Environmental Analysis
Guidance Manual



ISSUED BY

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET

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Kentucky
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OFFICE OF THE SECRETARY
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SUBJECT: ENVIRONMENTAL ANALYSIS GUIDANCE MANUAL

This manual has been prepared to provide information and guidance to personnel, consultants, and local public agencies involved in the development of projects for the Kentucky Transportation Cabinet, Department of Highways (KYTC). Its purpose is to describe the scope of work and responsibilities required in connection with environmental studies and documents necessary for compliance with environmental laws and regulations applicable to highway projects.

The rules and regulations contained within are approved and declared effective unless officially changed.

All previous instructions, written and oral, relative to or in conflict with this manual are hereby superseded.

Signed and approved this 4th day of September, 2014.

Michael Hancock
Secretary

Approved as to Legal Form

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ACRONYMS

AASHTO.....American Association of State Highway Transportation Officials
ACHP .....Advisory Council on Historic Preservation
ACM .....Asbestos-Containing Materials
ADA .....Americans with Disabilities Act
ADD .....Area Development Districts
ADT.....Average Daily Traffic
AMU .....Adjusted Mitigation Units
APE .....Area of Potential Effect
AQ .....Air Quality
AST .....Above Ground Storage Tank
ASTM.....American Society for Testing and Materials
BA.....Biological Assessment
BE .....Biological Evaluation
BMPs .....Best Management Practices
BNR .....Below Notification Requirements
BO.....Biological Opinion
CAA.....Clean Air Act
CAP.....Communicating All Promises
CAP.....Corrective Action Plan
CE .....Categorical Exclusion
CEL1.....Categorical Exclusion Level 1
CEL2.....Categorical Exclusion Level 2
CEL3.....Categorical Exclusion Level 3
CEMP.....CE for Minor Projects
CEQ.....Council on Environmental Quality
CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act
CFR .....Code of Federal Regulations
CIA.....Community Impact Assessment
CMAQ.....Congestion Mitigation Air Quality
CO.....Carbon Monoxide
Corps.....US Army Corps of Engineers
CWA .....Clean Water Act
DAQ.....KY Division of Air Quality
DBA.....Decibels (A-Weighting)

DEA.....Division of Environmental Analysis
DEC.....District Environmental Coordinator
DEIS GAF.....Draft Environmental Impact Statement Guide and Accountability Form
DEIS .....Draft Environmental Impact Statement
DEP.....KY Department for Environmental Protection
DFWR .....KY Department of Fish and Wildlife Resources
DHV .....Design Hourly Volume
DLG.....Department for Local Government
DNR .....KY Department for Natural Resources
DOI .....US Department of the Interior
DOT .....US Department of Transportation
DOW.....Kentucky Division of Water
DRP.....Data Recovery Plan
DWM.....Division of Waste Management
EA .....Environmental Assessment
EATS .....Environmental Analysis Tracking System
ECA .....Environmental Corrective Action
EEC .....KY Energy and Environment Cabinet
EIS.....Environmental Impact Statement
EJ .....Environmental Justice
EJA.....Environmental Justice Analysis
EKSAP.....Eastern Kentucky Stream Assessment Protocol
EO.....Executive Order
EO.....Ecological Overview
EO.....Environmental Overview
EPA.....Environmental Protection Agency
EPM.....Environmental Project Manager
ESA .....Environmental Site Assessment
ESA .....Endangered Species Act
FEIS.....Final Environmental Impact Statement
FEMA.....US Federal Emergency Management Agency
FHPM.....Federal Highway Program Manual
FHWA .....Federal Highway Administration
FONSI .....Finding of No Significant Impact
FPPA.....Farmland Protection Policy Act
FTA .....Federal Transit Administration
GAF.....Guidance and Accountability Form
HA.....Habitat Assessment
HABS .....Historic American Building Survey
HAER .....Historic American Engineering Record
HAM .....Habitat Assessment Manual
HAZMAT.....Hazardous Materials
HOT .....High-Occupancy Toll

HOV .....High-Occupancy Vehicle
IB CMOA.....Indiana Bat Conservation Memorandum of Agreement
IB .....Indiana Bat
ILF.....In Lieu Fee
IP .....Individual Permit
ITC .....Indian Tribal Consultation
KDFWR .....Kentucky Department of Fish and Wildlife Resources
KDOF .....Kentucky Division of Forestry
KDOW .....Kentucky Division of Water
KGS.....Kentucky Geological Survey
KPDES.....Kentucky Pollutant Discharge Elimination System
KSNPC.....Kentucky State Nature Preserves Commission
KSS.....Kentucky Speleological Survey
KYOSH .....Kentucky Occupational Safety and Health Program
KYTC .....Kentucky Transportation Cabinet
LA .....Letter Agreement
LESA.....Land Evaluation and Site Assessment
LOP.....Letter of Permission
LOS .....Level of Service
LPA .....Local Public Agency
LWCFA.....Land and Water Conservation Fund Act
LWCFA.....Land and Water Conservation Fund Act
MAP-21 .....Moving Ahead for Progress in the 21st Century
MOA.....Memorandum of Agreement
MOU.....Memorandum of Understanding
MOVES.....Motor Vehicle Emissions Simulator
MPO .....Metropolitan Planning Organization
MS4 .....Municipal Separate Storm Sewer System
MSATs .....Mobile Source Air Toxics
NAAQS .....National Ambient Air Quality Standards
NAC .....Noise Abatement Criteria
NEPA .....National Environmental Policy Act
NESHAP.....National Emissions Standards for Hazardous Air Pollutants
NHPA.....National Historic Preservation Act
NLTAA .....Not Likely to Adversely Affect
NOA.....Notice of Availability
NOI .....Notice of Intent
NOV.....Notice of Violation
NO_x.....Nitrogen Oxides
NPDES .....National Pollutant Discharge Elimination System
NPS.....National Park Service
NRCS.....US Natural Resources Conservation Service
NRHP.....National Register of Historic Places

NWP .....Nationwide Permit
O_3 .....Ozone
OLP .....Office for Local Programs
OSA .....Office of State Archaeology
OSHA .....Occupational Safety and Health Administration
PAH .....Polynuclear Aromatic Hydrocarbons
Pb .....Lead
PCB .....Polychlorinated Biphenyls
PIP .....Project Impact Profile
PM .....Project Manager
PM_{10} .....Particulate Matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
$PM_{2.5}$ .....Particulate Matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
ppb .....Parts Per Billion
ppm .....Parts Per Million
PVA.....Property Valuation Administrator
RCRA .....Resource Conservation and Recovery Act
REC .....Recognized Environmental Concerns
RFP .....Request for Proposal
ROD .....Record of Decision
ROW .....Right of Way
SAFETEA-LU....Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users
SARA.....Superfund Amendments and Reauthorizations Act
SCAR.....Supplier Corrective Action Request
SCS.....US Soil Conservation Service
SHPO .....State Historic Preservation Office
SIP .....State implementation Plan
SME .....Subject Matter Expert
SOL .....Statute of Limitations
SO_x.....Sulfur Oxides
SRTS .....Safe Routes to School
STIP .....Statewide Transportation Improvement Program
SWPP.....Storm Water Pollution Prevention Plan
TAP .....Transportation Alternatives Program
TCSP .....Transportation, Community, and System Preservation
TE.....Transportation Enhancement
THPO .....Tribal Historic Preservation Officers
TIP .....Transportation improvement Program
TMDL.....Total Maximum Daily Load
TNM .....Traffic Noise Model
TSCA .....Toxic Substances Control Act

TVA.....Tennessee Valley Authority
USACE.....US Army Corps of Engineers
USC.....United States Code
USDA.....US Department of Agriculture
USFS.....US Forest Service
USFWS.....US Fish and Wildlife Service
USGS.....US Geological Survey
UST.....Underground Storage Tank
WQC.....Water Quality Certification





Chapter

INTRODUCTION

Subject

Design of This Manual

ORGANIZATION & NUMBERING

Chapters: The subject matter in the manual is divided into chapters. The chapter title appears in the upper right-hand corner of the first page of a subject and in the upper left-hand corner of any subsequent page.

Subjects: Chapters are arranged by subject.

Subject Number: Each subject is assigned a number, which appears in the upper right-hand corner of each page of the subject. For example, Chapter 200 includes subjects 201, 202, and 203.

Subject Title: The title of a subject appears in the upper right-hand corner of the first page of a subject and in the upper left-hand corner of any subsequent page.

"EA" Prefix: Preceding each subject number, this prefix stands for the manual title *Environmental Analysis Guidance Manual*.

Date: The latest issuance date of a subject appears at the bottom of each page of the subject. This date agrees with the latest issuance date shown for the subject in the Table of Contents (**EA-01**).

Page Numbering—Each subject has its own page numbering, which appears at the bottom of each page.

LOCATING INFORMATION

Two indexes appear at the front of the manual, and one index appears at the back:

Table of Contents (EA-01): This index at the front lists the titles of the manual's chapters and their subjects, as well as other information, in numerical order. It includes the most recent issuance dates of all the subjects. As the manual matures, these dates change.

LOCATING INFORMATION (CONT.)

Acronyms (EA-02): This index at the front lists the manuals acronyms.

Table of Exhibits (EA-9000): This index at the back lists the manual's exhibits and includes the latest issuance date of each exhibit. As the exhibits mature, the issuance dates change.

CROSS-REFERENCES IN MANUAL

Subject Numbers within Narrative—A boldfaced subject number within the narrative on a page directs the user to more information about the subject.

QUESTIONS

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Chapter

INTRODUCTION

Subject

Purpose of This Manual

OVERVIEW

This manual provides information, procedures, and guidance for addressing environmental considerations during the development of Kentucky Transportation Cabinet (KYTC) projects. This manual is not regulatory; however, it has been prepared to document standard methods and means by which KYTC shall ensure compliance with environmental laws, regulations, and guidance. Those laws most applicable to addressing transportation projects are identified at the beginning of each subject area chapter.

A separate *Environmental Handbook for Management of Highways and Transportation Facilities* exists to address environmental considerations during operational activities.



Chapter

ADMINISTRATION

Subject

Organization

OVERVIEW

The Division of Environmental Analysis (DEA) is responsible for providing environmental guidance to Transportation Cabinet (KYTC) employees, to contractors, and to the general public concerning KYTC projects and activities. The DEA facilitates KYTC's mission of performing in an environmentally sound manner by ensuring that impacts associated with planning, design, construction, operation, and maintenance projects are identified and addressed in accordance with applicable state and federal laws. With this information, KYTC is maximally positioned to understand the implications of its actions and make the best possible decisions regarding developing projects. KYTC then strives to minimize or mitigate any resulting impacts to the human or natural environment that cannot be avoided.

The DEA executes these duties through the review, preparation, and oversight of environmental documents, contracts, or actions as required by state and federal environmental laws and regulations. The DEA also provides a single point of contact to the general public and to KYTC employees for environmental guidance, information, and concerns.

ORGANIZATION

The DEA is organized into three branches under the office of the director. These include the Ecology and Permitting Branch, the Cultural Resources Branch, and the Project Management Branch. The DEA organizational chart may be accessed at:

http://transportation.ky.gov/Organizational-Resources/Organizational%20Charts/Environmental%20Analysis.pdf

A more detailed discussion of DEA organization and services is contained in the KYTC Environmental Analysis web page located at:

http://transportation.ky.gov/Environmental-Analysis/Pages/default.aspx



Chapter

ADMINISTRATION

Subject

Local Public Agencies

OVERVIEW

The Kentucky Transportation Cabinet (KYTC) is responsible for administering federal transportation funds in Kentucky. However, in some instances a local public agency (LPA), such as a city or county government, may be a subrecipient of federal transportation funding. Although KYTC cannot delegate responsibility, activities can be delegated and the local entities held accountable to KYTC. When activities are delegated to LPAs, KYTC shall review and take actions necessary to ensure local compliance with all requirements of state and federal laws, regulations, and policies.

The basic federal requirements for developing projects as part of the federal-aid highway program, as codified in *Title 23 Code of Federal Regulations* and *Title 49 Code of Federal Regulations*, shall be followed. KYTC has developed comprehensive guidance on the role of LPAs.

If LPAs do not have specialized environmental staff to complete the environmental evaluations required to obtain environmental approval, they shall engage the services of prequalified environmental consultants.

ENVIRONMENTAL APPROVAL

A critical step in the federal-aid process is obtaining environmental clearance, such as the completion and federal approval of an environmental document for the proposed project. Development and approval of the environmental document shall comply with the National Environmental Policy Act (NEPA), Section 4(f) of 49 United States Code (USC) 303, Section 106 of the National Historic Preservation Act, Sections 401 and 404 of the Clean Water Act, Endangered Species Act, and any other applicable environmental laws and regulations.

By written agreement with the local agency, KYTC may delegate all or some project activities to local agencies, including environmental studies. KYTC retains its responsibilities under federal law and regulations for all delegated activities. KYTC shall provide the necessary processes, approvals, oversight, and review to ensure that delegated projects receive adequate supervision and inspection and they are completed in conformance with approved plans and specifications and applicable federal requirements.

ENVIRONMENTAL APPROVAL (CONT.)

KYTC shall not delegate the review and approval of environmental documents. Upon request, KYTC may assist the LPA in completing the environmental document, although this may require that KTYC expend project funds. Environmental clearance shall be obtained from the Federal Highway Administration (FHWA) or acquired through KYTC prior to the start of final design and right-of-way activities.

Normally, the development and approval of the environmental document occur in the preliminary engineering phase and is eligible for federal funding as part of the project. However, for some projects, (such as typical projects funded through the Transportation Alternatives Program [TAP]), construction may be the only phase for which the LPA requests the use of federal funds. In these cases, the "critical first steps" shall occur in the following sequence:

1. Project programming
2. Environmental approval
3. FHWA authorization
4. Project agreement

In all cases, environmental approval shall be obtained before FHWA authorization is requested for detailed design, right of way (ROW), utilities, and construction. If ROW is required for the project, no offers for acquisition shall be made prior to environmental approval.

ENVIRONMENTAL COMMITMENTS

In some cases, an environmental document is approved with the understanding that outstanding commitments shall be completed prior to initiating certain project activities. For example, a project may receive conditional environmental approval with the understanding that archaeological investigations shall be completed, coordinated, and approved before beginning any ground-disturbing activities.

An approved environmental document does not necessarily mean that there are no outstanding environmental commitments. Failure to identify and meet environmental commitments at the appropriate points during project development and delivery may jeopardize federal participation in the project. It is the responsibility of the LPA to identify, understand, and fulfill all environmental commitments established in the environmental document.





Chapter

ADMINISTRATION

Subject

Environmental Consultants

OVERVIEW

Due to the specialized nature of environmental investigations and the volume of projects, the Kentucky Transportation Cabinet (KYTC) routinely utilizes the services of prequalified environmental consultants. Firms are prequalified through the Division of Professional Services to provide services in specific subject areas. This may include companies that are also prequalified to provide engineering services, or those who specialize in one or more environmental subject areas**.**

Firms proposing consultant services for projects shall either be prequalified in the environmental subject areas required for the project, or shall contract with prequalified environmental subconsultants to address the environmental scope of work for the project.

KYTC also establishes multiple statewide consultant contracts for environmental studies, cultural historic and archaeology studies, and UST/HazMat studies to provide on-call services under the direction of the Division of Environmental Analysis (DEA).

PROJECTS INITIATED UNDER STATEWIDE CONTRACTS

Environmental services may be initiated through one of several statewide contracts KYTC holds with multiple consultants. When projects are initiated under a statewide contract, the following process shall be followed:

1. The district or a design consultant gives the DEA information specific enough in nature to advance a request for completion of any required work.

2. The request for proposal (RFP) is completed via the statewide contract and sent to the statewide-specific consultant for development of an appropriate scope and budget.

PROJECTS INITIATED UNDER STATEWIDE CONTRACTS (CONT.)

3. The RFP shall include a schedule for completion of fieldwork and submittal of any interim reports, as well as dates for submittal of the final reports.

4. KYTC subject matter experts (SMEs) shall review the consultants' submitted scope and budget and negotiate revisions as necessary.

5. When the consultant and the KYTC SMEs agree upon the scope of work and budget, the SME shall advise the district environmental coordinator and the project manager of the costs associated with the work to determine if adequate funds are available.

6. Per the memorandum of March 20, 2006, "Consultant Contracting for Statewide Environmental Activities," the project manager (PM) shall give written approval if the costs of the project are greater than $10,000.

7. A request for the development of a letter agreement (LA) is completed, with the consultant scope and budget and the PM funding approval attached, as appropriate.

8. The LA is executed by the joint signatures of the DEA Director and the consultant.

9. The DEA manages invoice payment.

PROJECTS INITIATED UNDER DESIGN CONTRACTS

Per PS-15-05-0200, "Preparation of Cabinet Estimate for Contracts with Professional Firms" from the *Professional Services Manual*, all new projects and contract modifications that include more than 500 production hours of environmental services (see **PS-15-05-0200**) shall follow the process below:

- The appropriate KYTC environmental project manager (EPM) and SMEs shall attend the pre-design conference to discuss or receive project scope or, if unable to attend, give the district environmental coordinator (DEC) and project manager information on any expected issues.

