will not induce any significant impacts to planned growth or land use for the area;
- will not require relocations
- will not have a significant impact on any federally listed, threatened or endangered species
 - No Effect (Project Type: *Guardrail, shoulder work and establishing positive drainage*)
 - Not Likely to Adversely Effect (Attach finding/describe minimization measures)
- will not have a significant impact on any cultural or archaeological resource
 - No Effect No Adverse Effect (see comments and attach coordination letters/findings)
- will not have a significant impact on any (check all that apply and describe in Comments)
 - water fowl refuge recreational/park Cultural Resource other 4(f) resource
 - Deminimis* 4(f) completed and attached Programmatic 4(f) completed and attached
- will not involve significant air or noise impacts;
- will not have a significant impact on water quality;
Permits required: 401 404 Unknown (explain in comments)
- will not have significant impacts on travel patterns;
- will not otherwise, either individually or cumulatively, have any significant environmental impacts.

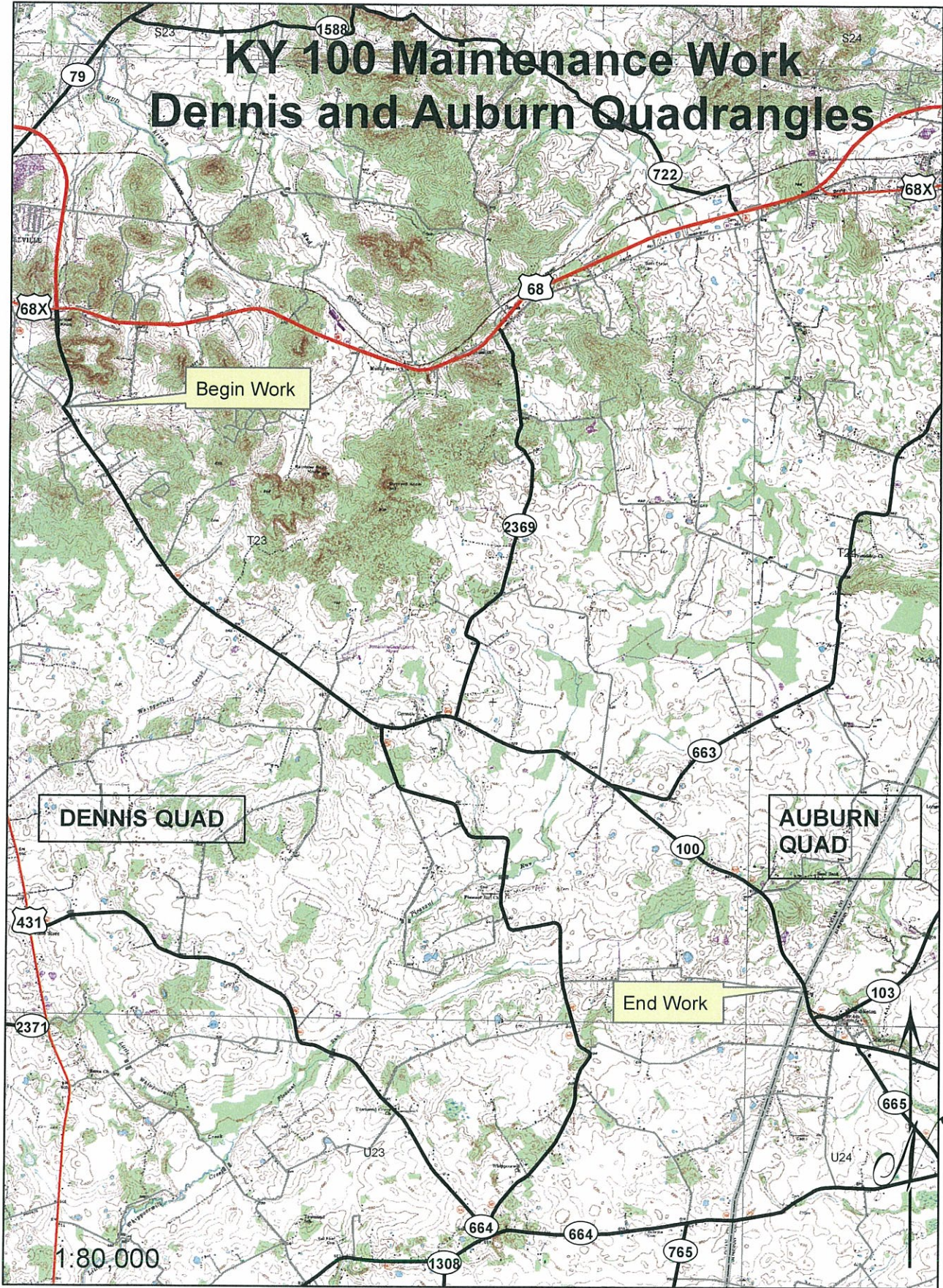
Comments: The project involves working on KY 100 shoulders and drainage pipes to provide good drainage along the roadway and safer shoulder by extending pipes and removing headwalls close to the roadway. Install guardrail in areas were the shoulders are steep. We must be diligent as to stay on existing ROW as there are many historic and archaeological sites along KY 100. Trees can only be cut between November 1 and March 31.

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

		
Dist. Environmental Coordinator	Project Manager	Date
Date: 02/07/2012		2/7/12

pc: Greg Rawlings, FHWA ; Ron Rigney, Program Management; DEA







**Kentucky Transportation Cabinet
Federal Highway Administration
NO EFFECT FINDING**



KYTC Item No:	03 - 0100 (HSIP)	Route:	KY 100
Quadrangle(s):	DENNIS AND AUBURN	County(ies):	Logan

Project Description: (Type of improvement, areas to be impacted, crossroad improvements, easements, etc.)

This is a HSIP project to improve road safety along KY 100. Road safety improvements consist of slight realignments in some areas and removal of ~40 trees for sight distance improvement. Existing culverts will not be removed, although they may be fortified.

LOGAN COUNTY LISTED SPP:

- Indiana Bat (*Myotis sodalist*) (USFWS, KDFWR, KSNPC)**
- Gray Bat (*Myotis grisescens*) (USFWS, KDFWR, KSNPC)**
- Fanshell (*Cyprogenia stegaria*) (USFWS)**
- Ring Pink (*Obovaria retusa*) (USFWS)**
- Littlewing Pearlymussel (*Pegias fabula*) (USFWS, KDFWR, KSNPC)**
- Slabside Pearlymussel (*Lexingtonia dolabelloides*) (USFWS, KSNPC)**
- Fluted Kidneyshell (*Ptychobranchnus subtentum*) (USFWS)**

This NE document will cover all listed mussel species and the gray bat. IB will be covered in another document.

Methodologies: (Methods of assessment, who, what, when, resources, etc.)

ArcMap (Aerial photographs, topographic maps, project area photos, and project plans)

KYTC biologists Nathan Click and district EC discussed project.

Results: (Compare habitat used by listed species with available habitat)

Mussels:
There are two stream crossings. Listed mussel species require cobble or large textured soil class substrate. They cannot tolerate slack water conditions or silt/sediment loaded systems as this “chokes” them out. The two streams present are heavily silted, shallow (< 1 ft.), and likely dry up in the summer months. Therefore these streams do not represent mussel habitat.