- Following the pre-design conference, the consultant shall submit a scope of work outlining the necessary level of work.

PROJECTS INITIATED UNDER DESIGN CONTRACTS (CONT.)

- After review of the submitted scope of work, some aspects of the proposal may need to be negotiated with the consultant. If so, the results of any alterations to the scope shall be documented and details provided to the project team.

- Based upon the level of work outlined in the scope, the KYTC SMEs shall complete an independent estimate of production hours and give it to the appropriate EPM.

- EPM shall transmit completed scope and worksheets to the Division of Professional Services.

- EPM or appropriate SMEs may be asked to attend any meetings set by the Division of Professional Services to negotiate scope and hours with the consultant, if the consultant hours are not in agreement with DEA's submittal.

- Invoice payment is managed by the project manager in the district.

For projects and contract modifications that include 500 or fewer environmental services production hours, development of independent production hours is not required. The EPM and appropriate SMEs shall review the consultant's production hour proposal and assist the Division of Professional Services, if requested, in the negotiation of production hours.





Chapter

ENVIRONMENTAL REVIEW PROCEDURES

Subject

Regulatory Considerations

OVERVIEW

Kentucky Transportation Cabinet (KYTC) projects are subject to environmental laws, regulation, and guidance from both federal and state levels. Specific laws, regulations, and guidance relevant to particular subject areas are identified at the beginning of each subject matter chapter.

This chapter explains general procedures whereby regulatory considerations are incorporated into KYTC's project development process. In particular, the National Environmental Policy Act (NEPA) outlines a process for considering potential environmental consequences of federal actions (any action funded or permitted by a federal agency). The NEPA process is discussed in greater detail in the following section.

Review and approval procedures are in place to ensure that appropriate consultation and documentation occur in compliance with NEPA and other environmental regulations. General procedures are discussed here. Detailed procedures relating to specific subject areas are discussed in detail in those subject area chapters.

Other project development considerations are contained in project development and Division of Environmental Analysis (DEA) memoranda. These memoranda may update or modify existing policies and guidance contained in manuals. Environmental practitioners shall be aware of these directives so that their work reflects the most current policies and procedures. Those in existence during the development of this manual have been incorporated herein; however, where appropriate, individual memoranda have been appended to provide additional context and detail.

On all projects involving federal funding or permitting in any project phase, KYTC is responsible for ensuring compliance with current federal regulations, whether or not this manual reflects those requirements. If a conflict exists between the federal regulations and the policies outlined in this manual, federal regulations prevail.

NEPA

The National Environmental Policy Act of 1969 (NEPA) established a national environmental policy for federal activities, balancing a sustainable environment with other essential needs of present and future generations of Americans.

NEPA mandates that federal agencies consider the potential environmental consequences of their actions, document the analysis, and make this information available to the public for comment prior to implementation. NEPA also requires that federal agencies use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment.

While NEPA established the basic framework for integrating environmental considerations into federal decision making, it did not establish a detailed process. NEPA established the Council on Environmental Quality (CEQ), which interpreted the law and developed regulations and guidance.

Each federal agency has adopted their own procedures for addressing NEPA in the context of their mission.

The Federal Highway Administration's (FHWA) NEPA project development process (as described in FHWA's *Environmental Review Toolkit*) is an approach to balanced transportation decision making that takes into account the potential impacts on the human and natural environment and the public's need for safe and efficient transportation.

It is FHWA's policy (23 CFR § 771.105) that:

- To the fullest extent possible, all environmental investigations, reviews, and consultations shall be coordinated as a single process, and compliance with all applicable environmental requirements shall be reflected in the environmental document required by this regulation.

- Alternative courses of action shall be evaluated and decisions shall be made in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation; of the social, economic, and environmental impacts of the proposed transportation improvement; and of national, state, and local environmental protection goals.

- Public involvement and a systematic interdisciplinary approach shall be essential parts of the development process for proposed actions.

NEPA (CONT.)

- Measures necessary to mitigate adverse impacts shall be incorporated into the action.

CEQ and FHWA have developed extensive guidance on NEPA compliance. **EA-400** provides guidance for developing and reviewing each NEPA document type for federally funded KYTC projects.

INTERGOVERNMENTAL REVIEW PROCESS

The Kentucky State Clearinghouse is located in the Department for Local Government and is charged with providing state and local input to the appropriate federal agency, and providing these agencies with the opportunity to evaluate proposals in a timely, effective fashion. The Division of Highway Design processes intergovernmental review of environmental documents for KYTC projects and initiatives through the Kentucky State Clearinghouse.



Chapter

ENVIRONMENTAL REVIEW PROCEDURES

Subject

Environmental Procedures & Tools

OVERVIEW

Addressing environmental considerations during the development of projects often produces lengthy reports and extensive data. The Kentucky Transportation Cabinet (KYTC) has developed procedures and tools to ensure consistency and to record and track project decisions so that project commitments and project statuses are readily available. Tools that are routinely used to manage project data include Guidance and Accountability Forms (GAFs), ProjectWise®, ORACLE® Six-Year Plan - Communicating All Promises (CAPs), permit tracking, and the Environmental Assessment Tracking System database (EATS).

This manual is itself a tool to assist the environmental practitioner in following the appropriate approach for KYTC environmental review. Each chapter contains detailed procedures for addressing individual subject areas. This chapter discusses general tools that may be applied across multiple subject areas.

GAFS

KYTC and the Federal Highway Administration – Kentucky Division (FHWA) have designed and implemented quality control processes for base studies and environmental documents. A key element of this process is *Guidance and Accountability Forms* (GAF), to be used during the development of environmental studies. The forms are a result of a coordinated effort between the agencies to improve the quality and consistency of the environmental reports. The purpose of the GAF is to clearly document the expectations of KYTC and FHWA with regard to the content of base study reports and environmental assessment documents.

GAFs have been developed for thirteen study areas: Air Quality (**Exhibit 9001**), Cultural/Historic (**Exhibit 9013**), Archaeology (**Exhibit 9002**), Aquatic Studies, Terrestrial Studies, Biological Assessment (**Exhibit 9004**), Noise (**Exhibit 9017**), Socioeconomic (**Exhibit 9020**), UST/Hazardous Materials (**Exhibit 9024**), Environmental Assessment (**Exhibit 9010**), Finding of No Significant Impact (FONSI) (**Exhibit 9012**), Draft Environmental Impact Statements (DEIS) (**Exhibit 9008**), Final Environmental Impact Statements (FEIS) (**Exhibit 9011**), and Record of Decision (ROD) (**Exhibit 9019**).

GAFs (CONT.)

The forms are designed for signature and submittal by the prime consultant for the project. The GAF consists of a checklist of items that must be addressed in the subject report. If the report is deficient, the GAF shall accompany the request for revisions, identifying items that were not incorporated in the document. If the report is grossly deficient, a *Supplier Corrective Action Request* (SCAR) (**Exhibit 9021**) will be issued asking the consultant to identify the reasons why the report did not comply with the GAF and the measures to be taken to prevent such deficiencies in the future.

The GAF also requires the identification of any commitments for future activities or investigation, any mitigation that may be required, and any other special issues that should be brought to the attention of the project team as the project is advanced. Once a report is accepted by KYTC Division of Environmental Analysis (DEA) reviewers, the GAF shall be sent to the district environmental coordinator and the district project manager for their signature and approval. The project manager shall capture any long-term project commitments identified in the GAF by placing them in the project CAP. Other short-term commitments may be captured in the EATS database. Upon final acceptance of the report, the signed GAF shall be copied to the consultant.

PROJECTWISE

Bentley ProjectWise® is a project team collaboration application that KYTC has adopted to store and manage project reports, files, and data. It is currently available only to KYTC staff and is not accessible by KYTC consultants. KYTC has adopted a standard file structure that includes locations for environmental documents and data. EPMs, SMEs, and DECs shall place completed environmental documents in the appropriate project folder locations. While this electronic repository does not currently serve as a substitute for a paper "central file" administrative record, it does provide a highly functional complement that is immediately accessible to users across KYTC.

COMMUNICATING ALL PROMISES (CAP)

The CAP provides a centralized location within the ORACLE® Six-Year Plan database to collect all project commitments throughout the development and delivery of a KTYC project. The project development manager shall develop and maintain this database. The CAP report shall be included in the bid package and remains part of the contract document. The CAP is further discussed in the *Highway Design Guidance Manual* (**HD-203**).

ENVIRONMENTAL ANALYSIS TRACKING SYSTEM (EATS)

EATS is a web-based interface that enables KYTC staff to access and maintain detailed status and comment data related to environmental milestones for specific KYTC projects. The SME, EPM, and DEC shall maintain environmental data that they routinely produce or manage. For example, a DEA archaeologist shall note the date that a phase I report was received, when it was sent to the State Historic Preservation Office (SHPO) and FHWA for review, and when each agency concurred with the findings. If the report was sent back to the consultant for revisions, the DEA archaeologist shall also note that in EATS.

EATS also provides a way to capture commitments that will be addressed prior to the construction phase, and therefore may not need to be placed in the CAP. If, for example, archaeological sites needing additional investigation are identified, that can be noted in the project commitments function of EATS. Any commitment that will need to be carried through to project construction shall be coordinated with the project manager for inclusion in the CAP. EATS also has the ability to produce customized reports.

PROJECT IMPACT PROFILE (PIP)

The TC 58-28 form, *Project Impact Profile* (PIP) (**Exhibit 9018**), is a summary listing of potential environmental impacts identified during the development of an EA/FONSI or EIS/ROD. It is approximately two pages long and provides a consistent format to capture potential issues for each resource subject area. The document preparer (the individual or entity who prepares the NEPA document [EA/FONSI or EIS/ROD]) shall complete and submit this along with the environmental document.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Governing Documents & Authorities

GOVERNING DOCUMENTS

Environmental documents completed for Kentucky Transportation Cabinet (KYTC) projects shall comply with all applicable state and federal laws and regulations, guidance, and directives including but not limited to:

- National Environmental Policy Act (NEPA): 42 U.S.C. 4321-4347; (P.L. 91-190). 23 CFR 770-772; 40 CFR 1500-1508; Executive Order 11514 as amended by Executive Order 11991 on NEPA responsibilities (Consider environmental factors through systematic interdisciplinary approach before committing to a course of action)

- Section 4(f) of the Department of Transportation Act of 1966: 23 U.S.C. 138; 49 U.S.C. 303; (P.L. 86-67). 23 CFR 771.135 (Preserve publicly owned parklands, waterfowl and wildlife refuges and significant historic sites)

- MAP-21, the Moving Ahead for Progress in the 21st Century Act (P.L. 112-141)

- KYTC *Categorical Exclusion Evaluations Users Manual*

- KYTC *Highway Design Guidance Manual*

- KYTC *Planning Guidance Manual*

- KYTC Project Development Memoranda

- KYTC DEA Guidance and Accountability Forms



Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Introduction

OVERVIEW

The environmental document records the project decision-making process. It includes the evaluation and selection of project alternatives through consideration of engineering, environmental, and economic factors.

Development of federally funded projects shall adhere to the Federal Highway Administration (FHWA) Technical Advisory (T 6640.8a). A federally funded project is a project in which any phase or part thereof includes federal funding. Projects requiring federal land transfers, federal land easements, or federal permits (from the U. S. Army Corps of Engineers (Corps), U. S. Coast Guard, etc.) may also qualify as federal undertakings and shall comply with the National Environmental Policy Act (NEPA). These federal agencies prepare their own NEPA documentation but may rely partially or wholly upon information provided by the Kentucky Transportation Cabinet (KYTC) to fulfill their obligations for environmental review.

State-funded projects do not require the approval of FHWA but may require an approval or permit from another federal agency subject to NEPA requirements. Examples of such actions include Corps permits, Coast Guard permits, and easements on purchase of federally owned property or from within federally designated lands such as the Daniel Boone National Forest.

All state-funded projects, regardless of federal involvement or permitting, must comply with the Endangered Species Act. Other environmental factors such as underground storage tanks, relocations, hazardous waste or cleanup sites, and noise must also be fully considered, regardless of funding source.

DOCUMENT TYPES

Project scope, funding type (federal or state), complexity, and controversy associated with a project determine the required environmental document type.

DOCUMENT TYPES (CONT.)

The following table provides a general idea of when each document type may be appropriate, who prepares it, how long it may take to complete, and how long the document shall be valid before a written reevaluation is required.

NEPA Document Types

Document Type	When to Use	Who Prepares	Time to Complete	Valid for
EO (EA-403)	Planning phase or state-funded projects	KYTC planning or environmental staff or consultant	2-12 months	N/A
CE (EA-404)	When impacts are not significant (See CE Manual)	KYTC district or CO environmental staff or consultant	2-12 months	2-years
EA (EA-405)	When unsure whether impacts will be significant or not	typically consultant	6-18 months	Until final environmental document is completed
FONSI (EA-406)	When an EA finding results in no significant impacts	typically consultant	6-12 months after EA	1-year
EIS/FEIS (EA-407, EA-408)	When impacts are anticipated to be significant	typically consultant	24-36 months	Until ROD is signed
ROD (EA-409)	When impacts are significant	typically consultant	6-12 months after FEIS	3-years
Re-evaluation (EA-410)	Expired document, plan changes or changes in regulation	manager of original document (EPM or DEC)	1 week – several months	Same as original document

DOCUMENT TYPES (CONT.)

The decision on what document type to pursue shall be determined by the project team with input from environmental subject matter experts (SMEs) and shall be documented in meeting minutes or by memorandum to the project file.

ADDITIONAL REPORTS

Additional reports may also be developed to document and support the evaluation of a project's impacts. Examples of these document types include environmental base studies (particularly with regard to EA, FONSI, and EIS projects), community impact assessments, environmental justice assessments, conceptual stage relocation reports, etc.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Environmental Overview (EO)

OVERVIEW

A project's planners and designers use an environmental overview (EO) during the development of state-funded projects or in the early stage of project development for large-scale, federally funded projects. These studies are a preliminary assessment of possible environmental impacts that may result from the project and may require field evaluation, ranging from windshield survey to full environmental investigation, depending upon project complexity.

REPORT CONTENT

An EO may consist of one overall document or of individual reports, each detailing a specific area of environmental subject matter. It may address the full range of environmental disciplines covered under the National Environmental Policy Act (NEPA), as implemented by the Federal Highway Administration (FHWA), or it may focus on specific project aspects necessary to address requirements of other involved federal agencies such as U. S. Army Corp of Engineers (USACE), U. S. Coast Guard, Tennessee Valley Authority, etc. For state-funded projects needing approvals by federal agencies, evidence of consideration of Section 106 of the National Historic Preservation Act (Cultural Historic and Archaeology) and Section 7 of the Endangered Species Act (Endangered Species) are required.

An EO shall include a discussion of archival data gathered from various sources and usually requires little fieldwork, other than a windshield survey of the project area to verify existing data and conditions. As a general rule, the format and content of the EO shall be determined by the project team during scoping or during negotiation activities with the consultant.



Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Categorical Exclusion (CE)

OVERVIEW

Categorical exclusions (CEs), by definition, do not have significant environmental impacts and are excluded from the extensive evaluation and documentation necessary to prepare an environmental assessment (EA) or environmental impact statement (EIS). Through a programmatic agreement with the Federal Highway Administration (FHWA), CEs are processed as one of four types or levels (CE for minor projects or CE levels 1–3). The appropriate type or level depends upon the context of the project and intensity of the impacts as discussed in the Kentucky Transportation Cabinet (KYTC) *Categorical Exclusion Evaluations User's Manual* (*CE Manual*).

CEs are actions that do **not**:

- Induce significant impacts to planned growth or land use
- Require the relocation of significant numbers of people
- Have a significant impact on any natural, cultural, historic, archaeological, or recreational features
- Involve significant air, noise, or water-quality impacts
- Have, either individually or cumulatively, any significant environmental impacts

CE LEVEL

Projects with little to no impact are processed using a CE for minor projects (CEMP) which, for The Highway Plan projects, is prepared in the district office and approved by the district environmental coordinator (DEC) and project manager (PM). Non-Highway Plan projects (those without a specific KYTC item number) may be processed by the district, but are more often processed by the Division of Environmental Analysis (DEA). A specific list of project types that can be processed as CEMPs is found in Table 1 of the *CE Manual*.

Project types as described in Table 2 of the *CE Manual* may be processed as either a CEMP or a CE level 1 (CEL1) (usually coordinated within the district and approved by the DEC and PM), a CE level 2 (CEL2) (coordinated and approved by DEA), or a CE level 3 (CEL3) (coordinated by DEA and approved by FHWA), depending upon the level of impacts.

CE LEVEL (CONT.)

Additional FHWA actions and projects, which are not specifically listed in Table 1 or Table 2, may also be suitably evaluated with a CE if found to be consistent with the criteria and intent of 23 CFR 771.117. The determination for the applicability of CE status for these types of actions or projects shall be made with the participation and approval of FHWA.