Mammals:
The gray bat uses streams for insect foraging corridors. The streams present at the project area are very small and would likely not entice bat usage as a feeding corridor. Although insects are present, the size of the streams and the surrounding landscape usage being heavily agriculture represents minimal habitat at best that is likely not used.

Determinations:

NO HABITAT, NO EFFECT for

Gray Bat (*Myotis grisescens*) (USFWS, KDFWR, KSNPC)

Fanshell (*Cyprogenia stegaria*) (USFWS)

Ring Pink (*Obovaria retusa*) (USFWS)

Littlewing Pearlymussel (*Pegias fabula*) (USFWS, KDFWR, KSNPC)

Slabside Pearlymussel (*Lexingtonia dolabelloides*) (USFWS, KSNPC)

Fluted Kidneyshell (*Ptychobranthus subtentum*) (USFWS)

The project has been assessed in accordance with the provisions of Section 7 of the Endangered Species Act. As a designated representative of the FHWA, the KYTC has determined that the project will have No Effect on any listed species or their critical habitat, and further Section 7(a)(2) consultation with the Service is not required.



KYTC Signature

1/10/2012

Date

Nathan Click

Print Name

E.A.T.S. Milestones updated

Nathan Click

Name

1/10/2012

Date



U.S. Fish & Wildlife Service
Kentucky Ecological Services Field Office

U.S. Fish & Wildlife Service
330 West Broadway, Rm 265
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate Species in <u>LOGAN</u> County, KY					
Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	<i>Myotis grisescens</i>	gray bat	E	K	
	<i>Myotis sodalis</i>	Indiana bat	E	K	
Mussels	<i>Pegias fabula</i>	littlewing pearlymussel	E	K	
	<i>Lexingtonia dolabelloides</i>	slabside pearlymussel	C	K	
	<i>Cyprogenia stegaria</i>	fanshell	E	P	
	<i>Obovaria retusa</i>	ring pink	E	P	
	<i>Ptychobranchus subtentum</i>	fluted kidneyshell	C	P	

Species Information

Federal Threatened, Endangered, and Candidate Species observations for selected counties

Linked life history provided courtesy of [NatureServe Explorer](#).

Records may include both recent and historical observations.

[US Status Definitions](#) [Kentucky Status Definitions](#)

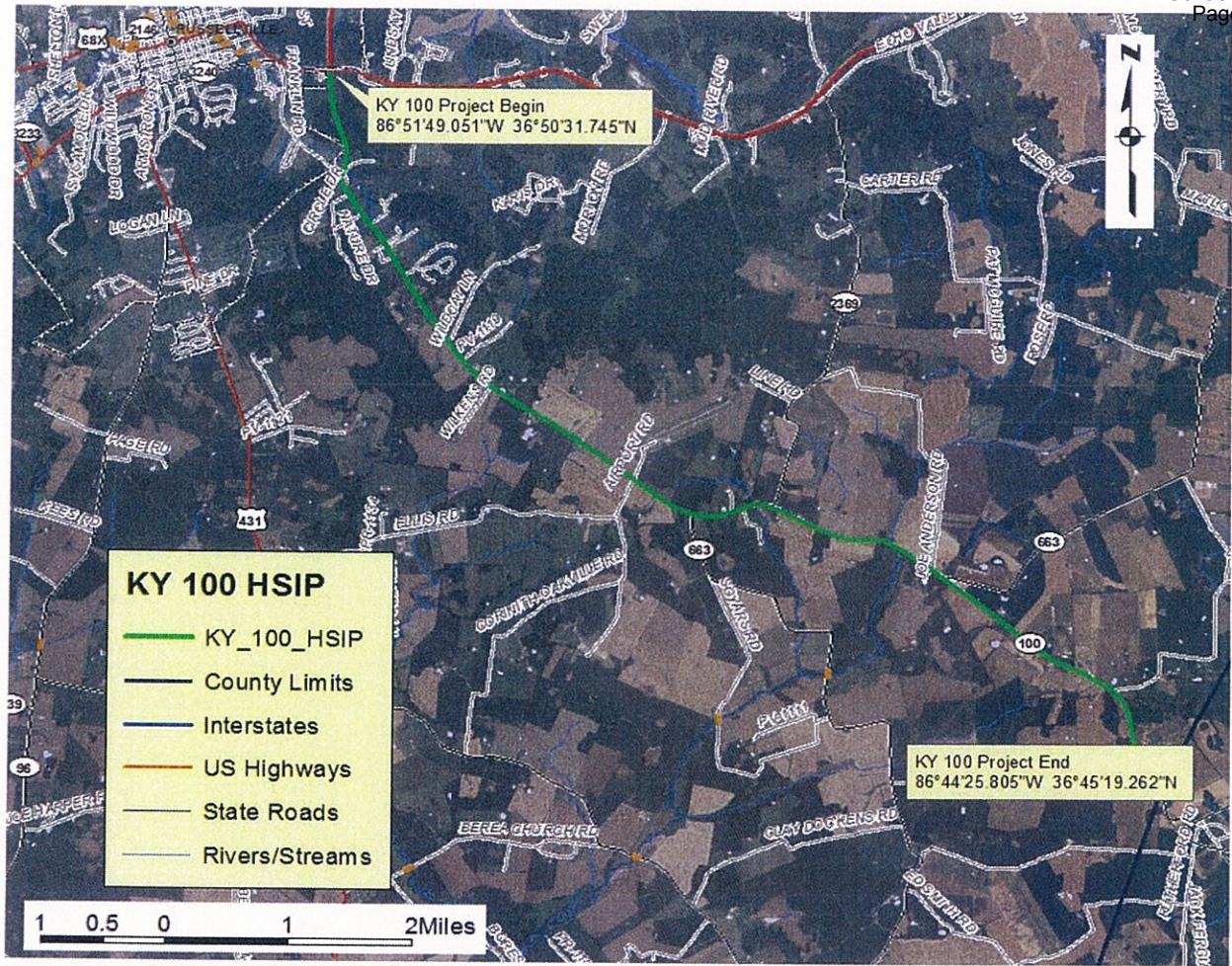
List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.

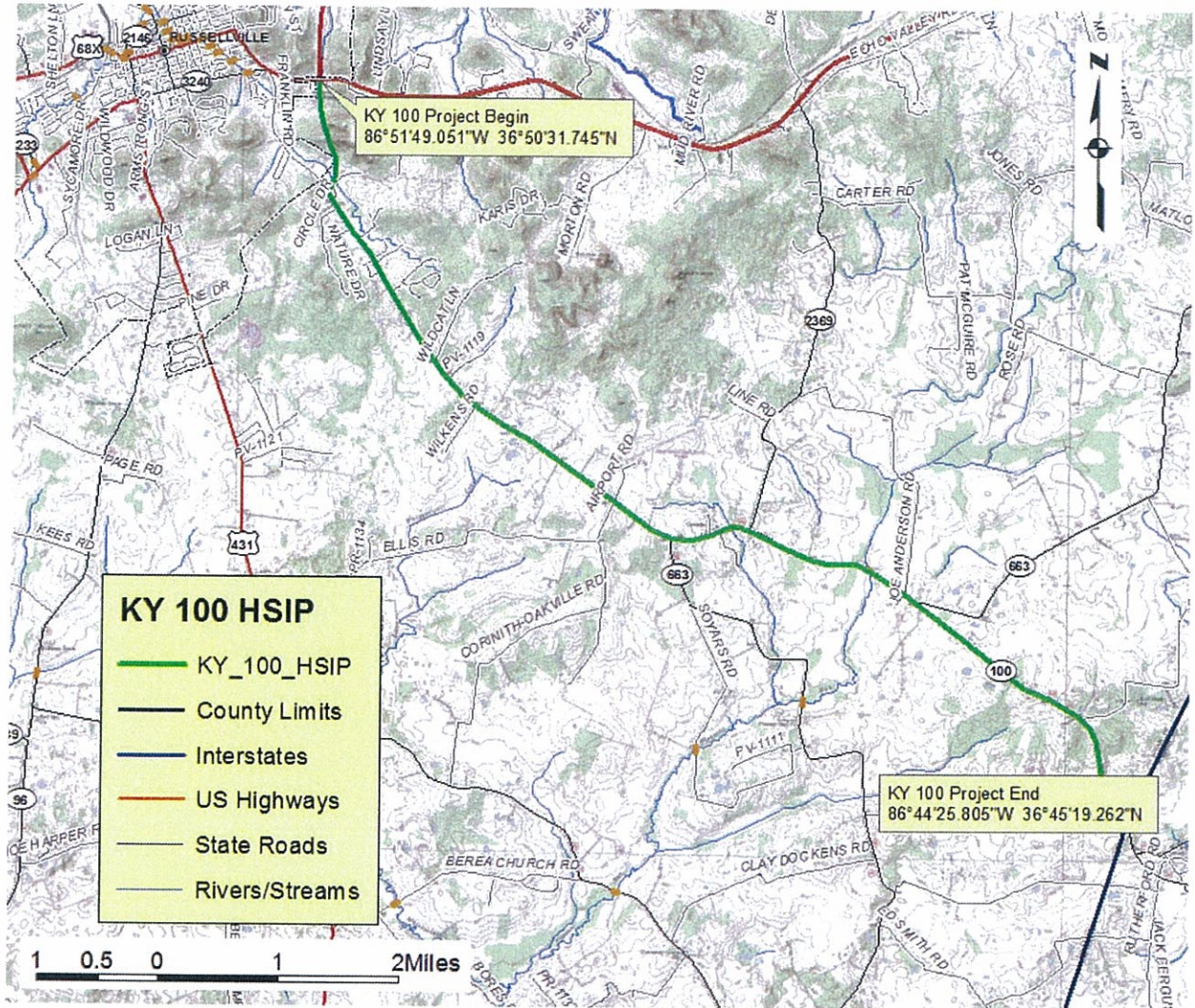
Selected county is: Logan.

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
Myotis grisescens	Gray Myotis	Mammalia	Logan	LE	T	Yes	Reference
Myotis sodalis	Indiana Bat	Mammalia	Logan	LE	E	Yes	Reference
Nerodia erythrogaster neglecta	Copperbelly Water Snake	Reptilia	Logan	PS:LT	S	Yes	Reference
Pegias fabula	Littlewing Pearlymussel	Bivalvia	Logan	LE	E	Yes	Reference