Depending upon the potential for project impacts and the necessity to consult with outside resource agencies, CEMP development may require only a few days or 2–3 months. CE level 1 documentation may require 2–6 months, depending upon the resources affected, especially cultural historic or archaeological resources. CE level 2 or CE level 3 documentation can be expected to require 6–12 months, depending upon the complexity of the project, resources affected, securing resource agency agreements for mitigation, etc.

SURPLUS PROPERTIES

The action of selling an excess right-of-way parcel is processed as a CE level 1. However, due to the unique circumstances surrounding the disposal of excess property, and the minimal potential for impacts, special abbreviated forms are used to document and process these actions. TC-58-46 form, *Categorical Exclusion Impact Summary Sheet* (**Exhibit 9022**), accompanied by TC 58-47 form, *Surplus Property – Notification of Environmental Conditions* (**Exhibit 9023**), must be completed prior to approving transfer of the property. More detailed guidance is available in the *CE Manual*, available online at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Project-Management.aspx

LOCAL PUBLIC AGENCY PROCESS

The majority of federally funded projects initiated by local public agencies (LPAs) shall be appropriately processed as CEs. CEs for certain categories of projects (such as Transportation Enhancement [TE], Congestion Mitigation Air Quality [CMAQ], Safe Routes to School [SRTS], and Transportation, Community and System Preservation [TCSP-funded projects]) are usually coordinated through the Office of Local Programs and approved by DEA, with FHWA approval as appropriate. LPAs may also initiate projects identified and funded through the six-year plan process (dedicated or earmarked projects), in which case they shall coordinate through the appropriate district office.

For larger projects where detailed impact analyses are appropriate, the LPA shall provide KYTC with the results of these analyses or a complete environmental document. The responsibilities of the LPA in this regard shall be clearly addressed in the scoping meeting for the project and the KYTC point of contact for environmental issues identified.

SUBJECT MATTER EXPERT (SME) ASSISTANCE

The TC 61-6 form, *Project Scoping Summary*, will detail LPA roles and responsibilities (*Highway Design Guidance Manual*, **HD-202**). The *Interim Federal-Aid Highway Program Project Development Guide for Local Public Agencies* (*Interim LPA Guide*) more completely addresses the roles and responsibilities of the LPA.

In the preparation of CE documents, the DEC or environmental project manager (EPM) may require the assistance of a DEA subject matter expert (SME). This may be dictated by the *CE Manual* or may be due to workload. SME involvement shall be secured with the submittal of a TC 58-50 form, *Assistance Request* (**Exhibit 9003**), to DEA.

Consultants tasked with preparing CE documents shall utilize appropriately prequalified subject matter experts to evaluate and document project impacts.

CONSULTANT ASSISTANCE

If the DEA SME is unable to meet the schedule dictated by the project for completion of the needed study or investigation, statewide consultants may be used to complete the work requested. Contracting with the consultant shall be in accordance with **EA-203**. Regardless of whether activities are being completed by the DEC, DEA SMEs, or statewide consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the DEC, EPM, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

CE SUBMITTAL

CEs shall be prepared by or submitted to the appropriate KYTC office (according to CE level) for review or approval. The CE shall consist of a completed TC 58-48 form, *CE Environmental Determination Checklist* (**Exhibit 9005**), and appropriate supporting documentation in accordance with the *CE Manual*. CEs shall be subject to review and comment by the appropriate KYTC office or FHWA according to approval authority based on CE level. Revisions may be required prior to approval.

CE DISTRIBUTION

Once the final CE document is approved, the completed document shall be placed on ProjectWise and copies shall be distributed in accordance with the *CE Manual* to ensure that the files of the district, DEA, Division of Highway Design, Division of Program Management, and Division of Right of Way and Utilities are current. The entire document shall be placed on the FHWA ftp site, and FHWA shall be notified via email. CEMP and CE Level 1 documents are the responsibility of the DEC. CE Level 2 and CE Level 3 documents are the responsibility of the EPM.

ACTIVITIES REQUIRING COMPLETION PRIOR TO CONSTRUCTION

Upon completion of the CE document, the DEC or EPM identifies any activities that remain to be completed prior to construction and notes them in the CE document and in the "Project Commitments" section of the EATS database. The DEC or EPM shall also submit any commitments made during the project development process that will affect construction or other future phases of the project to the project manager for inclusion in the KYTC Oracle database "Communicating All Promises" (CAP) screen.

TERM

In accordance with an agreement between FHWA KY Division and KYTC, the CE document shall be considered current for any FHWA action occurring within two years of its approval. If more than two years have elapsed since CE document approval, reevaluation shall be required prior to any FHWA funding authorization. Regardless of the expiration date for the CE document, reevaluation may also be warranted by changes in the project scope, changes in regulations, or changes in conditions within the project area.

The coordinator of the original CE document (typically the DEC for CEMP and CEL1, and the EPM for CEL2 and CEL3) shall initiate reevaluations. Reevaluations shall be documented using the TC 58-49 form, *Categorical Exclusion Project Impacts Reevaluation Summary* (**Exhibit 9006**).

REFERENCE

The *CE Manual* shall be used to research specifics regarding processing, procedures, CE checklist, forms, etc., for the development of CE documents.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Environmental Assessment (EA)

OVERVIEW

An environmental assessment (EA) helps the Kentucky Transportation Cabinet (KYTC) and Federal Highway Administration (FHWA) determine the appropriate type of environmental documentation for a proposed project. Due to the scale of these projects, the Division of Environmental Analysis (DEA) almost exclusively employs consultants to complete the environmental evaluation, usually under the contract issued to the project design consultant. Similarly, if local public agencies (LPAs) do not have sufficient environmental staff to complete this level of documentation, they shall engage the services of a prequalified environmental consultant.

The schedule for completion of the documentation shall be determined through consultation among the project team members including, but not limited to, the project manager (PM), DEA, and FHWA. Regardless of whether activities are being completed by the district environmental coordinator (DEC), DEA subject matter experts (DEA SMEs), or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the DEC, EPM, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

The project team, in consultation with DEA and FHWA, shall establish the level of effort needed to determine the range of alternatives and the studies necessary for completion of an adequate assessment. The EPM, DEC, or a prequalified environmental consultant documents the decision-making process by preparing an EA that summarizes the results of the base studies (detailed studies of the affected environment such as air quality, noise, etc.), as well as engineering and economic considerations. The EA shall discuss a reasonable range of alternatives for the proposed action, including the no-build, and alternatives considered but eliminated.

The KYTC and FHWA shall use the EA to determine whether an environmental impact statement (EIS) is needed. When reviewing the document, the FHWA and DEA shall consider the purpose of an EA and the project impacts.

OVERVIEW (CONT.)

The scale of the impacts and other factors such as project controversy shall be weighed. If it determines that impacts are significant, the DEA shall prepare an EIS. Similarly, the impacts may be determined to be minor, justifying the project being evaluated as a CE. If impacts exceed CE thresholds but are not considered significant, the process may advance with the finalization of the EA, solicitation of public input at a public hearing, and preparation of a finding of no significant impact (FONSI).

A determination to pursue a different document type can occur at any point during the development of the EA. The decision-making process is documented by inclusion of the results of the baseline studies in addition to engineering and economic considerations. This process concludes with the determination as to whether the impacts are significant and what final environmental documentation is appropriate. The document may, but does not usually, identify the preferred alternative of the project team. EAs usually require 18–36 months to complete.

The Council on Environmental Quality (CEQ) regulations require that an EA include the information listed in 40 CFR Part 1508.9 and shall:

- Describe the proposed action
- Detail the purpose and need for the proposed action
- Describe alternatives
- Evaluate the impacts associated with the various alternatives
- Discuss proposed mitigation
- List the agencies and persons consulted during early coordination
- Discuss the preferred alternative if one has been identified by the project team

BASE STUDIES

DEA SMEs or prequalified environmental consultants shall prepare base studies to determine the effect that the various alternatives may have on the environment. These studies analyze the potential effects of the alternatives on specific areas of environmental concern (such as historic properties, air quality, socioeconomic, noise, etc.). See **EA-500–1000** for further information on base studies.

Base studies may not be required for every possible subject matter area. Decisions to exclude preparation of certain base studies shall only be made with a thorough knowledge and understanding of the project area and potential for project effects. The studies to be conducted shall be determined during development of the project scope.

BASE STUDIES (CONT.) Base study content is defined by the guidance and accountability forms (GAFs) for the study type. Discussion of the content of these documents and methodologies for conducting the work may be found within the sections of this manual specific to those subject matter areas. The results of base study analyses shall be summarized in the EA.

EA FORMAT FHWA Technical Advisory T 6640.8A provides guidance for the format of an EA. The draft EA and EA shall be prepared utilizing the following general format:

- Cover and signature sheet
- Project description
- Purpose and need for the proposed project
- Alternatives considered
- Description of the affected environment
- Environmental impacts of the proposed alternatives
- Proposed mitigation measures
- Comments and coordination
- References
- Appendices
- Section 4(f) evaluation (if any)

The EA shall include all information outlined in the EA GAF (TC 58-38 form)(**Exhibit 9010**). A modified format for the document may be utilized when agreed upon by DEA and FHWA. The document shall adequately address all aspects of the proposed project. Maps, tables, and exhibits shall be appropriately placed within the body of the document to allow for easy reference and review. An EA contains approximately 50–60 pages of text including maps and exhibits, plus appendices, etc.

The EA shall summarize information compiled in the environmental base studies as well as any other environmental, engineering, and economic data or reports developed in accordance with the approved scope of work. The EA shall discuss a reasonable range of alternatives for the proposed action and summarize the studies, reviews, consultations, and coordination required by environmental laws and executive orders. A discussion of alternatives considered but eliminated shall also be provided.

DRAFT EA SUBMITTAL The preparer shall complete the EA GAF (TC 58-38 form) (**Exhibit 9010**) and the appropriate number of copies of the draft EA, as shown in the NEPA document review table (**Exhibit 9027**), or as determined during project scoping, shall be prepared and submitted to DEA and the DEC for review. The EPM shall establish the schedule for document review and comment. The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the EPM for inclusion with DEA comments. The DEA shall manage the overall review of the draft EA and preparation and compiling of any comments, questions, or required modifications.

EA SUBMITTAL After revision to address comments resulting from the review of the draft document, the appropriate number of copies shown in the NEPA document review table (**Exhibit 9027**), or as determined during project scoping, shall be prepared and submitted to DEA and the DEC for final review and acceptance. The preparer shall submit the EA, the EA GAF and the TC 58-28 form, *Project Impact Profile* (PIP) (**Exhibit 9018**). The PIP shall be submitted with, but not be bound within, the EA.

The EPM shall establish the schedule for document review and comment following the same process as for draft EA review. Upon acceptance of the document by KYTC, DEA shall submit the EA and EA GAF to FHWA for approval. Since this affords FHWA their first opportunity for review and comment on the document, FHWA may require further revisions to address their comments.

FHWA shall notify DEA of any comments or issues identified as a result of their review. The EPM shall coordinate the development of appropriate revisions to address unresolved concerns until the EA satisfies FHWA and KYTC.

Upon completion of the review phase, the Director of DEA and the Administrator of the Kentucky Division of FHWA shall sign the document.

EA DISTRIBUTION After FHWA approval of the EA, the EPM shall request the preparation of the appropriate number of document copies according to the NEPA document distribution table (**Exhibit 9026**) or as determined during project scoping. The EPM shall update EATS appropriately, place the complete document on ProjectWise, and distribute the document.

DEA shall provide copies of the document to the Division of Highway Design for preparation of a notice of availability (NOA) to initiate the public hearing and intergovernmental review process. Copies of the EA, the PIP sheets, and a map of the project area shall be attached to the NOA.

PUBLIC HEARING

KYTC shall schedule and advertise a public hearing according to the *Highway Design Guidance Manual* (**HD-602**, "Types of Public Involvement"). The project team shall provide exhibits and other project information for the hearing and shall attend the hearing to make presentations and to answer questions about the project. A court reporter or recording device is usually provided at the hearing to document verbal comments received. The project manager shall prepare the resulting public hearing summary and transcript for approval and distribution according to the *Highway Design Guidance Manual* (**HD-602**). The public hearing comments and responses to comments shall be incorporated into the final environmental document.

DECISION MAKING

Following the public hearing and close of the public comment period, the project team shall convene to consider the comments received and formulate responses. The project team shall consider the information available (including any new information, comments received, and data developed since publication of the document) and determine whether the project will result in significant impacts. If such is the case, an EIS shall be prepared. Likewise, if it is determined that the project meets the impact threshold allowed for a CE, the project shall be processed as a CE. Otherwise, the project shall proceed as a FONSI.

TERM

There is no specific time period established for the validity of an EA. It is assumed that the publication of a FONSI will shortly follow the approval of the EA under most circumstances. If significant time elapses between approval of an EA and issuance of the FONSI, the project team may need to consider whether data gathered during the early stages of project development remain valid. Other factors in such a determination may include changes in regulation, growth or other changes in the project area, or evolution of the project scope. A FONSI shall not be prepared if the data gathered for the preparation of the EA is considered to be outdated.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Finding of No Significant Impact (FONSI)

OVERVIEW

Following approval of an environmental assessment (EA), the holding of a public hearing, and the close of the comment period, the project team shall convene to consider comments received and to reconfirm the preferred alternative. Unless a determination was made to process the project as an environmental impact statement (EIS) or a categorical exclusion (CE), the project decisions shall be documented in a finding of no significant impact (FONSI).

Regardless of whether a preferred alternative was identified in the EA, the project team shall consider comments received and data developed since publication of the document and reconfirm the preferred alternative. Comments or additional information received may dictate the need for study of additional alternative combinations, crossovers, or entirely new alignments. These new solutions shall be evaluated at the same level of detail as previous alternatives before final alternative selection may occur. Additional field investigations of the preferred alternative (such as biological assessments and phase I or phase II archaeological investigations) may also be necessary before identification of the selected alternative.

A FONSI is prepared to document the final Transportation decision. Due to the content and expanse of their scope, consultants usually prepare FONSIs for KYTC. Similarly, if local public agencies (LPAs) do not have sufficient environmental staff to complete this level of documentation, they shall engage the services of a prequalified environmental consultant. Usually, the consultant that developed the EA is also responsible for the preparation of the FONSI. Regardless of whether activities are being completed by the district environmental coordinator (DEC), DEA subject matter experts (DEA SMEs), or consultant, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the DEC, environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OVERVIEW (CONT.)

The FONSI summarizes the environmental, economic, engineering impacts, and mitigation associated with the selected alternative and provides responses to any comments and issues identified during the public hearing and comment period. Areas of environmental review for which impacts were not identified in the EA shall not be further addressed in the FONSI. The approved EA shall be appended to the FONSI.

The FONSI shall:

- Focus on the impacts of the selected alternative without reiterating all of the information included in the EA
- Include a specific finding that the proposed project will have no significant impacts on the environment
- Reflect compliance with applicable environmental laws and regulations
- Include a final Section 4(f) determination, if applicable
- Identify any mitigation measures incorporated in the project to minimize environmental impacts

If, during the development of the FONSI or upon consideration of scope changes, it is determined that impacts are significant, an EIS shall be prepared. Depending upon archaeological work that may need to be completed, the scope of the public comments received, and whether additional alternatives or studies are required as a result thereof, the development of a FONSI may require 6–15 months.

FONSI FORMAT

FHWA Technical Advisory T 6640.8A outlines the preparation of a FONSI. The draft FONSI and final FONSI shall utilize the following general format:

- Title page
- Signature page
- Project description
- Purpose and need
- Summary of alternatives considered but eliminated
- Selected alternative
- Environmental impacts of the selected alternative
- Mitigation measures
- Comments and coordination
- References
- Appendices
- Final Section 4(f) finding (if any)

FONSI FORMAT (CONT.)

The FONSI shall include all information outlined in the TC 58-40 form, *FONSI Guidance and Accountability Form* (FONSI GAF) (**Exhibit 9012**). A modified format for the document may be utilized when agreed upon by DEA and FHWA. The document shall adequately address all aspects of the proposed project. Maps, tables, and exhibits shall be appropriately placed within the body of the document to allow for easy reference and review. A typical FONSI should not exceed 15 pages, excluding maps, attachments, and appendices.

ACTIVITIES REQUIRING COMPLETION PRIOR TO FONSI APPROVAL

Certain milestones shall be met before the approval of a FONSI. Phase I and phase II archaeology shall be complete on all parcels, or a memorandum of agreement (MOA) shall be executed to address any outstanding Section 106 (National Historic Preservation Act) commitments. Section 7 (Endangered Species Act) coordination shall be complete and all endangered species issues resolved. If the project includes Section 4(f) or Section 6(f) impacts, the resolution of these impacts shall be documented in the FONSI.