4 species are listed

Logan	Vascular Plants	<i>Adiantum capillus-veneris</i>	Southern Maidenhair-fern	T /	G5 / S2S3	10.00	0	0	0
Logan	Vascular Plants	<i>Aureolaria patula</i>	Spreading False Foxglove	S /	G3 / S3	30.00	0	0	0
Logan	Vascular Plants	<i>Baptisia australis var. minor</i>	Blue Wild Indigo	S /	G5T5 / S2S3	11.00	0	0	0
Logan	Vascular Plants	<i>Bouteloua curtipendula</i>	Side-oats Grama	S /	G5 / S3?	60.00	0	0	0
Logan	Vascular Plants	<i>Carex gigantea</i>	Large Sedge	E /	G4 / S1S2	10.00	0	0	0
Logan	Vascular Plants	<i>Cheilanthes alabamensis</i>	Alabama Lipfern	H /	G4G5 / SH	01.00	0	0	0
Logan	Vascular Plants	<i>Dalea purpurea</i>	Purple Prairie-clover	S /	G5 / S3?	40.00	0	0	0
Logan	Vascular Plants	<i>Delphinium carolinianum</i>	Carolina Larkspur	T /	G5 / S1S2	40.00	0	2	0
Logan	Vascular Plants	<i>Dodecatheon frenchii</i>	French's Shooting Star	S /	G3 / S3	01.00	0	0	0
Logan	Vascular Plants	<i>Echinodorus tenellus var. parvulus</i>	Dwarf Burhead	E / SOMC	G3Q / S1	10.00	0	0	0
Logan	Vascular Plants	<i>Fimbristylis puberula</i>	Chestnut Sedge	T /	G5 / S2	20.00	0	0	0
Logan	Vascular Plants	<i>Forestiera ligustrina</i>	Upland Privet	T /	G4G5 / S2S3	50.00	0	0	0
Logan	Vascular Plants	<i>Gentiana puberulenta</i>	Prairie Gentian	E /	G4G5 / S1	20.00	0	0	0
Logan	Vascular Plants	<i>Isoetes butleri</i>	Butler's Quillwort	E /	G4 / S1	10.00	0	0	0
Logan	Vascular Plants	<i>Juncus filipendulus</i>	Ringseed Rush	T /	G5 / S2?	01.00	0	0	0
Logan	Vascular Plants	<i>Leavenworthia torulosa</i>	Necklace Gladiolus	T /	G4 / S2	20.00	0	1	0
Logan	Vascular Plants	<i>Malvastrum hispidum</i>	Hispid Falsemallow	T /	G3G5 / S2?	10.00	0	0	0
Logan	Vascular Plants	<i>Muhlenbergia cuspidata</i>	Plains Muhly	T /	G4 / S2	10.00	0	0	0
Logan	Vascular Plants	<i>Muhlenbergia glabrifloris</i>	Hair Grass	S /	G4? / S2S3	10.00	0	0	0
Logan	Vascular Plants	<i>Oenothera triloba</i>	Stemless Evening-primrose	T /	G4 / S1S2	20.00	0	0	0
Logan	Vascular Plants	<i>Onosmodium molle</i>	Soft-hairy False-gromwell	H /	G4G5 / SH	00.00	0	1	0
Logan	Vascular Plants	<i>Prenanthes aspera</i>	Rough Rattlesnake-root	E /	G4? / S1	10.00	0	0	0
Logan	Vascular Plants	<i>Schoenoplectus hallii</i>	Hall's Bulrush	E / SOMC	G2G3 / S1	10.00	0	0	0
Logan	Vascular Plants	<i>Siphium pinnatifidum</i>	Tansy Rosinweed	S /	G3Q / S3	40.00	0	0	0
Logan	Vascular Plants	<i>Symphotrichum pratense</i>	Barrens Silky Aster	S /	G4? / S3	10.00	0	0	0
Logan	Vascular Plants	<i>Symphotrichum priceae</i>	White Heath Aster	E /	G3G5 / S1	10.00	0	1	0
Logan	Vascular Plants	<i>Talinum calcaricum</i>	Limestone Fameflower	E /	G3 / S1	10.00	0	0	0
Logan	Vascular Plants	<i>Viola septemloba var. egglestonii</i>	Eggleston's Violet	S /	G4 / S3	10.00	0	0	0
Logan	Aquatic Snails	<i>Leptoxis praerosa</i>	Onyx Rocksnail	S / SOMC	G5 / S3S4	50.00	0	0	0
Logan	Aquatic Snails	<i>Pleurocera alveare</i>	Rugged Hornsnail	S / SOMC	G3 / S3S4	30.00	0	0	0
Logan	Aquatic Snails	<i>Pleurocera curta</i>	Shortspire Hornsnail	S / SOMC	G2 / S2	00.00	1	0	0
Logan	Terrestrial Snails	<i>Rabdotus dealbatus</i>	Whitewashed Rabdotus	T /	G5 / S1S2	30.00	0	0	0
Logan	Freshwater Mussels	<i>Alasmidonta marginata</i>	Elktoe	T / SOMC	G4 / S2	00.00	1	0	0
Logan	Freshwater Mussels	<i>Epioblasma triquetra</i>	Snuffbox	E / PE	G3 / S1	00.00	2	0	0
Logan	Freshwater Mussels	<i>Lexingtonia dolabelloides</i>	Slabside Pearlymussel	X / C	G2 / SX	00.00	0	2	0
Logan	Freshwater Mussels	<i>Pegias fabula</i>	Littlewing Pearlymussel	E / LE	G1 / S1	10.00	1	0	0
Logan	Freshwater Mussels	<i>Pleurobema oviforme</i>	Tennessee Clubshell	E / SOMC	G2G3 / S1	10.00	5	0	0
Logan	Freshwater Mussels	<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot	T / C	G3G4T3 / S2	20.00	4	0	0
Logan	Freshwater Mussels	<i>Toxolasma lividus</i>	Purple Lilliput	E / SOMC	G2 / S1	10.00	3	1	0
Logan	Freshwater Mussels	<i>Villosa lienosa</i>	Little Spectaclecase	S /	G5 / S3S4	01.00	0	0	0
Logan	Freshwater Mussels	<i>Villosa ortmanni</i>	Kentucky Creekshell	T / SOMC	G2 / S2	30.00	1	1	0
Logan	Freshwater Mussels	<i>Villosa vanuxemensis vanuxemensis</i>	Mountain Creekshell	T /	G4T4 / S2	70.00	6	0	0
Logan	Crustaceans	<i>Orconectes pellucidus</i>	Mammoth Cave Crayfish	S / SOMC	G4 / S3	10.00	0	0	0
Logan	Crustaceans	<i>Orconectes ronaldi</i>	Mud River Crayfish	T /	G3 / S2S3	30.00	0	0	0
Logan	Insects	<i>Pseudanophthalmus transfluvialis</i>	A Cave Obligate Beetle	S /	G1G2 / S1S2	01.00	0	0	0
Logan	Fishes	<i>Erimystax insignis</i>	Blotched Chub	E / SOMC	G4 / S1	60.00	0	0	0
Logan	Fishes	<i>Etheostoma cinereum</i>	Ashy Darter	S / SOMC	G2G3 / S3	01.00	0	0	0
Logan	Fishes	<i>Etheostoma microlepidum</i>	Smallscale Darter	E / SOMC	G2G3 / S1	40.00	0	0	0
Logan	Fishes	<i>Hybopsis amnis</i>	Pallid Shiner	E / SOMC	G4 / S1	01.00	0	0	0
Logan	Fishes	<i>Ichthyomyzon castaneus</i>	Chestnut Lamprey	S /	G4 / S2	01.00	0	0	0
Logan	Fishes	<i>Lepomis miniatus</i>	Redspotted Sunfish	T /	G5 / S2	30.00	0	0	0
Logan	Fishes	<i>Noturus exilis</i>	Slender Madtom	E /	G5 / S1	11.00	0	0	0
Logan	Amphibians	<i>Hyla gratiosa</i>	Barking Treefrog	S /	G5 / S3	150.00	0	0	0
Logan	Reptiles	<i>Nerodia erythrogaster neglecta</i>	Copperbelly Water Snake	S / SOMC	G5T3 / S3	10.00	0	0	0
Logan	Reptiles	<i>Thamnophis sauritus sauritus</i>	Eastern Ribbon Snake	S /	G5T5 / S3	11.00	0	0	0
Logan	Breeding Birds	<i>Aimophila aestivalis</i>	Bachman's Sparrow	E / SOMC	G3 / S1B	01.00	0	0	0
Logan	Breeding Birds	<i>Circus cyaneus</i>	Northern Harrier	T /	G5 / S1S2B,S4N	10.00	0	0	0
Logan	Breeding Birds	<i>Tyto alba</i>	Barn Owl	S /	G5 / S3	10.00	0	0	0
Logan	Mammals	<i>Myotis grisescens</i>	Gray Myotis	T / LE	G3 / S2	20.00	0	0	0
Logan	Mammals	<i>Myotis sodalis</i>	Indiana Bat	E / LE	G2 / S1S2	01.00	0	0	0
Logan	Communities	<i>Limestone barrens (open woodland)</i>		T /	GNR / S2	20.00	0	0	0
Logan	Communities	<i>Limestone slope glade</i>		S /	GNR / S2S3	40.00	0	0	0
Logan	Communities	<i>Limestone/dolomite prairie</i>		E /	GNR / S1	10.00	0	0	0
Logan	Communities	<i>Sinkhole/depression pond</i>		T /	GNR / S2	10.00	0	0	0
Logan	Communities	<i>Tallgrass prairie</i>		E /	GNR / S1	10.00	0	0	0
Logan	Communities	<i>Wet depression/sinkhole forest</i>		T /	GNR / S1S2	00.00	0	1	0







TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

January 11, 2012

Mr. Virgil Lee Andrews, Field Supervisor
USFWS, KY Frankfort Field Office
330 W. Broadway, Rm 265
Frankfort, KY 40601

Subject: HSIP project to improve road safety along KY 100
Logan County
Dennis and Auburn Quads
KYTC HSIP KY 100

Dear Mr. Andrews,

The Kentucky Transportation Cabinet (KYTC) has proposed safety improvement actions along approximately 10 miles of KY 100 in Logan County Southeast of Russelville. The surrounding landscape consists primarily of urban, rural residential and agricultural land use. The northern section of KY 100 lies ~ 1 mile East of Russelville and is surrounded by an urban/rural residential land use. The southern 2/3 of KY 100 is surrounded heavily by agricultural blocks of land use. The entire project occurs within **potential Indiana bat habitat** as determined by the United States Fish and Wildlife Service (USFWS).

The lat/longs for the beginning and ending of this project are as follows:

86°51'49.051"W x 36°50'31.745"N and 86°44'25.805"W x 36°45'19.262"N.