DRAFT FONSI SUBMITTAL

The preparer shall complete the FONSI GAF (TC 58-40) and the appropriate number of copies of the draft FONSI, as shown in the NEPA document review table (**Exhibit 9027**), or as determined during project scoping, shall be prepared and submitted to DEA and the DEC for KYTC review. The EPM shall establish the schedule for document review and comment. The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the EPM for inclusion with DEA comments. The DEA shall manage the overall review of the draft FONSI and compile any comments, questions, or required document modifications.

FONSI SUBMITTAL

After revision to address comments resulting from the review of the draft document, the appropriate number of copies shown in the NEPA document review table (**Exhibit 9027**), or as determined during project scoping, shall be prepared and submitted to DEA and the DEC for final review and acceptance. The document author shall prepare the FONSI GAF and the FONSI for DEA approval and submittal to FHWA for approval. The FONSI shall include an electronic pdf copy of the EA on CD as an appendix to the document. In addition to the FONSI, a summary of the project impacts shall be provided in the TC 58-28 form, *Project Impact Profile* (PIP) (**Exhibit 9018**). The PIP shall be submitted with, but not bound within, the FONSI.

FONSI SUBMITTAL (CONT.)

The EPM shall establish the schedule for document review and comment following the same process as for draft FONSI review. Upon acceptance of the document by KYTC, DEA shall submit the FONSI and FONSI GAF to FHWA for approval. Since this affords FHWA their first opportunity for review and comment on the document, FHWA may require further revisions to address their comments.

FHWA shall notify DEA of any comments or issues identified as a result of their review. The EPM shall coordinate the development of appropriate revisions to address unresolved concerns until the FONSI satisfies FHWA and KYTC.

Upon completion of the review phase, the Director of DEA and the Administrator of the Kentucky Division of FHWA shall sign the document. FHWA approval of the FONSI shall constitute location approval of the selected alternative for the project.

FONSI DISTRIBUTION

After FHWA approval of the FONSI, the EPM shall request the preparation of the appropriate number of document copies according to the NEPA document distribution table (**Exhibit 9026**) or as determined during project scoping. The EPM shall update EATS appropriately, place the complete document on ProjectWise, and distribute the document.

The EPM shall give copies of the cover letter to the State Highway Engineer, location engineer, Director of the Division of Right of Way and Utilities, DEC, and Division of Highway Design for initiation of the intergovernmental review process (23 CFR 771.121[b]).

STATUTE OF LIMITATIONS

Section 6002 of the MAP-21 establishes a 150-day statute of limitations (SOL) on claims against the United States Department of Transportation, including FHWA, and other federal agencies if an SOL notification is published in the *Federal Register* announcing that final action on a transportation project has been taken. If no SOL notice is published, the period for filing claims is not shortened from what is provided by other parts of federal law. If other federal laws do not specify a SOL, then a 6-year claims period applies.

The project team, with deference to FHWA, shall determine whether publication of a notice is prudent. If such a notice is to be published, KYTC shall prepare the required information for the notice and submit a request for its publication in the *Federal Register* to the FHWA.

TERM

In accordance with an agreement between FHWA-KY Division and KYTC, the document shall be considered current for any FHWA action occurring within one year of its approval. If more than one year has elapsed since document approval, reevaluation is required prior to any FHWA authorization. Regardless of the expiration date for the document, reevaluation may also be warranted by changes in the project scope, changes in regulations, or changes in conditions within the project area (**EA-410**, "Reevaluation of Environmental Documents").

FONSI ADDENDUM

Refinements to the project (slope changes due to geotechnical issues, intersection and crossroad tie-in details, drainage details, etc.) may occur during detailed design. If these changes do not significantly alter the environmental effects of the selected alternative, such modifications are addressed through the reevaluation process (**EA-410**, "Reevaluation of Environmental Documents"). When a project alteration occurs that incorporates a substantially larger scope than was addressed in the FONSI or where impacts resulting from a design modification are considered substantial, a FONSI addendum may be the appropriate document to address the change. Examples of such changes include, but are not limited to:

- Addition of excess excavation fill sites into the project
- Addition of an interchange where no intersection or interchange was previously evaluated
- Other changes that incorporate substantial additional area within the project limits
- New information or circumstances relevant to environmental concerns are identified that were not addressed in the FONSI

A FONSI addendum shall address the impacts resulting from the change in the project and the cumulative effect of these impacts in combination with those previously identified for the selected alternative. Mitigation for these impacts, if appropriate, shall also be addressed. The document shall follow the same format, submittal, and review process as that of a FONSI.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Draft Environmental Impact Statement (DEIS)

OVERVIEW

The National Environmental Policy Act (NEPA) requires the preparation of an environmental impact statement (EIS) for any proposed major action that may significantly affect the quality of the human or natural environment. Although the EIS functions as a disclosure document, the project team, consultants, Federal Highway Administration (FHWA), and others involved with the project use the EIS in conjunction with other relevant information to plan actions and make decisions.

Due to the scale of these projects, the Division of Environmental Analysis (DEA) almost exclusively employs consultants to complete the environmental evaluation, usually under the contract issued to the project design consultant. Similarly, if local public agencies (LPAs) do not have sufficient environmental staff to complete this level of documentation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members including, but not limited to, the project manager (PM), DEA, and FHWA.

Projects requiring an EIS are of the largest scale developed by the Kentucky Transportation Cabinet (KYTC) and may include:

- Major new route construction
- Major reconstruction
- Replacement of existing systems within urban areas resulting in significant community disruption

The Council on Environmental Quality (CEQ) regulations require that an EIS include the information listed in 40 CFR Part 1502. The project team, in consultation with FHWA and participating agencies (defined below), shall establish the level of effort needed to determine the range of alternatives and the studies necessary for completion of an adequate evaluation.

OVERVIEW (CONT.)

The decision-making process is documented by inclusion of the results of the base studies (detailed studies of the affected environment—air quality, noise, etc.) as well as engineering and economic considerations.

Following the publication of a notice of intent (NOI) in the *Federal Register,* the EIS process results in the development of three documents:

- Draft EIS (DEIS)
- Final EIS (FEIS) (**EA-408**)
- Record of Decision (ROD) (**EA-409**)

The DEIS shall summarize information compiled in the environmental base studies as well as any other environmental, engineering, and economic data or reports developed in accordance with the approved scope of work. The DEIS shall discuss a reasonable range of alternatives for the proposed action and summarize the studies, reviews, consultations, and coordination required by environmental laws and executive orders. A discussion of alternatives considered but eliminated shall also be provided.

The estimated time needed to develop the DEIS is two to three years, and shall depend upon the complexity of the project.

PROJECT INITIATION

To initiate the environmental review process, KYTC shall notify FHWA about the type of work, termini, length, and general location of the proposed project. The notification shall also provide a list of any other federal approvals (such as Section 401/404 permits) anticipated to be necessary for the proposed project, to the extent that such approvals are known at the outset, and shall indicate the time frame within which the environmental review process shall be started.

The Commissioner of the Department of Highways shall send the notification to the FHWA KY Division Administrator. The commissioner shall include a draft NOI, including information contained within FHWA guidance, with a request for its publication in the *Federal Register*.

LEAD AGENCIES

For federally funded KYTC projects, FHWA serves as the federal lead agency. As the direct recipient of the federal funds, KYTC (and in some cases the LPA) shall serve as a joint lead agency. In consultation with FHWA, KYTC or LPA shall identify and involve participating agencies, develop the coordination plan, and provide opportunities for participating agencies and public involvement at key decision points of the project development process, as specified in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU Section 6002) (codified in 23 CFR 139) and outlined below.

PARTICIPATING AGENCIES

Federal, state, tribal, regional, and local government agencies that may have an interest in the project shall be invited to serve as participating agencies. Nongovernmental organizations and private entities shall not serve as participating agencies.

Participating agencies shall be identified at the outset of the project. The KYTC or LPA shall prepare a list of those identified agencies for concurrence by the FHWA. Identified agencies shall be sent a letter of invitation to join in the project development process as a participating agency. The invitation shall include a draft coordination plan (if available) as discussed below. Participating agencies shall be consulted throughout the project development process on issues, such as the purpose and need statement, range of alternatives, methodologies, and the level of detail for the analysis of alternatives.

COORDINATION & SCHEDULE

Following project initiation, the lead agencies shall draft a plan for coordinating public and agency participation and comment during the environmental review process. The purposes of the coordination plan are to facilitate and document the lead agencies' structured interaction with the public and other agencies and to inform them of the coordination process. The initial coordination plan may be changed and updated by the lead agencies as necessary.

The coordination plan shall outline:

- How the lead agencies have divided the responsibilities for compliance with the various aspects of the environmental review process, such as the issuance of invitations to participating agencies
- How the lead agencies shall provide opportunities for input from the public and other agencies
- The coordination points in the process when input shall be specifically solicited

A project schedule shall be included in the coordination plan unless otherwise agreed through consultation among the lead agencies. The schedule shall accommodate public and participating agency comments and input, and allow time to conduct appropriate additional engineering and environmental studies in order to make any necessary project changes. The schedule shall be consistent with requirements regarding comment deadlines and other applicable time periods established under other laws.

COORDINATION & SCHEDULE (CONT.)

The coordination plan shall be shared with participating agencies so they know what to expect and are afforded an opportunity for meaningful input. Meetings with participating agencies to discuss the coordination plan are optional.

Following comments from participating agencies, the coordination plan shall be shared with the public, and the public shall have opportunities to review the coordination plan. This may be accomplished through a variety of means including issuance of a news release, providing notification of availability of the plan on a project web site, or by publication of a notice in area newspapers.

All comment periods shall be specified in the coordination plan. Generally, with the exception of a maximum 60-day comment period for the DEIS, comment periods shall not exceed 30 days.

SCOPING

Following publication of the NOI, the lead agencies shall invite participating agencies and other interested parties to assist in determining the project scope and identifying the significant issues related to a proposed project. This requirement is usually fulfilled by conducting a scoping meeting.

Participating agencies and others in attendance at the scoping meeting are encouraged to provide input regarding the appropriate level of study required to gather the information needed to successfully complete the environmental review. As recommended in 40 CFR 1501.7, the scoping meeting shall be designed to:

- Identify significant issues that will be analyzed in depth
- Eliminate issues that are not significant or have been addressed through prior environmental review
- Identify other environmental reviews or permits that may be developed concurrently with the project review
- Establish a schedule for completion of the environmental process and subsequent agency decision making

The project manager shall document the scoping meeting with meeting minutes that shall be circulated among the participating agencies for comment. All commitments or agreements regarding review of documents by the agencies, methods of analysis, scope of work to be undertaken, etc., shall be documented. The document preparer shall append copies of the scoping meeting minutes to the DEIS in the "Comments and Coordination" appendix.

BASE STUDIES

Base studies are prepared to determine the impact that the various alternatives may have on the environment. These studies analyze the potential impacts of the alternatives on specific areas of environmental concern (such as historic properties, air quality, socioeconomic, noise, etc.). See **EA-300** and **EA-500–1200** for further information on base studies.

Base studies may not be required for every possible subject matter area. Decisions to exclude preparation of certain base studies shall only be made with a thorough knowledge and understanding of the project area and potential for project effects. The studies to be conducted shall be determined during the development of the project scope.

Base study content is defined by the guidance and accountability form (GAF) for the study type. Discussion of the content of these documents and methodologies for conducting the work may be found within the sections of this manual specific to those subject matter areas. The results of base study analyses shall be summarized in the DEIS.

DEIS FORMAT

FHWA Technical Advisory T 6640.8A outlines the required format for the DEIS, consistent with 40 CFR 1502.10. The preliminary DEIS shall utilize the following general format:

- Cover or signature sheet
- Summary
- Table of contents
- Purpose and need
- Alternatives considered
- Affected environment
- Environmental consequences (including proposed mitigation)
- List of preparers
- List of agencies, organizations, and persons to whom copies of the statement are sent
- Index
- Appendices (including draft Section 4(f) statement, if any)

The DEIS shall include all information outlined in the TC 58-39 form, *Draft Environmental Impact Statement Guidance and Accountability Form* (DEIS GAF) (**Exhibit 9008**).

DEIS FORMAT (CONT.) If the DEA and FHWA agree, a modified format for the document may be utilized. The document shall adequately address all aspects of the proposed project. Maps, tables, and exhibits shall be appropriately placed within the body of the document to allow for easy reference and review.

PRELIMINARY DEIS SUBMITTAL The preparer shall complete the DEIS GAF (TC 58-39 form) and the appropriate number of copies of the DEIS, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, shall be prepared and submitted to DEA and the DEC for review. The environmental project manager (EPM) shall establish the schedule for document review and comment. The district environmental coordinator (DEC) shall coordinate the review of the document with the PM and other appropriate district personnel and shall submit any comments from the review to the EPM for inclusion with DEA comments. The DEA shall manage the overall review of the preliminary DEIS and preparation and compiling any comments, questions, or required modifications.

DEIS SUBMITTAL After revision to address comments resulting from the review of the draft document, the preparer shall provide the appropriate number of copies of the DEIS, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, and the DEIS GAF for DEA approval and submittal to FHWA for review. In addition to the DEIS, a summary of the project impacts shall be provided in the TC 58-28 form, *Project Impact Profile* (PIP) (**Exhibit 9018**). The PIP shall be submitted with, but not bound within, the DEIS.

The EPM shall establish the schedule for document review and comment following the same procedure as for the preliminary DEIS review. Upon acceptance of the document by the Department, the DEA shall submit the DEIS to FHWA for approval. Since this affords FHWA their first opportunity for review and comment on the document, FHWA may require further revisions to address their comments.

FHWA shall notify DEA of any comments or issues identified resulting from their review. The EPM shall coordinate the development of appropriate revisions to address unresolved concerns until the DEIS satisfies FHWA and KYTC.

Upon completion of the review phase, the Commissioner of the Department of Highways, or Secretary of KYTC, and the Administrator of the Kentucky Division of FHWA shall sign the document.

DEIS CIRCULATION & AVAILABILITY

After FHWA approval of the DEIS, the EPM shall request the preparation of the appropriate number of document copies according to the NEPA document distribution table (**Exhibit 9026**) or as determined during project scoping. The DEA SME shall place a pdf copy of the document in ProjectWise, enter the appropriate information in the Environmental Analysis Tracking System (EATS) database, and notify the Division of Highway Design for initiation of the intergovernmental review process (23 CFR 771.121[b]). DEA shall make copies of the DEIS available to the public and shall circulate the DEIS for comments to:

- Public officials, private interest groups, and members of the public known to have an interest in the proposed action or the DEIS
- All federal, state, and local government agencies expected to have jurisdiction, responsibility, interest, or expertise in the proposed action, including participating agencies
- States and federal land management entities that may be affected by the proposed action or any of the alternatives (40 CFR 1502.19 and 1503.1)

DEA shall provide FHWA with copies for filing of the document with the U. S. Environmental Protection Agency (EPA) and appropriate language for publication of a notice of availability (NOA) in the *Federal Register*. DEA shall secure copies of the DEIS and have them distributed to the agencies no later than the time of the document's filing with EPA for *Federal Register* publication. The notice shall allow for a minimum 45-day review period (40 CFR 1506.9 and 1506.10). The DEIS comment period shall not exceed 60 days, unless a different comment period is established by agreement between FHWA and KYTC, the project sponsor, and all participating agencies. The DEIS comment period begins on the date EPA publishes the NOA of the DEIS in the *Federal Register*.

PUBLIC HEARING

Within 30 days following approval of the DEIS by the FHWA, KYTC shall advertise a notice for a public hearing in the newspaper of highest local circulation (see *Highway Design Guidance Manual*, **HD-602**, "Types of Public Involvement"). The notice shall be advertised for a minimum of 30 days prior to the scheduled hearing date. At the discretion of the KYTC project manager, KYTC may also place notices in larger regional or statewide publications. Depending upon the size of the project area, the project team may decide to conduct hearings in multiple locations along the affected corridor.

PUBLIC HEARING (CONT.)

The project team shall provide exhibits and other project information for the hearing and shall attend the hearing to make presentations and to answer questions about the project. A court reporter or recording device shall be made available at the hearing to document verbal comments received. The project manager shall prepare the resulting public hearing summary and transcript (transcript) for approval and distribution according to the *Highway Design Guidance Manual* (**HD-602**). The transcript shall be summarized and all comments received shall be addressed in the FEIS.

TERM

A DEIS remains current provided that the project advances with publication of an FEIS within three years of DEIS approval. If more than three years elapse without publication of an FEIS, the DEIS must be reevaluated to assure the conditions, assessments, and conclusions remain valid. Regardless of the expiration date for the document, reevaluation may also be warranted by changes in the project scope, changes in regulations, or changes in conditions within the project area. See **EA-410**, "Reevaluation of Environmental Documents."





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Final Environmental Impact Statement (FEIS)

OVERVIEW

Following the public hearing and close of the public comment period, the project team shall convene to consider the comments received, formulate responses, and, if possible, identify the preferred alternative. Comments or additional information received may dictate the need to study additional alternative combinations, crossovers, or entirely new alignments not previously considered. These new solutions shall be evaluated at the same level of detail as previous alternatives before final alternative selection may occur. Additional field investigations of the preferred alternative, such as biological assessments and phase I or phase II archaeological investigations may also be necessary before identification of the selected alternative.

After publication of a draft environmental impact statement (DEIS), the holding of a public hearing, consideration of comments, completion of any additional studies deemed appropriate, and selection of a preferred alternative, the project team shall prepare a final environmental impact statement (FEIS). The FEIS shall:

- Identify the preferred alternative
- Summarize results of activities and investigations completed since the publication of the DEIS
- Discuss comments received for the DEIS
- Summarize citizen involvement
- Document the final Section 4(f) determination (if any)
- Identify any environmental mitigation measures that are to be incorporated into the proposed action
- Document, to the extent possible, compliance with all applicable environmental laws and executive orders or provide reasonable assurance that their requirements have been or shall be met

OVERVIEW (CONT.)

Due to the scale of these projects, the Division of Environmental Analysis (DEA) almost exclusively employs consultants to complete the environmental evaluation, usually under the contract issued to the project design consultant. Similarly, if local public agencies (LPAs) do not have sufficient environmental staff to complete this level of documentation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members including, but not limited to, the project manager (PM), DEA, and FHWA.

The FEIS shall summarize alternatives considered and identify the preferred alternative and the basis for its selection. Mitigation proposals shall also be detailed along with final Section 4(f) determinations and any unresolved major issues. The document shall outline commitments to conduct any additional studies or investigations.

FEIS FORMAT

FHWA Technical Advisory T 6640.8A outlines the required format for the FEIS, consistent with 40 CFR 1502.10. The FEIS shall utilize the following general format:

- Cover or signature sheet
- Summary
- Table of contents
- Purpose and need
- Alternatives considered (including proposed action)
- Affected environment
- Environmental consequences (including proposed mitigation)
- List of preparers
- List of agencies, organizations, and persons to whom copies of the statement are sent
- Index
- Appendices (including draft Section 4(f) Statement - if any)

The content of the document shall conform to the TC 58-52 form, *Final Environmental Impact Statement – Guidance and Accountability Form* (FEIS GAF) (**Exhibit 9011**). When DEA and FHWA agree, a modified format for the document may be utilized. The document shall adequately address all aspects of the proposed project. Maps, tables, and exhibits shall be appropriately placed within the body of the document to allow for easy reference and review.

PRELIMINARY FEIS SUBMITTAL

The FEIS GAF (TC 58-52) and the appropriate number of copies of the preliminary FEIS, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, shall be prepared for DEA and district office review. The environmental project manager (EPM) shall establish the schedule for document review and comment. The district environmental coordinator (DEC) shall coordinate the review of the document with the PM and other appropriate district personnel and shall submit any comments from the review to the EPM for inclusion with DEA comments. DEA shall manage the overall review of the preliminary FEIS and compiling any comments, questions, or required document modifications.

FEIS SUBMITTAL

After revision to address comments resulting from the review of the preliminary document, the preparer shall provide the appropriate number of copies of the FEIS, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, and the FEIS GAF for DEA approval and submittal to FHWA for review. The FEIS shall include the approved DEIS as an appendix, preferably as a pdf file on a compact disc. In addition to the FEIS, a summary of the project impacts shall be provided in the TC 58-28 form, *Project Impact Profile* (PIP) (**Exhibit 9018**). The PIP shall be submitted with, but not bound within, the FEIS.

The EPM shall establish the schedule for document review and comment following the same procedure as for the preliminary FEIS review. Upon acceptance of the document by the Department, DEA shall submit the FEIS to FHWA for approval. Since this affords FHWA their first opportunity for review and comment on the document, FHWA may require further revisions to address their comments.

FHWA shall notify DEA of any comments or issues identified as a result of their review. This shall include any comments received as a result of legal sufficiency review. The EPM shall coordinate the development of appropriate revisions to address unresolved concerns until the FEIS satisfies FHWA and KYTC.

Upon completion of the review phase, the Commissioner of the Department of Highways, or Secretary of KYTC, and the Administrator of the Kentucky Division of the FHWA shall sign the document.

FEIS CIRCULATION & AVAILABILITY

Following FHWA approval of the FEIS, DEA shall place the document on ProjectWise, enter the appropriate information in the Environmental Analysis Tracking System (EATS), and circulate for review and comment. DEA shall provide FHWA with copies for filing of the document with the Environmental Protection Agency (EPA) and appropriate language for publication of a notice of availability (NOA) in the *Federal Register*. DEA shall secure copies of the FEIS and have them distributed to the agencies no later than the time of the document's filing with EPA for *Federal Register* publication. The notice shall allow for a maximum 30-day review period, unless provisions for a longer period were specifically included in the coordination plan and agreed upon by FHWA and KYTC, the project sponsor, and all participating agencies. The FEIS comment period begins on the date EPA publishes the NOA of the FEIS in the *Federal Register*.

DEA shall also make copies of the FEIS available to resource agencies and the public and shall circulate the FEIS for comments to:

- Those who commented on the DEIS
- Participating agencies
- Anyone who requested a copy of the FEIS

Copies of the document shall be provided to the Division of Highway Design for initiation of the intergovernmental review process (23 CFR 771.121[b]).

TERM

An FEIS remains current and does not require reevaluation, provided that actions are taken to advance the project, such as approvals for design, right of way, utilities, or construction. If activities to advance the project are not undertaken within any three-year period, a written reevaluation is required to assure the conditions, assessments, conclusions, and basis for selection of a preferred alternative remain valid. See **EA-410**, "Reevaluation of Environmental Documents."

SUPPLEMENTAL EIS

When project alteration occurs that incorporates a substantially larger scope than was addressed in the DEIS or FEIS or where additional impacts resulting from a project change are considered significant, a supplemental EIS may be necessary. Examples of such changes include but are not limited to:

- Addition of excess excavation fill sites into the project
- Addition of an interchange where no intersection or interchange was previously evaluated
- Other changes that incorporate substantial additional area within the project limits

SUPPLEMENTAL EIS (CONT.)

- New information or circumstances relevant to environmental concerns are identified that were not addressed in the DEIS or FEIS

A supplemental EIS shall address the impacts resulting from the change in the project and the cumulative effect of these impacts in combination with those previously identified for the selected alternative. Mitigation for these impacts, if appropriate, shall also be addressed. The document shall follow the same general format, submittal, and review process as that of an EIS.





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Record of Decision (ROD)

OVERVIEW

After the Kentucky Transportation Cabinet (KYTC) and the Federal Highway Administration (FHWA) approve the final environmental impact statement (FEIS) and circulate the document for comment, the project team shall prepare a record of decision (ROD) in accordance with 40 CFR 1505.2 and 23 CFR Part 771.125. The ROD shall not be published any sooner than 45 days following the approval of the FEIS.

Due to the scale of these projects, the Division of Environmental Analysis (DEA) almost exclusively employs consultants to complete the environmental evaluation, usually under the contract issued to the project design consultant. Similarly, if local public agencies (LPAs) do not have sufficient environmental staff to complete this level of documentation, they shall engage the services of a prequalified environmental consultant.

The schedule for completion of the documentation shall be determined through consultation among the project team members including, but not limited to, the project manager (PM), DEA, and FHWA. Regardless of whether activities are being completed by the district environmental coordinator (DEC), DEA subject matter experts (SMEs), or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the DEC, environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

The Council on Environmental Quality (CEQ) regulations require that a ROD include the information listed in 40 CFR Part 1505.2. The ROD shall:

- Incorporate the FEIS by reference
- Identify the selected alternative and explain the basis for the project decision
- Summarize comments received regarding the FEIS and any KYTC or FHWA responses to those comments

OVERVIEW (CONT.)

- Summarize any mitigation measures incorporated into the project
- Outline the monitoring and enforcement program
- Summarize the basis of approval for Section 4(f) impacts (if any)

The ROD shall focus specifically on issues that are relevant to the selected alternative and summarize the basis for the selection. Mitigation measures that are to be incorporated within the project and the plan for implementing those measures shall be discussed. The ROD will document Section 4(f) approval, if required. All substantive comments received on the FEIS shall be identified and given appropriate responses. Cross referencing and incorporating the FEIS by reference is appropriate; however, the ROD shall explain the basis for the project decision as clearly as possible based upon the information contained in the Draft Environmental Impact Statement (DEIS) and FEIS.

ROD FORMAT

FHWA Technical Advisory T 6640.8A outlines the required format for the ROD, consistent with 40 CFR 1502.10. The ROD shall utilize the following general format:

- Project decision
- Alternatives considered and values that influenced decision making
- Section 4(f)
- Measures to minimize harm
- Monitoring or enforcement program
- Comments on FEIS

The content of the document shall conform to the TC 58-51 form, *Record of Decision – General Accountability Form* (ROD GAF) (**Exhibit 9019**). When DEA and FHWA agree, a modified format for the document may be utilized. The document shall adequately address all aspects of the proposed project without repeating all of the information in the FEIS. Maps, tables, and exhibits shall be appropriately placed within the body of the document to allow for easy reference and review.

DRAFT ROD SUBMITTAL

The preparer shall complete the ROD GAF and the appropriate number of copies of the draft ROD, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, for DEA and district office review. The EPM shall establish the schedule for document review and comment. The DEC shall coordinate the review of the document with the PM and other appropriate district personnel and shall submit district comments, if any, to the EPM for inclusion with DEA comments. DEA shall manage the overall review of the draft ROD and compiling any comments, questions, or required modifications.

ROD SUBMITTAL

After revision to address comments resulting from the review of the draft document, the preparer shall provide the appropriate number of copies of the ROD, as shown in the NEPA document review table (**Exhibit 9027**) or as determined during project scoping, and the ROD GAF. The ROD shall include an electronic pdf copy of the FEIS on compact disc as an appendix to the document.

The EPM shall establish the schedule for document review and comment following the same procedure as for draft ROD review. Upon acceptance of the document by the Department, DEA shall submit the ROD to FHWA for approval.

FHWA shall notify DEA of any comments or issues identified as a result of their review. The EPM shall coordinate the development of appropriate revisions to address unresolved concerns until the ROD satisfies FHWA and KYTC.

Upon completion of the review phase the Administrator of the Kentucky Division of FHWA shall sign the document. FHWA approval of the ROD shall constitute location approval of the selected alternative for the project and completion of the environmental phase.

ROD DISTRIBUTION

After FHWA approval of the ROD, the EPM shall request the preparation of the appropriate number of document copies according to the NEPA document distribution table (**Exhibit 9026**) or as determined during project scoping. DEA shall secure an adequate number of copies for distribution and give copies of the document to the Division of Highway Design for initiation of the intergovernmental review process (23 CFR 771.121[b]). The DEA SME shall place a pdf copy of the document in ProjectWise, and enter the appropriate information in the Environmental Analysis Tracking System (EATS) database.

STATUTE OF LIMITATIONS

Section 6002 of the MAP-21 establishes a 150-day statute of limitations (SOL) on claims against the United States Department of Transportation, including FHWA, and other federal agencies if a SOL notification is published in the *Federal Register* announcing that a final action on a transportation project has been taken. If no SOL notice is published, the period for filing claims is not shortened from what is provided by other parts of federal law. If other federal laws do not specify a SOL, a 6-year claims period applies.

STATUTE OF LIMITATIONS (CONT.)

In most cases for a project requiring EIS-level documentation, an SOL notice should be published. The project team, with a great level of deference to FHWA, shall determine whether publication of a notice is prudent. If such a notice is to be published, DEA shall prepare the required information for the notice and submit a request to FHWA for its publication in the *Federal Register*.

TERM

A ROD does not require reevaluation; however, if timely actions are not taken to advance the project (such as approvals for design, right of way, utilities, or construction), then a reevaluation of the FEIS may be required. If activities to advance the project are not undertaken within any three-year period, a written reevaluation of the FEIS is required to assure the conditions, assessments, and conclusions remain valid. Regardless of the expiration date for the document, reevaluation may also be warranted by changes in the project scope, changes in regulations, or changes in conditions within the project area. See **EA-410**, "Reevaluation of Environmental Documents."





Chapter

ENVIRONMENTAL DOCUMENT TYPES

Subject

Reevaluation of Environmental Documents

OVERVIEW

Before the advancement of any federal-aid project into any major phase (right of way, utilities, construction), Federal Highway Administration (FHWA) regulation 23 CFR 771.129 may require reevaluation of the approved National Environmental Policy Act (NEPA) document. The purpose of the reevaluation is to ensure that the decision reflects the current project and that effects and impacts previously identified have not significantly changed. Reevaluation of a project decision is appropriate if:

- The scope of the project has changed

  This may mean that termini, alignments, or other significant aspects of the previous analysis and approval have substantively changed. Though not necessarily considered a change of scope, a reevaluation shall also consider minor changes that develop between preliminary and final design. These refinements may incorporate additional right of way, affect additional residences, or create impacts not addressed by the original determination.

- Conditions have changed

  After approval of a document, conditions in the area of the project may be altered. This would most typically occur as a result of the introduction of man-made features or influences on the landscape but may also include significant catastrophic events such as fires, floods, etc. Any significant changes that have occurred within the landscape where the project will be located that alter previous determinations of impact or effect shall be considered.

- Regulations have changed

  Passage of new regulations or changes that may occur within existing regulations may render a previous determination invalid. When reevaluated, projects shall be assessed in accordance with regulations that exist at the time of reevaluation, not those that were in effect at the time of the original decision.

OVERVIEW (CONT.)

Project changes occurring after approval of an environmental document shall be clearly communicated among all project team members to ensure that project decision documents receive proper updating. This includes minor revisions to the project footprint resulting from detailed design at intersections, defining of approaches, changes in slopes, or other refinements that minimally expand the area to be impacted by the project. When substantial additional impacts are identified or considerable expansion of the project area occurs after completion of the environmental document, such as with the incorporation of excess excavation sites, reevaluation or an environmental document supplement or addendum may be appropriate, regardless of scheduled major phases.

TERM FOR ENVIRONMENTAL DOCUMENTS

As a practical matter, changes that would demand a reevaluation would not be expected to occur within a short period following document approval. If a project phase authorization (right of way, utilities, construction) is requested shortly following document approval, the document may not need a formal reevaluation, provided there are no known changes to the project, environment, or regulations.

A draft environmental impact statement (DEIS) (**EA-407**) remains current provided the project advances with publication of a final environmental impact statement (FEIS) (**EA-408**) within three years of DEIS approval. If more than three years elapse without publication of an FEIS, the DEIS shall be reevaluated to assure the conditions, assessments, and conclusions remain valid. If the subsequent document phase is not completed within the three years, reevaluation is required. FEIS documents and record of decision (ROD) (**EA-409**) approvals remain valid for three years, or longer, provided that the project is progressing toward construction and there has been continuous FHWA involvement and oversight. If activities to advance the project are not undertaken within any three-year period, a written reevaluation of the FEIS may be required to ensure the conditions, assessments, conclusions, and basis for selection of a preferred alternative remain valid.

Finding of no significant impact (FONSI) (**EA-406**) approvals are valid for one year, and categorical exclusion (CE) approvals remain valid for two years. There is no limit for a ROD. Reevaluations shall be valid for the same periods as established for the original document type.

Regardless of the expiration date for any document type, reevaluation may also be warranted by changes in the project scope, changes in regulations, or changes in conditions within the project area.

PARTIES RESPONSIBLE FOR REEVALUATIONS

The project manager (PM) shall initiate a reevaluation if the approved NEPA document, or its subsequent reevaluation, will expire prior to required authorization of a major phase, or if there has been a significant change (scope, regulation, project area) in the project since approval of the NEPA document. If reevaluation is to be completed by the Division of Environmental Analysis (DEA), a TC 58-50 form, *Assistance Request Form*, (**Exhibit 9003**) shall be submitted.

The reevaluation shall be initiated sufficiently in advance of any scheduled major phase authorization to allow for completion of additional studies, coordination with resource agencies, etc. Generally, the reevaluation is the responsibility of the office that developed the original document. For CE for minor projects and CE level 1 documents developed in the district office, the district environmental coordinator (DEC) shall initiate reevaluation. For other document types developed by the DEA or consultants, the DEA shall initiate reevaluation. In some cases, environmental consultants may also play a role in developing reevaluation documentation.

DOCUMENTING SCOPE CHANGES

When initiating a reevaluation, the PM shall document any changes occurring in the project since the previous document approval. These changes often result from the development of a more detailed design and may include, among other things, minor alterations such as:

- Refinements at intersections, crossings, and entrances
- Changes in proposed construction slopes
- Identification of excess materials and proposed handling methods
- Additional right of way (ROW) added to the project

The PM shall clearly identify these issues and include them in any request to the district or DEA for the reevaluation of the project, along with current project plans. The reevaluation shall include a thorough discussion of the environmental impacts associated with these changes.