There are very few trees present within the project's disturbance area (39). KYTC wishes to **cut these trees between November 15th and March 31st.**



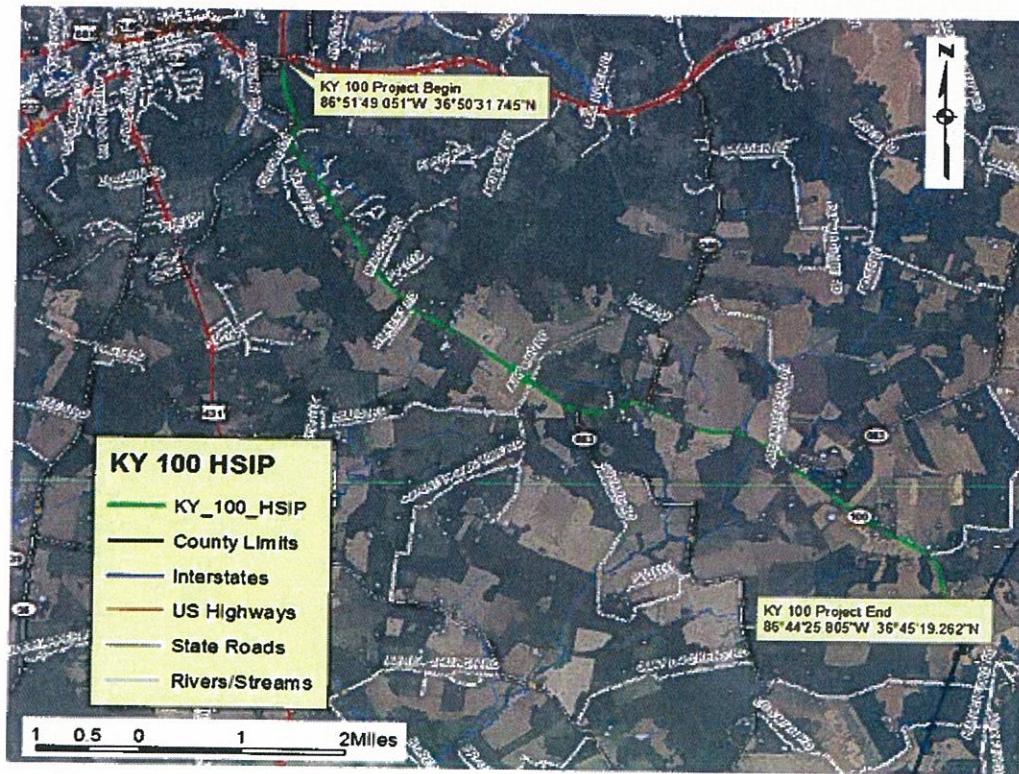
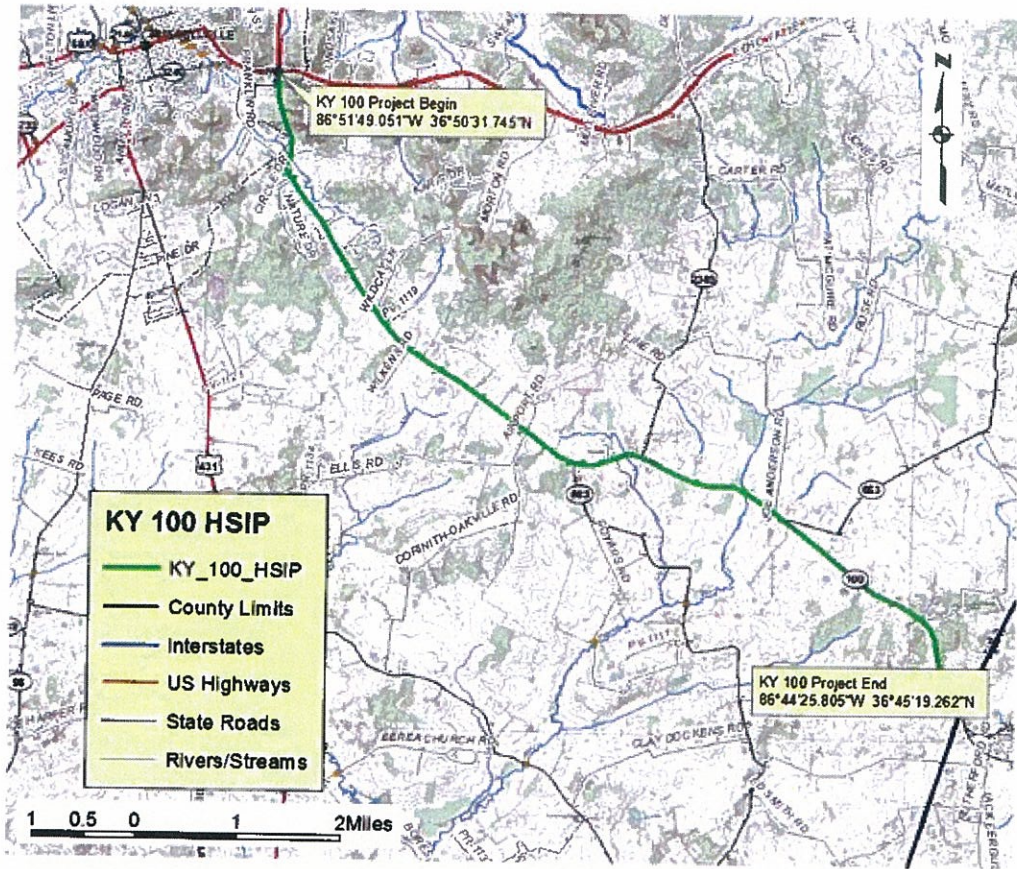
The trees in question grow directly alongside the existing roadway on KY 100 and have the size potential to be used by *Myotis sodalis*. **All 39 trees occur within potential Indiana bat habitat and will be impacted between November 15th and March 31st.** This is a request to enter into Indiana bat tree cutting restrictions in order to be compliant with Section 7(a)(2) of the Endangered Species Act of 1973. There should not be any direct effects to *M. sodalis*, since the trees will be cut when they are unoccupied; in effect, *M. sodalis* should not be indirectly affected by the nominal loss of roosting trees in poor habitat directly roadside. As a result of these tree cutting restrictions, KYTC feels the proposed project "may affect, is not likely to adversely affect" *M. sodalis*. Please contact KYTC biologist Nathan Click at (502) 564-7250 if you require any further information or details.

Sincerely,



David M. Waldner, P.E., Director
Division of Environmental Analysis

NDC
Attachments
Renee Slaughter (D-3 EC) (PDF ONLY)
Scott Schurman (D-3 EPM) (PDF ONLY)
Nathan Click (DEA Biologist) (PDF ONLY)
Derek Adams (D-3 EPC) (PDF ONLY)
Project File with attachments
Reading File



KYTC Historic Architectural Investigation Form

KYTC Item No: HSIP

County: Logan

Route: KY 100

Project Description: Guardrail Replacement on KY
100 from Russellville to the
Simpson Co. Line

Project Type listed in Attachment 1 (in Section 106 Programmatic Agreement)?

Yes

No (Continue)

Project Type listed in Attachment 2 (in Section 106 Handbook)?