GATHERING & PROCESSING DATA

The review coordinator—usually the environmental project manager (EPM) or DEC, but in some cases the consultant—shall involve appropriate subject matter experts (SMEs) as necessary to review previous determinations or address identified project changes. The review coordinator shall:

GATHERING & PROCESSING DATA (CONT.)

- Gather checklists, memoranda, or other accepted means of documenting the completion of review of the various subject matter areas
- Update resource agency correspondence and concurrence, as appropriate
- Attach materials developed to support the conclusions of the reevaluation
- Prepare a summary of the gathered information
- Identify further work necessary to complete all environmental requirements, if any
- Prepare a recommendation for approval

For environmental assessment (EA), FONSI, and CE documents, reevaluations shall be documented using the TC 58-56 form, *Project Reevaluation* (**Exhibit 9007**) or the TC 58-49 form, *Categorical Exclusion Project Impacts Reevaluation Summary* (**Exhibit 9006**). For EIS and ROD documents, the reevaluation form may also be used if a more detailed narrative summary is determined to be unnecessary.

APPROVALS

For document types programmatically delegated to KYTC by FHWA for approval (CE for minor projects, CE level 1, and CE level 2), reevaluation documentation shall be approved at the same level as appropriate for the original action. For actions requiring FHWA approval, the DEA shall transmit copies of the reevaluation results, in their entirety, to the FHWA. The transmittal shall recommend approval of the reevaluation and draw attention to:

- Changes identified during the reevaluation
- Outstanding issues to be addressed during future project development
- The means and schedule planned for resolution of issues

The document developer (DEC or DEA SME) shall distribute copies of the approved document to ensure that the files of the district, DEA, Division of Highway Design, Division of Program Management, and FHWA are current.



Chapter

NOISE IMPACT ANALYSIS

Subject

Governing Documents & Guidance

GOVERNING DOCUMENTS

The governing documents for traffic noise analysis include:

- Title 23 of the Code of Federal Regulations Part 772; *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (2010)
- *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA January 2011)
- *Measurement of Highway-Related Noise* (Report - FHWA 1996)
- *KYTC Noise Analysis and Abatement Policy* (July 13, 2011)
- *KYTC Traffic Noise Abatement Calculation Guide* (July 13, 2011)

REGULATORY & GENERAL REQUIREMENTS

The National Environmental Policy Act (NEPA) requires that noise impacts be considered for any federal project. The level of detail in a noise analysis shall vary considerably according to the size of the project, the existing level of traffic noise in the area, future potential for noise due to the project, and the degree of project controversy. The presence and type of noise receptors are also a major consideration in whether noise analysis is necessary.



Chapter

NOISE IMPACT ANALYSIS

Subject

Introduction

INTRODUCTION

Noise impact analysis is undertaken to identify instances when highway traffic noise or construction noise may impact citizens of the Commonwealth. The Kentucky Transportation Cabinet (KYTC) recognizes the adverse effects that traffic noise may have and shall consider and evaluate reasonable measures to minimize these effects. Noise considerations are a part of the planning, design, and construction of a highway project. The identification of noise-sensitive sites or areas shall be done early in the planning phase of the project. During project development, detailed analyses shall be performed to assess specific traffic noise impacts and abatement measures at locations that may experience increased traffic noise levels as a result of the project. Concern for noise impacts shall continue into the construction phase, with emphasis on minimizing disruption from construction noise.

In addition to defining traffic noise impacts, the Federal Highway Administration (FHWA) Noise Standard (23 CFR 772) requires that noise abatement measures be considered when traffic noise impacts are identified for type I federal projects.

A project is identified as a type I federal project by meeting one or more of the following conditions:

- Construction of a highway on new location
- Physical alteration of an existing highway when there is either:
  - Substantial horizontal alteration, defined as a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition
  - Substantial vertical alteration, defined as a project that removes shielding, and therefore exposes the line-of-sight between the receptor and the traffic noise source, either by altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor

INTRODUCTION (CONT.)

- Addition of a through-traffic lane(s), including the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane
- Addition of an auxiliary lane, except when the auxiliary lane is a turn lane
- Addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange
- Restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane
- Addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza

If a project is determined to be a type I project under this definition, the entire project area as defined in the environmental document is a type I project.

Noise abatement measures that are found to be feasible and reasonable shall be considered for such projects. Feasible and reasonable noise abatement measures shall be eligible for federal-aid participation at the same ratio or percentage as other eligible project costs.

Detailed guidance on the implementation of the FHWA noise standard is contained in KYTC's *Noise Analysis and Abatement Policy*, which can be accessed at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Noise.aspx

PUBLIC NOISE CONCERNS

When KYTC receives comments or complaints from the general public regarding highway noise on existing alignments, those concerns shall be directed to the noise subject matter expert (SME) in the Division of Environmental Analysis (DEA), who shall investigate and respond. The need for additional analysis shall be determined on a case-by-case basis.

DOCUMENTATION & REPORTING

The scope of work and level of environmental documentation may vary from project to project. State-funded projects do not require detailed analysis unless the project is anticipated to have some level of federal funding applied to it at a later stage. State-funded projects may be processed by means of a memorandum to document the conditions relating to traffic noise.

DOCUMENTATION & REPORTING (CONT.)

For federal projects determined not to be type I and processed as categorical exclusions (CEMP, CE Level 1, 2, or 3), that determination shall be appropriately documented on the categorical exclusion checklist.

Federal projects determined to be type I projects shall be documented in a traffic noise assessment. The traffic noise assessment is discussed in more detail in **EA-503**. It is generally considered the appropriate baseline study to address noise impacts for incorporation into NEPA documents such as an environmental assessment (EA), finding of no significant impact (FONSI), or environmental impact statement (EIS).





Chapter

NOISE IMPACT ANALYSIS

Subject

Traffic Noise Analysis

OVERVIEW

Traffic noise analysis is conducted in the early stages of project development when developing a type I federal project (the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes).

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

Traffic noise analysis defines anticipated traffic noise impacts from traffic noise sources such as tire pavement noise, engine noise, and exhaust noise. The analysis should address:

- Existing and future traffic volumes
- Calculated noise impact for build and no-build scenarios
- A mitigation statement if the noise abatement criteria (NAC) will be exceeded

The traffic noise analysis is the appropriate base study for the purposes of documenting environmental conditions for alternative analysis in NEPA documents for type I federal projects. This analysis may compare impacts across multiple alternatives so that relative impacts can be considered and may also recommend avoidance, minimization, and mitigation measures to address potential impacts.

TRIGGER Traffic noise analysis is triggered when a project is identified as a type I federal project (**EA-502**).

METHODS The traffic noise analysis shall follow the most current Kentucky Transportation Cabinet (KYTC) *Noise Analysis and Abatement Policy*.

REPORT FORMAT The following report format shall be utilized for the traffic noise analysis. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project coordination and investigations. When possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review and enable the reviewer to duplicate results and conclusions from the data presented. The TC 58-42 form, *Noise Analysis and Abatement - Guidance and Accountability Form* (Noise GAF), (**Exhibit 9017**) shall be followed to ensure document completeness.

- Title page
- Table of contents
- Executive summary/abstract
- Introduction
- Project description
- Existing noise levels and validation of noise model
- Development of design year noise levels
- Comparative receptor site analysis
- Noise abatement recommendations and conclusion
- Indirect and cumulative impacts
- Construction noise
- Appendices (**Note:** Supporting data may be attached in electronic format.)

SUBMITTAL Unless otherwise specified during project scoping, the consultant shall submit one hard copy and one electronic copy of the traffic noise analysis, the electronic Traffic Noise Model input files, and a completed Noise GAF (TC 58-42 form) (**Exhibit 9017**) to the DEA and one hard copy of the traffic noise analysis to the district office. The DEA SME shall establish the schedule for document review and comment.

SUBMITTAL (CONT.) The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the SME for inclusion with DEA comments. DEA shall be responsible for the overall review of the traffic noise analysis and preparation and compiling of any comments, questions, or required modifications.

If the report is not acceptable, the DEA SME shall generate a letter to the preparer requesting changes and identifying those elements of the Noise GAF that were not appropriately addressed. The SME shall establish the schedule for document resubmittal, review, and comment following the same process as for the initial submittal.

If the report is acceptable, the DEA SME shall coordinate the Noise GAF with the district office so the project manager can capture project commitments and record them in the CAP (Communicating All Promises database). The DEA SME shall send a letter and a copy of the completed Noise GAF to the preparer accepting the report and requesting final deliverables.

DISTRIBUTION After acceptance of the document, unless otherwise specified during project scoping, the consultant shall distribute deliverables as follows:

- Two hard copies and one electronic copy of the final traffic noise analysis along with the electronic Traffic Noise Model input files (if they have changed since the initial submittal) and a completed Noise GAF (TC 58-42 form) to DEA
- One hard copy of the final traffic noise analysis to the district office

TERM Findings within the document shall be considered valid unless the scope of the project changes to the point where the anticipated impacts may be altered. Reevaluation shall consider whether there are outstanding commitments to resolve noise impacts, and whether scope changes are sufficient to require additional analysis.





Chapter

AIR QUALITY ANALYSIS

Subject

Governing Documents & Guidance

GOVERNING DOCUMENTS

The governing documents for air quality analysis include:

- *Federal Highway Program Manual* (FHPM, 7-7-9)
- The *Clean Air Act* (CAA) and its subsequent amendments (42 USC 85)
- 40 CFR 50 *National Ambient Air Quality Standards* (NAAQS)
- *Final Rule – Implementing 8-Hour Ozone National Ambient Air quality Standards* (40 CFR 50, 51, and 81; 2004)
- *Final Rule - Transportation Conformity Determinations for the New PM2.5 and Existing PM10 National Ambient Air Quality Standards* (40 CFR 93, March 2006)
- The *Transportation Conformity Rule Amendments* (August 2, 2004) and its successors
- *Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents* (FHWA, December 2012)
- The *Kentucky Division of Air Quality Regulations*, Chapter 401 Kentucky Administrative Regulations (KAR)
- The *Kentucky Statewide Transportation Improvement Program* (STIP)
- Transportation improvement programs (TIPs) developed by metropolitan planning organizations (MPOs)
- The *Kentucky State Implementation Plan (SIP) for the Attainment and Maintenance of National Ambient Air Quality Standards* (NAAQS)
- *Kentucky Guidelines for Addressing Transportation Air Quality in NEPA Documents* (FHWA/KYTC Policy, June 2008)
- *Using MOVES in Project-Level Carbon Monoxide Analysis* (EPA, 2010)
- *Guideline for Modeling Carbon Monoxide From Roadway Intersections* (EPA, 1992)

GOVERNING DOCUMENTS (CONT.)

- *Transportation Conformity Guidance for Quantitative Hot-spot Analysis in PM2.5 and PM10 Nonattainment and Maintenance Areas* (EPA, November 2013)
- *The Green Book Nonattainment Areas for Criteria Pollutants* (http://www.epa.gov/airquality/greenbook/)

REGULATORY & GENERAL REQUIREMENTS

Both the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA) require that air quality be considered for federal transportation investments. Transportation projects shall be included in the Kentucky *Statewide Transportation Improvement Program* (STIP) and, if located in a metropolitan planning organization (MPO), shall also be included in that MPO's transportation improvement program (TIP).

The potential air quality impacts of transportation projects shall be analyzed and updated as a whole at least once every two years through the development of the STIP. The STIP is developed by the Kentucky Transportation Cabinet (KYTC) Division of Program Management in consultation with the FHWA, Federal Transit Authority (FTA), Environmental Protection Agency (EPA), MPOs, and other governing air quality agencies (Kentucky Division for Air Quality and Metropolitan Louisville Air Pollution Control District).

The CAA further requires that all programs, plans, and projects conform to the SIP and that priority be given to implementing those portions of the plan that are to achieve and maintain the National Ambient Air Quality Standards (NAAQS).





Chapter

AIR QUALITY ANALYSIS

Subject

Introduction

INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) recognizes that highway construction, maintenance, and operation may affect air quality. Air quality considerations are part of the planning, design, and construction of a highway project. KYTC's air quality commitment is addressed at two levels: through regional transportation conformity (see following discussion) and through project-level analysis.

Under regional conformity rules, KYTC takes a high-level look at proposed projects in a region to understand the potential air quality impacts of the overall program. The Division of Planning, along with the Division of Program Management, oversees regional transportation conformity. Transportation conformity is discussed in more detail below.

Project-level air quality impact analysis is performed to identify instances when a KYTC project may negatively impact air quality conformity. During project development, detailed analyses are performed to assess specific air quality impacts that may occur as a result of the project. Air quality impact analysis is discussed in **EA-603**.

TRANSPORTATION CONFORMITY

Transportation conformity is required under Clean Air Act (CAA) Section 176(c) (42 U.S.C. 7506(c)) to ensure that federally supported transportation project activities are consistent with (conform to) the purpose of the state air quality implementation plan (SIP). Conformity to the purpose of the SIP means that transportation activities shall not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS or "standards"). NAAQS have been established for transportation-related pollutants including carbon monoxide (CO), nitrogen dioxide (NO_2), ground level ozone (O_3), and particulate matter (PM_{10} and $PM_{2.5}$).

TRANSPORTATION CONFORMITY (CONT.)

Lead (Pb) and sulfur dioxide (SO_2) are also identified as transportation-related pollutants. However, lead is no longer a mobile source concern since tetraethyl lead was banned as a fuel additive, and SO_2 is primarily an industrial concern and not a mobile concern. As of September 2013, EPA designated two areas in Kentucky as nonattainment for the SO_2 standard. These areas are part of Jefferson County immediately surrounding the Louisville Gas and Electric Company Mill Creek Generating Station, and part of Campbell County. Currently, there is not an approved state implementation plan (SIP) to address this designation. All areas in Kentucky are currently in attainment for Pb, NO_2, and PM_{10}.

The Environmental Protection Agency's (EPA's) transportation conformity requirements apply in "nonattainment areas," areas that do not meet NAAQS, and "maintenance areas," which are areas that in the past have not met NAAQS for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$).

As of March 14, 2008, the EPA revised the 8-hour ozone standard to 0.075 ppm. Ozone is addressed regionally in the Kentucky statewide transportation improvement program (STIP) and, in areas where there is a metropolitan planning organization (MPO), in the local transportation improvement program (TIP). As of 2014, portions of Boone, Kenton, and Campbell counties are designated as maintenance areas. See the EPA Green Book at:

www.epa.gov/oar/oaqps/greenbk/hnc.html

NAAQS for carbon monoxide (CO) are 35 ppm (40 milligrams per cubic meter) for a 1-hour average concentration and 9 ppm (10 milligrams per cubic meter) for an 8-hour average concentration. To remain in conformity, neither the 1-hour nor 8-hour average can be exceeded more than once per year for carbon monoxide. As of 2014, all counties in Kentucky are in attainment for CO. See EPA Green Book at:

www.epa.gov/oar/oaqps/greenbk/cindex.html

The standard for $PM_{2.5}$ (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) is 12 ug/m^3 (annual) or 35 ug/m^3 (24 hr.). Nonattainment areas for this 2012 standard will be designated by December 2014. Following the 1997 standard (15 ug/m^3), $PM_{2.5}$ is required to be addressed in the following counties: Bullitt, Jefferson, Boone, Kenton, Campbell, Boyd, and the portion of Lawrence County as designated by Census Block 21-127-9901-6.

TRANSPORTATION CONFORMITY (CONT.)

The EPA designates areas as attainment, maintenance, or non-attainment, and the areas are subject to redesignation every two to three years. The EPA Motor Vehicle Emissions Simulator (MOVES) model is required to be used for quantitative $PM_{2.5}$ analysis.

The SIP defines the future maximum levels (called budgets) for each pollutant in each nonattainment and maintenance area. Transportation conformity is a process that uses transportation and air quality models to examine future levels of emissions for each of these areas and ensures that the transportation plan does not worsen or create air quality conformity problems. A traffic model is developed based upon planned roadway projects to determine projected traffic patterns, volumes, and speeds. The analyst enters this data, along with vehicle fleet characteristics and environmental information, into the current EPA emissions model to determine future emission levels. If the emission levels calculated are less than the budget for that pollutant, the area's long-range transportation plan is determined to be "in conformity."

More information on transportation conformity in Kentucky is available at:

http://transportation.ky.gov/planning/pages/air-quality.aspx

MOBILE SOURCE AIR TOXICS

Of the 188 air toxics identified in the CAA, EPA has identified 21 that are considered mobile source air toxics (MSATs), seven of which the Federal Highway Administration (FHWA) addresses. These include:

- Benzene
- Formaldehyde
- Diesel particulate matter plus diesel exhaust organic gases (diesel PM)
- Acrolein
- Napthalene
- 1, 3-butadiene
- Polycyclic organic matter

These seven MSATs shall be addressed for all federal projects in the state as per the Kentucky and FHWA *NEPA Documentation - Air Quality*. See DEA's Air Quality webpage at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Air-Quality.aspx

CLIMATE CHANGE GREENHOUSE GASES

To date, national standards have not been established regarding greenhouse gases, nor has EPA established criteria or thresholds for greenhouse gas emissions.

DOCUMENTATION & REPORTING

The level of detail in an air quality analysis shall vary considerably according to the scope of the project, the existing level of air quality in the area, and the degree of project controversy. State-funded projects do not require detailed analysis, unless the project is anticipated to have some level of federal funding applied to it at a later stage.

For federal projects processed as categorical exclusions (CEMP and CE Level 1 and 2), the air quality determination shall be documented on the categorical exclusion checklist and does not require detailed analysis.

Federal projects determined to have potential air quality impacts shall be documented in an air quality impact assessment, discussed in more detail in **EA-603**. An air quality impact assessment is generally considered the appropriate baseline study to address air quality impacts for incorporation into National Environmental Policy Act (NEPA) documents such as a CE Level 3, environmental assessment (EA), finding of no significant impact (FONSI), or environmental impact statement (EIS).





Chapter

AIR QUALITY ANALYSIS

Subject

Air Quality Impact Analysis

OVERVIEW

An air quality impact analysis is conducted during the early stages of project development to address transportation-related air quality concerns in the project area. All criteria pollutants shall be addressed, no matter what the attainment status. The analysis shall also include a discussion of climate and meteorological conditions in the project area and a discussion of land use adjacent to the project, where those land uses may impact air quality. A discussion of the indirect and cumulative impacts to air quality that may be anticipated in the area as a result of the project shall also be presented as part of the air quality impact analysis.

For certain pollutants, project-level analysis focuses the area of study on intersections within the proposed project corridor where delay and vehicle idling may create air quality "hot spots." Project-level analysis requires general input parameters such as roadway geometrics, traffic volumes, and worst-case meteorological data. These data are analyzed using the current Environmental Protection Agency (EPA) computer model (CAL3QHC Version 2, Motor Vehicle Emissions Simulator (MOVES) and, for older projects, Mobile 6.2). The resulting findings are referred to as a hot spot analysis.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

An air quality impact analysis defines anticipated air quality impacts from criteria pollutants resulting from changes in traffic intensity. The analysis shall address:

- Existing and future traffic volumes
- Designation and attainment status of the area with respect to the criteria pollutants
- Calculated air quality impact for build and no-build scenarios when project-level analysis is required

The air quality impact analysis is the appropriate base study for the purposes of documenting environmental conditions for alternative analysis in NEPA documents. This analysis compares impacts across multiple alternatives so that relative impacts can be considered.

Where impacts cannot be avoided, minimization for an air quality impact may consider alteration of the horizontal alignment of the project in order to move the project away from receptors or altering traffic signal timing in order to reduce congestion.

TRIGGER

To inform alternative selection during project development, air quality impact analysis is conducted on federally funded projects that are documented using CE Level 3, EA/FONSI, or an EIS. This analysis shall address all criteria pollutants regardless of the attainment status.

Project-level analysis is required when a project is located in a non-attainment or maintenance area for O_3 or $PM_{2.5}$. Project-level analysis is also triggered when projected traffic volumes exceed thresholds established for any criteria pollutant. Thresholds for project-level analysis vary by pollutant.

For CO, project-level analysis shall be performed if the project is considered controversial, or if it has or proposes to add signalized intersections with a projected average daily traffic (ADT) greater than or approaching 80,000.

For $PM_{2.5}$, project-level analysis shall be considered when projected ADT is greater than or approaches 125,000 and diesel traffic is at least 8 percent of the overall traffic mix and the proposed project is to be located in proximity to populated areas.

For MSATs, project-level analysis shall be performed when projected ADT is greater than or approaches 140,000 and diesel traffic is at least 8 percent of the overall traffic mix.

METHODS

The air quality impact analysis shall follow the most current *NEPA Documentation – Air Quality FHWA/KYTC*, June 2008, located at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Air-Quality.aspx

The analysis shall be consistent with current FHWA and EPA guidance. Currently approved emission models for project-level analysis are EPA Mobile 6.2.03, or MOVES. As of December 2012, all project-level modeling shall be done using MOVES. EPA has developed guidance to assist the practitioner in the correct application of MOVES (see "Using Moves in Project-Level Carbon Monoxide Analysis," EPA, December 2010).

Traffic data shall include average daily traffic (ADT), design hourly volume (DHV), truck percentages, fractions of light-duty and heavy-duty trucks, and, if needed, special trip generation conditions (heavy traffic generators, existing and future development plans, special events, etc.). These data are required for the existing, no-build, and all design alternatives for the design year, and for the year that the project opens to traffic.

REPORT FORMAT

The following report format shall be utilized for the air quality impact analysis. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project coordination and investigations. When possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review so the reviewer can duplicate results and conclusions from the data presented. The TC 58-33 form, *Air Quality Baseline - Guidance and Accountability Form* (AQ GAF) (**Exhibit 9001**), shall be followed to ensure document completeness.

- Title page
- Table of contents
- Executive summary/abstract
- Introduction
- Project description
- Assessment methodology
- Analysis of each criteria pollutant
- Indirect and cumulative impacts
- Conclusions
- Tables
- Exhibits
- Appendices

SUBMITTAL

Unless otherwise specified during project scoping, the preparer shall submit copies as follows:

- One hard copy and one electronic copy of the air quality impact analysis and a completed AQ GAF (**Exhibit 9001**) to the DEA
- One hard copy of the air quality impact analysis to the district office

The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. DEA shall be responsible for the overall review of the air quality impact analysis and preparation and compiling of any comments, questions, or required modifications.

If the report is not acceptable, the DEA SME shall generate a letter to the preparer requesting changes and identifying those elements of the AQ GAF that were not appropriately addressed. The DEA SME shall establish the schedule for document resubmittal, review, and comment following the same process as for the initial submittal.

When the report is acceptable, the DEA SME shall coordinate the AQ GAF with the district office so that any project commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the Six Year Plan database by the project manager. The DEA SME shall send a letter and a copy of the completed AQ GAF to the preparer accepting the report and requesting final deliverables.

DISTRIBUTION

After acceptance of the document, unless otherwise specified during project scoping, the preparer shall distribute deliverables as follows:

- Two hard copies and one electronic copy of the final air quality impact analysis along with a completed AQ GAF (**Exhibit 9001**) to DEA
- One hard copy of the final air quality impact analysis to the district office

TERM

Findings within the document shall be considered valid unless the scope of the project changes to the point where the anticipated impacts may be altered. Reevaluation shall consider whether there are outstanding commitments to resolve air quality impacts, and whether scope changes are sufficient to require additional analysis.





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Governing Documents

GOVERNING DOCUMENTS

All work conducted pertaining to the Socioeconomic Impact Analysis is governed by the following laws, statutes, regulations, executive orders, and directives:

- National Environmental Policy Act of 1969 (42 U.S.C. 4321)
- Department of Transportation Act of 1966 - Section 4(f) (49 U.S.C. 303)
- Land and Water Conservation Act — Section 6(f) (16 U.S.C. 4601-4, 1964)
- Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d-200d-7)
- Fair Housing Act of 1968 (42 U.S.C. 3601-3619)
- Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. 61)
- Americans with Disabilities Act of 1990 (42 U.S.C. 12101)
- Executive Order 12898, "Environmental Justice in Minority and Low-Income Populations" (1994)
- DOT Order 5610.2 (1997), "Final DOT Environmental Justice Order"
- Farmland Protection Policy Act of 1981 (7 U.S.C. 4201)
- Wilderness Act of 1964 (16 U.S.C. 1131-1136)
- "United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations" (2010)

GOVERNING DOCUMENTS (CONT.)

- "Pedestrian and Bicycle Travel Policy" (KYTC, 2002)
- "Guidelines for Pedestrian & Bicycle Accommodations" (KYTC *Highway Design Guidance Manual*, **HD-1502**)
- Section 4(f) Policy Paper (USDOT FHWA, July 20, 2012)
- *Land and Water Conservation Fund State Assistance Program: Federal Financial Assistance Manual* (National Park Service, U. S. Department of the Interior, 2008)
- "FHWA Actions to Address Environmental Justice in Minority Populations and Low Income Populations" (FHWA Order 6640.23A, 2012)
- *Community Impact Assessment: A Quick Reference Guide* (FHWA, 2005)
- "Environmental Justice Analysis for Projects Documented by Categorical Exclusion" (KYTC Memorandum, June 27, 2011)





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Introduction

OVERVIEW

Socioeconomic Impact Analysis is undertaken to evaluate and address potential direct or indirect impacts to the human environment. Impacts may be easily quantifiable, such as relocations of households or businesses. Detailed, data-driven analysis may be required to understand positive or negative economic impacts to business and employment.

Local land use planning and an understanding of local values provide context to identify potential impacts and suggest solutions that avoid, minimize, or mitigate those impacts. Quality of life issues, such as impacts to parks and recreational opportunities, including bicycle and pedestrian facilities, are also addressed. Impacts to low-income and minority populations who may be affected by a project are considered in Environmental Justice Analysis. In rural areas, impacts to farmland are evaluated.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

DOCUMENT TYPES

For small-scale projects (those processed as a CEMP, CE Level 1, or CE Level 2), socioeconomic impacts may be adequately documented by completion of the Categorical Exclusion Checklist (see **EA-404**). For larger projects, determined by project scope and context, the assessment may result in the development of one or more of the following project documents:

DOCUMENT TYPES (CONT.)

- Socioeconomic Assessment (**EA-703**)
- Community Impact Assessment (**EA-704**)
- Environmental Justice Analysis (**EA-705**)
- Section 4(f) Evaluation (**EA-706**)
- Section 6(f) Evaluation (**EA-707**)





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Socioeconomic Assessment

GENERAL

The Socioeconomic Assessment is normally completed during the early stages of project development and evaluates potential impacts to the human environment including: the relocation of households or businesses; quality of life issues such as access to community services, parks, and recreation; and economic considerations such as impacts to businesses and employment. It considers broad issues such as the project's effect on local land use planning or aesthetics. Socioeconomic Assessment requires a clear understanding of local context and local values; therefore, much of the assessment is devoted to documenting the existing conditions in the project area.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The goals of Socioeconomic Assessment are to document existing social and economic conditions in the project area and to evaluate potential project impacts to those conditions for different project alternative scenarios. If project impacts are identified, the assessment shall document how the project can avoid, minimize, or mitigate those impacts. The findings shall be considered in the project's overall alternative analysis and selection.

TRIGGER

Socioeconomic Assessment is triggered when potentially significant positive or negative social or economic impacts are anticipated to result from a federally funded project. A stand-alone Socioeconomic Assessment is usually not required for state-funded projects or lower-level NEPA studies (CEMP, CE Level 1, or CE Level 2), but should be considered for more complex projects (CE Level 3), and is usually required for projects processed using an EA/FONSI or EIS/ROD.

METHODS

Socioeconomic Assessment shall balance data resources with community and stakeholder engagement to develop a full understanding of conditions in the project area.

Organizations that may be consulted for local socioeconomic data include:

- Metropolitan Planning Organizations (MPOs – land use and zoning plans, forecasted socioeconomic data, economic base)
- Area Development Districts (ADDs - similar to MPOs), Kentucky employment agencies, or labor departments (employment trends, unemployment rates, economic base)
- Kentucky State Data Center (population data and forecasts)
- The Kentucky Transportation Cabinet (KYTC) (traffic, growth projections, roadway level of service, planning studies)
- Transit agencies (bus and train routes, ridership)

Other sources to consider are:

- State Historic Preservation Office
- U. S. Department of Interior
- Kentucky Department for Local Government
- State, local, and university libraries
- Local historical societies and local chambers of commerce
- American Automobile Association
- Religious institutions
- Social service agencies and organizations
- Crime records

METHODS (CONT.)

- Census Bureau publications, aerial maps, and road maps
- Yellow Pages or city directories
- PVA offices
- Local realtors
- Tax records
- Building-permit records
- USDA/NRCS and Kentucky Agricultural Statistics Bulletin (U. S. Department of Agriculture)
- Program for Agricultural Conservation Easements

These existing data sources shall be supplemented by windshield survey and field visits as well as interviews or meetings with business and community leaders and residents. If necessary, more detailed information may be gathered using written surveys, telephone interviews, going door-to-door, or using other public involvement and stakeholder engagement techniques. The KYTC Public Involvement Toolbox is a helpful resource and can be accessed at:

http://transportation.ky.gov/public-involvement-toolbox/Pages/default.aspx

REPORT FORMAT

The following report format shall be utilized for the Socioeconomic Assessment. Discussion shall be clearly written with sufficient detail to address the issues and concerns identified during project coordination and investigations. Whenever possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review. The reviewer should be able to duplicate results and conclusions from the data presented. The TC 58-43 form, *Socioeconomic Impact - Guidance and Accountability Form* (**Exhibit 9020**), shall be followed to ensure document completeness.

- Title Page
- Table of Contents
- Executive Summary/Abstract
- Introduction
- Project Description
- Land Use

REPORT FORMAT (CONT.)

- Community Resources
- Replacement Housing and Commercial Facilities
- Relocations and Displacements
- Farmland
- Environmental Justice
- Pedestrian and Bicycle Facilities
- Visual Impacts
- Construction Impacts
- Section 4(f) Resources
- Section 6(f) Resources
- Safety
- Indirect and Cumulative Impacts
- Appendices (**Note:** Supporting data may be attached in electronic format.)

SUBMITTAL

This document is typically prepared by a prequalified consultant. The review process described as follows may be modified for internally prepared documents.

Unless otherwise specified during project scoping, distribution shall be as follows:

- One hard copy and one electronic copy of the Socioeconomic Assessment and a completed TC 58-43 form, Socioeconomic GAF, to DEA
- One hard copy of the Socioeconomic Assessment to the district office

The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. The DEA shall be responsible for the overall review of the Socioeconomic Assessment and preparation and compiling of any comments, questions, or required modifications.

SUBMITTAL (CONT.) If the report is not acceptable, the DEA SME shall generate a letter to the preparer requesting changes and identifying those elements of the Socioeconomic GAF that were not appropriately addressed. The DEA SME shall establish the schedule for document resubmittal, review, and comment following the same process as for the initial submittal.

If the report is acceptable, the DEA SME shall coordinate the Socioeconomic GAF with the district office so that any project commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the KYTC project manager's database by the project manager. The DEA SME shall send a letter and a copy of the completed Socioeconomic GAF to the preparer accepting the report and requesting final deliverables.

DISTRIBUTION After acceptance of the document, unless otherwise specified during project scoping, deliverables shall be distributed as follows:

- Two hard copies and one electronic copy of the final Socioeconomic Assessment along with a completed TC 58-43 form, Socioeconomic GAF, to DEA
- One hard copy of the final Socioeconomic Assessment to the district office

TERM Findings within the document are generally considered valid unless the scope of the project changes to the extent that anticipated impacts may be substantively different than previously identified. Reevaluation shall consider whether there are outstanding commitments to resolve socioeconomic impacts, and whether scope changes are of a magnitude to warrant additional analysis.





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Community Impact Assessment

OVERVIEW

The various analytical components of a Community Impact Assessment (CIA) outlined below are similar to the components of the Socioeconomic Assessment (**EA-702**). However, the CIA evaluates particular communities that may be adversely affected by the proposed project, whereas the socioeconomic baseline encompasses a broader perspective of the entire project area and may include several communities in a more generalized form of analysis. The decision to prepare a CIA shall be made by the project team with the involvement of the Division of Environmental Analysis (DEA) socioeconomic subject matter expert (SME). Various components of a CIA can be tailored on a project-by-project basis to address unique characteristics of communities affected by the transportation action.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The goals of CIA are to document existing social and economic conditions in a defined community and to evaluate potential positive or negative project impacts to those conditions for different project alternative scenarios. If negative project impacts are identified, the CIA shall document how the project can avoid, minimize, or mitigate those impacts. The findings shall be considered in the project's overall alternative analysis and selection.

TRIGGER

CIA is triggered either during project scoping, when substantive community impacts are anticipated, or when Socioeconomic Impact Analysis indicates a unique or significant impact to a defined community as a result of project activities. Factors to consider include identifying whether protected populations are affected and whether anticipated impacts could disrupt community cohesion, or threaten the sustainability of a community. The project team, with the input of the Socioeconomic SME, shall determine whether a CIA is appropriate.

METHODS

CIA uses the same approach and tools as Socioeconomic Impact Assessment (**EA-702**) to identify communities and assess impacts. CIA further requires the identification and definition of geographic boundaries of the affected communities. FHWA has prepared extensive guidance on CIA at:

http://www.fhwa.dot.gov/environment/cia/

REPORT FORMAT

The report format for the CIA shall follow that used for the Socioeconomic Assessment, and shall include all relevant sections. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project coordination and investigations. Whenever possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review. The reviewer should be able to duplicate results and conclusions from the data presented. The TC 58-43 form, *Socioeconomic Impact - Guidance and Accountability Form* (Socioeconomic GAF) (**Exhibit 9020**), shall be followed to ensure document completeness.