Yes (List project activity types) #9 Modernization of Highway facilities

No (This project is not considered a small scale project under the Section 106 Programmatic Agreement. This checklist cannot be used. Process with full baseline or joint memorandum)

No (However, SHPO has agreed that this project may be documented using the Historic Architectural Investigation Form)

Project Area of Potential Effect is defined as:

Within 150 feet of project centerline (Small Scale Project - within existing corridor)

Within view shed of project (Discuss): _____

Other (Discuss): _____

Are there Historical Resources within the project APE (per KHC database)?

- Yes
- No
- N/A (Explain):

Are there Historical Resources (50 years old or older) identified within the project APE?

- Yes
- No

Date of Field Investigation: January 2012

Investigator Name(s): Rebecca Horn Turner

Discuss Basis for finding (Historic Mapping, PVA, Building Permit, Date of Construction, Deed/Title, etc.):

Site check, windshield survey

NRHP listed or potentially eligible sites/districts (> 50 years old) are:

- Present within the APE (Continue)

Sections below to be completed by KYTC Architectural Historian

Discuss eligibility determinations (criteria, integrity):

Sites 1-4 (See attached)

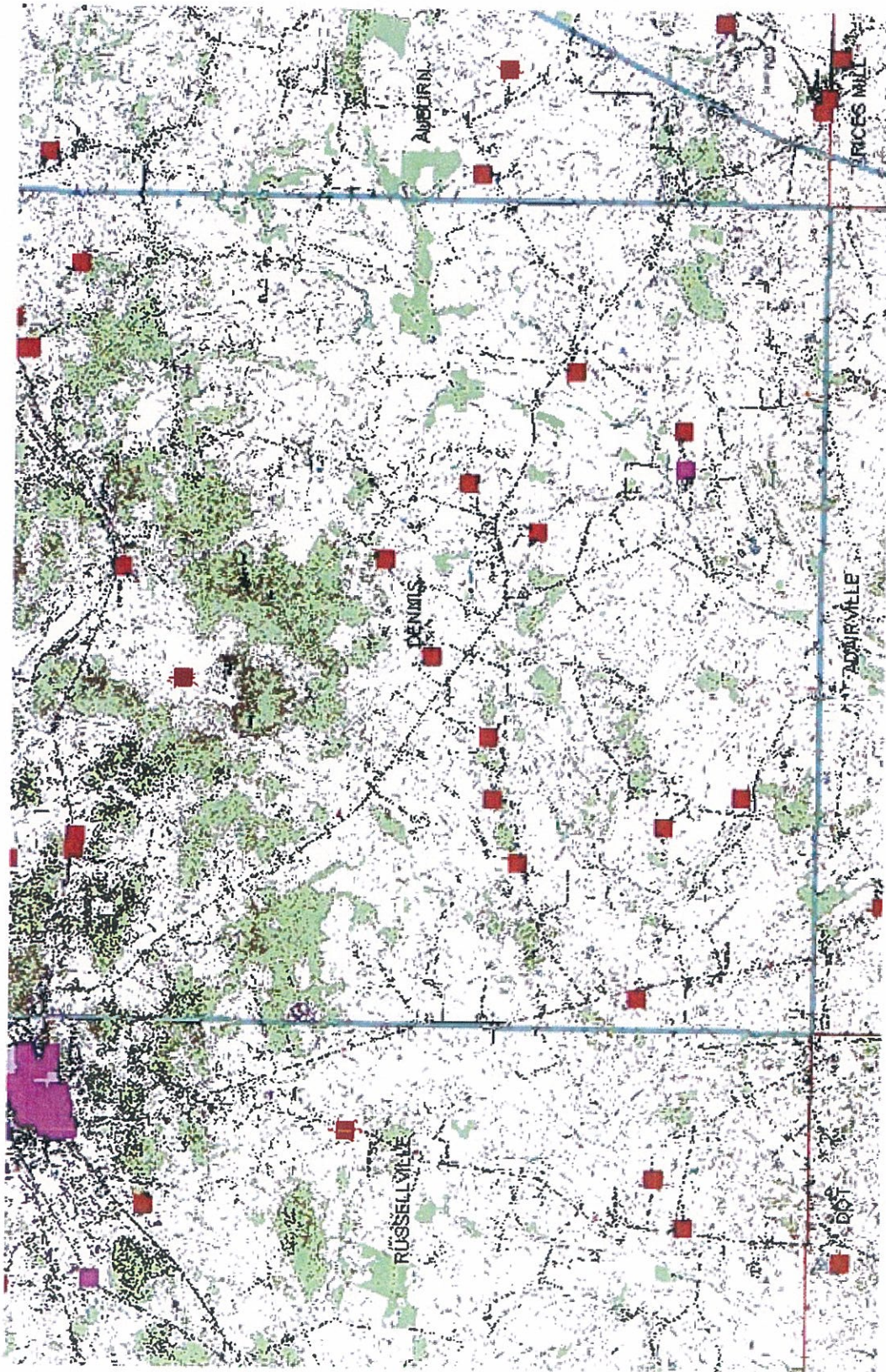
Determination of Effect (when eligible sites have been identified):

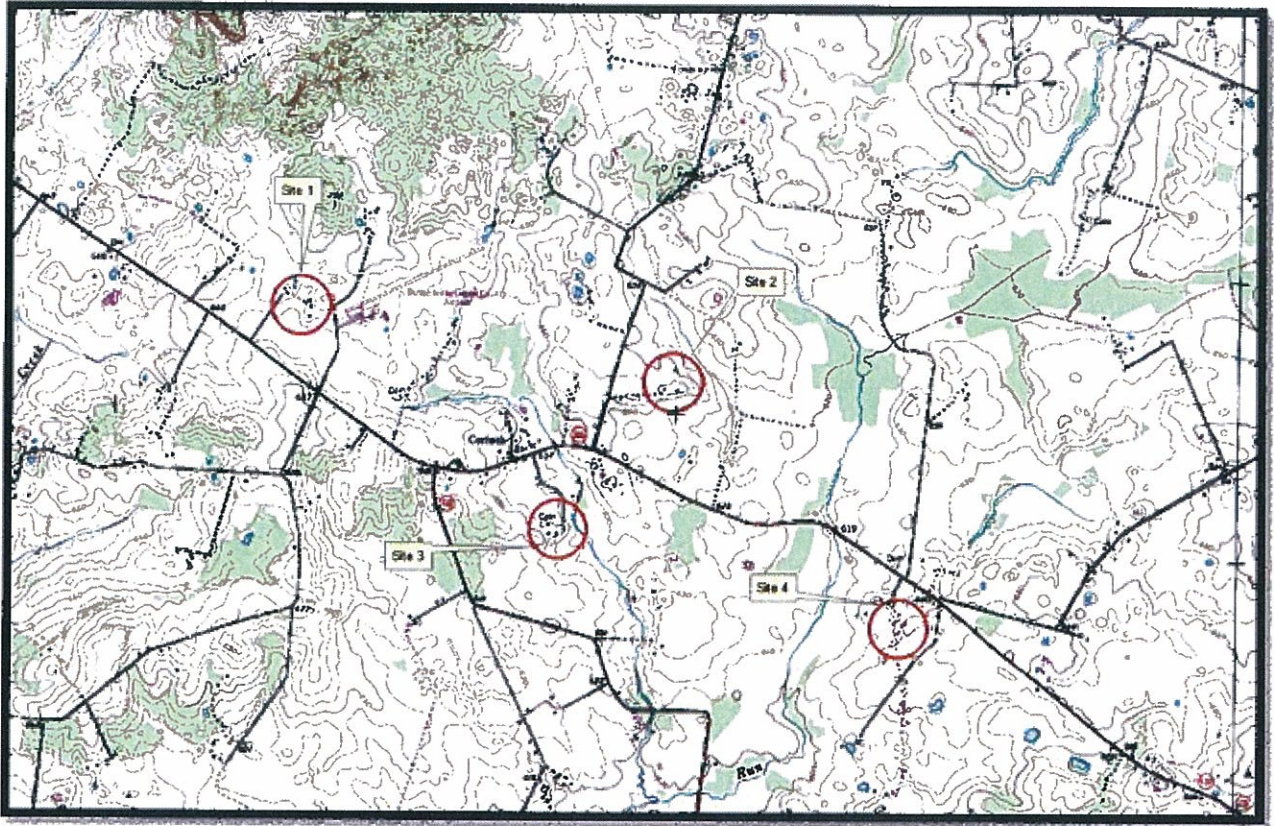
- No Historic Properties Affected
- No Adverse Effect (May result in Section 4(f) *De minimis* finding – Document appropriately)
- Adverse Effect

Version 1.0
June 14, 2011

Discuss No Effect/No Adverse Effect Determination:
The work will be completed in the current Right of Way.

<input checked="" type="checkbox"/> No Historic Properties	HSIP Logan Co. KY 100
<input type="checkbox"/> No Adverse Effect to Historic Properties	
As Determined By: <u>Rebecca W. Turner</u> <u>1/30/12</u> KYTC HISTORIAN Date	<u>[Signature]</u> <u>2/6/12</u> SHPO Representative Date
Attachments:	
<input checked="" type="checkbox"/> Map Showing APE and identified Historic Resources	
<input checked="" type="checkbox"/> Individual Site Maps	
<input checked="" type="checkbox"/> Photographs	
<input checked="" type="checkbox"/> Project Plans	
<input checked="" type="checkbox"/> KHC Site Survey Forms	
<input type="checkbox"/> Other (Describe): _____	
<input checked="" type="checkbox"/> Copy EPM	
<input checked="" type="checkbox"/> Copy DEC	
<input checked="" type="checkbox"/> Copy DEA Architectural Historian	
<input checked="" type="checkbox"/> Copy FHWA (w/De minimis Memo if appropriate)	
<input checked="" type="checkbox"/> Copy SHPO	





Location of Sites along KY 100 in Logan County, Kentucky (Dennis Quad)

Site 1 – LO 118 – Farm House (outside project limits)

Site 2 – LO 109 - House Site (outside project limits)

Site 3 – LO 48 – Linton House

Site 4 – LO 47 - Herndon Orndorff House

Version 1.0
June 3, 2010

KYTC Archaeological Investigation Form

KYTC Item No: HSIP County: Logan
Route: KY100 Project Description: Modernization of a KY100 by
USGS Quad Name: Dennis, Auburn resurfacing, restoration,
USGS Date: 52(83), 54(94) rehabilitation, and reconstruction.
UTM Coordinates (Project center point)
Zone: 16 17
Easting: 515643
Northing: 4072110

Project Type listed in Attachment 1 (in Section 106 Programmatic Agreement)?

Yes (list project activity types) _____

No (Continue)

Project Type listed in Attachment 2 (in Section 106 Handbook)?

Yes (list project activity types) 9

Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing, shoulders). When adding through lanes on an interstate or interstate-like freeway, consultation and approval from FHWA is required.

Are all new or existing ROW areas previously disturbed?

Yes (Describe disturbance or basis for conclusion. Attach photos or maps):

All work to be done within existing right-of-way.

Version 1.0
June 3, 2010

No Historic Properties Affected

As Determined By:

James Lee Anon 01/25/2012

KYTC Representative **Date**

Attachments

- Project Plans (show date on plans)
- Photos
- Mapping
- Other: Old Plans
- Copy EPM
- Copy DEC
- Copy DEA Archaeologist
- Copy SHPO

[Handwritten signature and date 1/30/2012 over a faded stamp]

If the project plans change then additional archaeological survey may be required. If human remains are discovered or a previously unidentified archaeological site is encountered, work must cease and the KYTC Division of Environmental Analysis be notified immediately.

KyTC BMP Plan for Project PCN ## - #####



Kentucky Transportation Cabinet

Highway District 3 (1)

And

_____ **(2), Construction**

Kentucky Pollutant Discharge Elimination System

Permit KYR10

Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Item No. 3-914.00

KY 100

Logan County

Project: PCN ## - ##### (2)

KyTC BMP Plan for Project PCN ## - ####

Project information

Note – (1) = Design (2) = Construction (3) = Contractor

1. Owner – Kentucky Transportation Cabinet, **District 3(1)**
2. Resident Engineer: (2)
3. Contractor name: (2)
Address: (2)

Phone number: (2)
Contact: (2)
Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number (2)
5. Route (Address) **US68 Russellville, KY 42276**
6. Latitude/Longitude (project mid-point) **36° 47' 34" N; -86° 49' 07" W (1)**
7. County **Logan (1)**
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KyTC BMP Plan for Project PCN ## - #####

A. Site description:

1. Nature of Construction Activity: **Extending culverts and correcting drainage issues along KY 100 West of Russellville to Simpson County line.**
2. Order of major soil disturbing activities **(2) and (3)**
3. Projected volume of material to be moved **580 Cubic yards of Embankment (1)**
4. Estimate of total project area **1.36 acres (1)**
5. Estimate of area to be disturbed **1.36 acres (1)**
6. Post construction runoff coefficient will be included in the project drainage folder. **Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information. (1)**
7. Data describing existing soil condition **Pembroke Silt Loam 2 to 6 % slopes erosion is a hazard for this soil type and Pickwich silt loam 6 to 12% slopes is subject to severe erosion. (1) & (2)**
8. Data describing existing discharge water quality **average (1) & (2)**
9. Receiving water name **Pleasant Run (1)**
10. TMDLs and Pollutants of Concern in Receiving Waters: **(1 DEA)**
11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. Potential sources of pollutants:

KyTC BMP Plan for Project PCN ## -

The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

B. Sediment and Erosion Control Measures:

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMP's in place before being disturbed.
3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:
 - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
 - At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover

KyTC BMP Plan for Project PCN ## -

- or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
- Clearing and Grubbing – The following BMP's will be considered and used where appropriate.
 - Leaving areas undisturbed when possible.
 - Silt basins to provide silt volume for large areas.
 - Silt Traps Type A for small areas.
 - Silt Traps Type C in front of existing and drop inlets which are to be saved
 - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
 - Brush and/or other barriers to slow and/or divert runoff.
 - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
 - Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
 - Non-standard or innovative methods.
 - Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
 - Silt Traps Type B in ditches and/or drainways as they are completed
 - Silt Traps Type C in front of pipes after they are placed
 - Channel Lining
 - Erosion Control Blanket
 - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
 - Non-standard or innovative methods
 - Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
 - Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
 - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
 - Additional Channel Lining and/or Erosion Control Blanket.
 - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
 - Special BMP's such as Karst Policy
 - Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probably changes include:

KyTC BMP Plan for Project PCN ## -

- Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
 - Permanent Seeding and Protection
 - Placing Sod
 - Planting trees and/or shrubs where they are included in the project
- BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: N/A
4. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
5. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

6. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Resident Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

7. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

➤ **Good Housekeeping:**

KyTC BMP Plan for Project PCN ## -

The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough product required to do the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

➤ **Hazardous Products:**

These practices will be used to reduce the risks associated with any and all hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data sheets (MSDS) will be reviewed and retained
- Contractor will follow procedures recommended by the manufacturer when handling hazardous materials
- If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed

The following product-specific practices will be followed onsite:

➤ **Petroleum Products:**

Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum

KyTC BMP Plan for Project PCN ## -

products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

➤ **Fertilizers:**

Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

➤ **Paints:**

All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

➤ **Concrete Truck Washout:**

Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water

➤ **Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.

KyTC BMP Plan for Project PCN ## -

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

C. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. N/A (1)

D. Maintenance

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
- Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
 - Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance.

E. Inspections

KyTC BMP Plan for Project PCN ## -

Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have received KyTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

F. Non – Storm Water discharges

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.

KyTC BMP Plan for Project PCN ## -

- Water form cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

G. Groundwater Protection Plan (3)

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

- Contractors statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan, will or may be may be conducted as part of this construction project:

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, ..., or related handling of hazardous waste, solid waste or special waste, ..., in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

_____ 2. (g) Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

_____ 2. (j) Storing or related handling of road oils, dust suppressants,, at a central location;

_____ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

KyTC BMP Plan for Project PCN ## - #####

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The contractor is responsible for the preparation of a plan that addresses the

401 KAR 5:037 Section 3. (3) Elements of site specific groundwater protection plan:

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in section C. Other control measures.
- (d) Implementation schedule – all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
- (g) Certification (see signature page.)

PROPOSAL BID ITEMS

Report Date 11/13/12

Section: 1 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0010	00001		DGA BASE	144.00	TON		\$	
0020	00020		TRAFFIC BOUND BASE	1,200.00	TON		\$	
0030	00301		CL2 ASPH SURF 0.38D PG64-22(REVISED: 11-13-12)	50.00	TON		\$	
0040	00440		ENTRANCE PIPE-15 IN	20.00	LF		\$	
0050	00441		ENTRANCE PIPE-18 IN	1,658.00	LF		\$	
0060	00443		ENTRANCE PIPE-24 IN	168.00	LF		\$	
0070	00462		CULVERT PIPE-18 IN	331.00	LF		\$	
0080	00464		CULVERT PIPE-24 IN	395.00	LF		\$	
0090	00496		CULVERT PIPE-36 IN EQUIV	44.00	LF		\$	
0100	00498		CULVERT PIPE-42 IN EQUIV	18.00	LF		\$	
0110	01310		REMOVE PIPE	1,342.00	LF		\$	
0120	01373		METAL END SECTION TY 1-24 IN	1.00	EACH		\$	
0130	01374		METAL END SECTION TY 1-30 IN	2.00	EACH		\$	
0140	01434		SLOPED BOX OUTLET TYPE 1-24 IN	1.00	EACH		\$	
0150	01440		SLOPED BOX INLET-OUTLET TYPE 1MODIFIED	3.00	EACH		\$	
0160	01517		DROP BOX INLET TYPE 5F	4.00	EACH		\$	
0170	01650		JUNCTION BOXTYPE B2	1.00	EACH		\$	
0180	01651		JUNCTION BOX-MOD	12.00	EACH		\$	
0190	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	24.00	EACH		\$	
0200	02230		EMBANKMENT IN PLACE	16,639.00	CUYD		\$	
0210	02237		DITCHING	1,740.00	LF		\$	
0220	02259		FENCE-TEMP	1,194.00	LF		\$	
0230	02268		REMOVE & REPLACE FENCE	2,478.00	LF		\$	
0240	02351		GUARDRAIL-STEEL W BEAM-S FACE	1,207.50	LF		\$	
0250	02360		GUARDRAIL TERMINAL SECTION NO 1	2.00	EACH		\$	
0260	02367		GUARDRAIL END TREATMENT TYPE 1	2.00	EACH		\$	
0270	02381		REMOVE GUARDRAIL	462.50	LF		\$	
0280	02403		REMOVE CONCRETE MASONRY	9.32	CUYD		\$	
0290	02460		REMOVE TREES OR STUMPS	39.00	EACH		\$	
0300	02483		CHANNEL LINING CLASS II	500.00	TON		\$	
0310	02545		CLEARING AND GRUBBINGKY 100 (APPROXIMATELY 1.36 ACRES)	1.00	LS		\$	
0320	02562		SIGNS	250.00	SQFT		\$	
0330	02575		DITCHING AND SHOULDERING	12,315.00	LF		\$	
0340	02625		REMOVE HEADWALL	18.00	EACH		\$	
0350	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0360	05950		EROSION CONTROL BLANKET	18,000.00	SQYD		\$	
0370	08003		FOUNDATION PREPARATIONMP 9.132	1.00	LS		\$	
0380	08003		FOUNDATION PREPARATIONMP 8.496	1.00	LS		\$	
0390	08003		FOUNDATION PREPARATIONMP 6.481	1.00	LS		\$	
0400	08003		FOUNDATION PREPARATIONMP 5.03	1.00	LS		\$	
0410	08003		FOUNDATION PREPARATIONMP 4.931	1.00	LS		\$	
0420	08003		FOUNDATION PREPARATIONMP 4.057	1.00	LS		\$	
0430	08003		FOUNDATION PREPARATIONMP 3.331	1.00	LS		\$	
0440	08003		FOUNDATION PREPARATIONMP 2.712	1.00	LS		\$	

PROPOSAL BID ITEMS

Report Date 11/13/12

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0450	08003		FOUNDATION PREPARATIONMP 2.511	1.00	LS		\$	
0460	08003		FOUNDATION PREPARATIONMP 2.09	1.00	LS		\$	
0470	08003		FOUNDATION PREPARATIONMP 1.551	1.00	LS		\$	
0480	08100		CONCRETE-CLASS A	80.74	CUYD		\$	
0490	08150		STEEL REINFORCEMENT	9,354.00	LB		\$	
0500	10020NS		FUEL ADJUSTMENT	2,674.00	DOLL	\$1.00	\$	\$2,674.00
0510	21415ND		EROSION CONTROLKY 100	1.00	LS		\$	
0520	21880NN		METAL END SECTION TY 3-42 IN EQUIV	4.00	EACH		\$	
0530	21981NN		METAL END SECTION TY 3-36 IN (EQUIV)	8.00	EACH		\$	

Section: 2 - DEMOB

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	FP	AMOUNT
0540	02569		DEMOBILIZATION	1.00	LS		\$	