The format shall be as follows:

- Title Page
- Table of Contents
- Executive Summary/Abstract
- Introduction
- Project Description
- Community Descriptions
- Land Use
- Community Resources

REPORT FORMAT (CONT.)

- Replacement Housing and Commercial Facilities
- Relocations and Displacements
- Farmland
- Environmental Justice
- Pedestrian and Bicycle Facilities
- Visual Impacts
- Construction Impacts
- Section 4(f) Resources
- Section 6(f) Resources
- Safety
- Indirect and Cumulative Impacts
- Appendices (**Note:** Supporting data may be attached in electronic format.)

SUBMITTAL

This document is typically prepared by a prequalified consultant. The review process described as follows may be modified for internally prepared documents.

Unless otherwise specified during project scoping, copies shall be distributed as follows:

- One hard copy and one electronic copy of the CIA and a completed TC 58-43 form, Socioeconomic GAF, to DEA
- One hard copy of the CIA to the district office

The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. DEA shall be responsible for the overall review of the CIA and preparation and compiling of any comments, questions, or required modifications.

SUBMITTAL (CONT.) If the report is not acceptable, the DEA SME shall generate a letter to the preparer requesting changes and identifying those elements of the Socioeconomic GAF that were not appropriately addressed. The DEA SME shall establish the schedule for document resubmittal, review, and comment following the same process as for the initial submittal.

If the report is acceptable, the DEA SME shall coordinate the Socioeconomic GAF with the district office so that any project commitments can be captured and recorded in "Communicate All Promises" (CAP) by the project manager. The DEA SME shall send a letter and a copy of the completed Socioeconomic GAF to the preparer accepting the report and requesting final deliverables.

DISTRIBUTION After acceptance of the document, unless otherwise specified during project scoping, deliverables shall be distributed as follows:

- Two hard copies and one electronic copy of the final CIA and a completed TC 58-43 form, Socioeconomic GAF, to DEA
- One hard copy of the final CIA to the district office

TERM Findings within the document are generally considered valid unless the scope of the project changes to the extent that anticipated impacts may be substantively different than previously identified. Reevaluation shall consider whether there are outstanding commitments to resolve community impacts, and whether scope changes are of a magnitude to warrant additional analysis.





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Environmental Justice Analysis

OVERVIEW

Environmental Justice Analysis (EJA) addresses potential disproportionate adverse human health or environmental effects on low-income or minority populations. See Executive Order 12898, which can be found at:

http://www.gpo.gov/fdsys/pkg/FR-1994-02-16/html/94-3685.htm

EJA may result in a stand-alone document, but is often addressed within the Socioeconomic Impact Assessment (**EA-702**), or incorporated into the National Environmental Policy Act (NEPA) document.

The Kentucky Transportation Cabinet (KYTC) has developed guidance to address EJA for projects documented by Categorical Exclusion. Information on this can be found at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Guidance-and-Forms.aspx

This guidance provides tools to reach out to households that may be relocated by KYTC projects, and provides a clear process for identifying and addressing potential impacts to Environmental Justice (EJ) populations for small-scale projects documented at this level.

Projects documented by EA/FONSI or EIS/ROD will be more appropriately analyzed individually using widely accepted social research tools and following current FHWA guidance. These can be found at:

http://environment.fhwa.dot.gov/projdev/guidance_ej_nepa.asp

These processes are further discussed under the “Methods” side heading below.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

OVERVIEW (CONT.) Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES The goals of EJA are to identify and avoid, if possible, disproportionate impacts to low income and minority populations. If such impacts are unavoidable, the project team shall work with FHWA to develop minimization and mitigation measures. A well-executed EJA will effectively engage underserved populations and result in a documented process for identifying and addressing impacts to EJ populations.

TRIGGER EJA shall be incorporated into any federally funded project during project development.

METHODS EJA uses many of the same tools as Socioeconomic Impact Assessment (**EA-702**) to identify EJ populations and assess impacts.

EJA shall be commensurate with the scope and intensity of anticipated impacts. Small-scale projects shall be analyzed and documented following the previously discussed KYTC guidance. For more information, go to:

http://transportation.ky.gov/Environmental-Analysis/Pages/Guidance-and-Forms.aspx

For projects processed using an EA Finding of No Significant Impact (EA/FONSI) or EIS Record of Decision (EIS/ROD), an individual analysis shall be undertaken. The first step shall be to determine whether an EJ population is potentially affected by any of the proposed alternates of the project and to determine whether the potentially affected community includes low income or minority populations. EJA for a project where a protected population is not identified may be concluded without further study as long as these findings are appropriately documented.

Where EJ populations are potentially affected by the project, those populations must be engaged in a meaningful way to gather their views on the project and identify the potential benefits and burdens of each alternative under consideration.

METHODS (CONT.)

According to DOT Order 5610.2, adverse effect means "the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities."

The EJA shall examine project impacts on EJ populations and determine whether disproportionately high and adverse human health or environmental effects will occur on those populations. Project impacts may also be beneficial. Potential transportation project benefits may include: increased access to jobs, community facilities, and services; access to additional travel modes; improved travel times or level of service; enhanced economic development potential; improvements in air quality; increased livability and sustainability of neighborhoods; improved safety; and reduced transportation costs. Project benefits to the community as a whole and to any EJ populations shall be considered.

Finally, if it is determined that disproportionately high adverse human health or environmental effects will accrue to EJ populations; consideration shall be given to minimizing or mitigating those effects. This can most effectively be done by engaging those populations in identifying appropriate solutions.

REPORT FORMAT

EJA is not typically a stand-alone document. However, it may require extensive documentation within a Socioeconomic Assessment, Community Impact Assessment, or NEPA document. For that reason, it has been treated in this guidance as a separate document type. The EJA discussion shall provide a clear account of the project team's efforts to identify and engage EJ populations.

REPORT FORMAT (CONT.)

Supporting documentation shall be incorporated within the text of the document, or clearly referenced for easy review. Each alternative under consideration at the time of the EJA shall be considered in a way that provides easy comparison between alternatives of the potential impacts (both benefits and burdens) to EJ populations.

Any proposed minimization or mitigation measures should be discussed in a concise manner, including a discussion of how the affected populations were involved in the decision process.

SUBMITTAL, DISTRIBUTION, & TERM

These shall follow that of the primary NEPA document of which the EJA is a part.





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Section 4(f) Evaluation

OVERVIEW

Section 4(f) refers to regulations governing the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federally funded transportation projects. Use occurs when any of the following apply:

- Section 4(f) land is permanently incorporated into a transportation facility
- There is temporary occupancy that is adverse in terms of the statutes preservation purposes
- There is a constructive use that affects the property's protected activities, attributes, or features

Section 4(f) provides protection for these significant resources, but compliance is often difficult and can become a cause of delay in the National Environmental Policy Act (NEPA) process. Although these requirements are now codified at 23 USC 138 and 49 USC 303, they originated in Section 4(f) of the Department of Transportation Act of 1966.

Many environmental laws, including NEPA, are procedural; that is, they establish procedures that must be followed before a decision is made. Section 4(f) is different. It prohibits certain types of decisions from being made at all. This type of law is known as a substantive requirement and can block an agency from taking action, regardless of how thoroughly the action has been studied.

Under Section 4(f), a federally funded highway project that uses Section 4(f) property can be approved only after a determination is made that no prudent and feasible alternative to use of the property exists and that project planning minimizes harm to Section 4(f) sites (49 USC 303).

OVERVIEW (CONT.)

In the 2005 Transportation Act re-authorization (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users -SAFETEA-LU), Section 4(f) was amended to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). The new rule states that once the U. S. Department of Transportation (DOT) determines that a transportation use of Section 4(f) property results in a *de minimis* impact, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete for that property (Section 6009(a) of SAFETEA-LU, 23 USC 138 and 49 USC 303). *De minimis* is discussed in more detail in the "Methods" side heading below.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

Section 4(f) evaluation identifies and addresses any use of a Section 4(f) property by a Department of Transportation project, including analysis of avoidance alternatives, or, if not feasible and prudent to avoid, all possible planning to minimize harm to the resource.

TRIGGER

Section 4(f) evaluation is triggered when any of the property types discussed above may be used by a federally funded transportation project.

METHODS

Section 4(f) evaluation shall first determine whether Section 4(f) properties are located within or adjacent to the project, and confirm that the property in question meets the definition of a protected Section 4(f) property type. FHWA has developed extensive guidance to help the practitioner determine whether a park, recreation area, wildlife refuge, or historic property should be considered protected under Section 4(f). Local, state, and federal parks agencies, local school systems, the Kentucky State Nature Preserves, and the State Historic Preservation Office (SHPO) should be consulted when identifying potentially protected properties.

METHODS (CONT.)

Historic properties shall be identified through the Section 106 process (see **EA-901—912**). Accurate identification of the boundaries for these properties is essential to properly evaluating Section 4(f) impacts. (See **EA-912** for a discussion of Section 4(f) as it relates to Section 106 of the National Historic Preservation Act.)

It is important to determine the exact boundaries of Section 4(f) properties and consult with officials having jurisdiction to answer questions about how a particular property is used. It must also be determined whether the project area includes public school properties with recreational facilities, as well as any recreational trails in the area that may meet criteria for protection under Section 4(f). Research may be necessary to determine whether the community has any designated planned or future parks, and determine whether privately owned lands may be subject to easements that could cause them to be considered "publicly owned" for purposes of Section 4(f).

The project team shall determine if any alternatives would result in a direct impact ("use") of land within Section 4(f) properties, including temporary impacts, and whether the criteria for "temporary occupancy" are met. When Section 4(f) properties are identified in close proximity to the project, but will not be directly affected, the FHWA division office shall be consulted to determine whether the criteria of "constructive use" apply.

***De Minimis* Impact Determination**

A *de minimis* finding requires FHWA to coordinate with the officials with jurisdiction (park owner, wildlife/waterfowl refuge owner/manager, or, for historic properties, the SHPO). If the officials with jurisdiction agree that the use will not adversely affect the activities, features, or attributes that define the property as a 4(f) resource, a *de minimis* finding may be made by FHWA. FHWA shall notify the officials with jurisdiction and the public of its intent to make a *de minimis* finding. Formal correspondence between FHWA and the officials with jurisdiction is required to document a *de minimis* impact determination (**Exhibits 9029** and **9030**).

Programmatic 4(f) Evaluation

For certain minor uses of Section 4(f) properties, FHWA has developed programmatic Section 4(f) evaluations based on experience with many projects that have a common fact pattern with respect to Section 4(f).

METHODS (CONT.) FHWA has issued five nationwide programmatic Section 4(f) evaluations:

1) Section 4(f) Statement and Determination for Independent Bikeway or Walkway Construction Projects

2) Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of a Historic Bridge

3) Final Nationwide Section 4(f) Evaluation and Approval for Federally Aided Highway Projects with Minor Involvements with Historic Sites

4) Final Nationwide Section 4(f) Evaluation and Approval for Federally Aided Highway Projects with Minor Involvements with Public Parks, Recreation Lands, Wildlife and Waterfowl Refuges

5) Nationwide Programmatic Section 4(f) Evaluation and Approval for Transportation Projects that have a Net Benefit to a Section 4(f) Property

For projects with only these limited Section 4(f) impacts, programmatic evaluations allow a streamlined approach to address the use of Section 4(f) property. These projects still require consultation with the officials having jurisdiction over the property. With the exception of the Historic Bridge Programmatic, the official with jurisdiction must agree that the action, including all minimization and mitigation measures, does not adversely affect the resource. The requirement to assess whether there are any feasible and prudent avoidance alternatives still applies. Programmatic Section 4(f) evaluations do not require a legal sufficiency review by FWHA counsel, thus reducing the time that would be required to process a Section 4(f) evaluation.

The programmatic Section 4(f) evaluation for historic bridges is used frequently. Since the option to process *de minimis* impacts became available, the Kentucky Transportation Cabinet (KYTC) rarely uses the remaining programmatic approaches.

Individual Section 4(f) Evaluation

For projects where greater than *de minimis* impact to a Section 4(f) property is anticipated and a programmatic approach is not applicable, an Individual Section 4(f) Evaluation shall be prepared. The project team must develop and evaluate a reasonable range of avoidance alternatives (including the “no build” option) to determine whether alternatives exist that completely avoid all Section 4(f) properties.

METHODS (CONT.)

Avoidance alternatives shall be evaluated to determine whether they are feasible and prudent. They shall meet the project's purpose and need, and shall not cause unique problems or impacts of extraordinary magnitude. If there are prudent and feasible alternatives that completely avoid the use of Section 4(f) property, one of those alternatives shall be selected.

If no feasible and prudent avoidance alternatives can be identified, modifications shall be considered to minimize impacts to Section 4(f) properties. From the remaining alternatives that use Section 4(f) property, FHWA may approve only the alternative that causes the least overall harm in light of the statute's preservation purpose. To determine which alternative would cause the least overall harm, the FHWA shall compare seven factors between the alternatives under consideration. The first four factors relate to the net harm each alternative would cause to Section 4(f) property:

1) Ability to mitigate adverse impacts for each Section 4(f) property
2) Relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection
3) Relative significance of each Section 4(f) property
4) Views of the officials with jurisdiction over each Section 4(f) property

The remaining factors enable FHWA to consider substantial problems on issues beyond Section 4(f). These factors are:

5) Degree to which each alternative meets the purpose and need for the project
6) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
7) Substantial differences in costs among the alternatives

An individual Section 4(f) evaluation shall be completed when approving a project that requires the use of a Section 4(f) property where the use results in a greater than *de minimis* impact and a programmatic Section 4(f) evaluation cannot be applied to the impact.

METHODS (CONT.)

The individual Section 4(f) evaluation authorizes the use of one or more Section 4(f) properties. An individual Section 4(f) evaluation requires legal sufficiency review by FHWA's legal counsel. The individual Section 4(f) evaluation is generally included as a separate chapter or appendix to the project's NEPA document. It must include two findings that:

1. There is no feasible and prudent alternative that completely avoids the use of Section 4(f) property
2. The project includes all possible planning to minimize harm to the Section 4(f) property resulting from the use

Finalization of the NEPA document and use of Section 4(f) property cannot proceed without FHWA approval (49 USC 303[c]).

REPORT FORMAT

Section 4(f) documentation varies, depending upon the project findings. A finding of no "use" shall be supported in the Section 4(f) discussion contained within the project environmental document.

De minimis findings are typically documented by written concurrence between FHWA or other DOT agency and SHPO (**Exhibit 9029**) or other officials with jurisdiction over the 4(f) property (**Exhibit 9030**). *De minimis* impact determinations shall be discussed in the NEPA document.

KYTC and FHWA have developed a programmatic evaluation checklist to address projects that "use" a historic bridge (TC 58-57 form [**Exhibit 9025**]). This checklist is to be completed by the KYTC SME or consultant, signed by FHWA, and shall be included in an appendix to the environmental document. This checklist, along with the Section 106 Memorandum of Agreement addressing impacts to the bridge, shall be coordinated with FHWA. Documentation for other types of programmatic 4(f) findings must be sufficient to demonstrate that the programmatic evaluation being relied upon applies to the use of the specific Section 4(f) property. In addition, the project file should document that any required coordination and specific conditions of the applicable programmatic evaluation were met.

Individual Section 4(f) evaluations shall follow the format set out below. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project coordination and investigations. Where possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review.

REPORT FORMAT (CONT.)

The reviewer should be able to duplicate results and conclusions from the data presented.

- Description of the project, including a concise statement of the project purpose and need

  Note: When a Section 4(f) evaluation is being done as part of an Environmental Impact Statement (EIS) or Environmental Assessment (EA), the corresponding section of the NEPA document can be referenced.

- Description of proposed actions
- Description of Section 4(f) resource
- Description of alternatives, including avoidance alternatives
- Discussion of all possible planning to minimize harm to the Section 4(f) property
- Description of impacts to each Section 4(f) property
- Discussion of mitigation measures
- Discussion of coordination activities, including copies of correspondence, if applicable

SUBMITTAL, DISTRIBUTION, & TERM

These shall follow that of the NEPA document of which the Section 4(f) evaluation is a part.





Chapter

SOCIOECONOMIC IMPACT ANALYSIS

Subject

Section 6(f) Evaluation

OVERVIEW

Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) shall be addressed when transportation projects result in permanent conversion of outdoor recreation property that was acquired or developed using LWCFA grant assistance. Conversion of LWCFA property is defined as a change in use to one other than outdoor recreation. In Kentucky, LWCFA coordination is administered by the Department for Local Government (DLG).

Section 6(f) directs the National Park Service (NPS) to ensure that replacement lands of equal value, location, and usefulness are provided as conditions to approve the land conversion. Whenever a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary, and the NPS concurrence on the land transfer shall be documented.

Section 4(f) typically applies to these same resources. Thus, avoidance to address Section 4(f) may eliminate the need to address Section 6(f).

The coordination requirements of Section 6(f) compliance are complex and time consuming. The agency with jurisdiction over the recreational property may need to be educated on the requirements of the conversion. A KYTC-qualified appraiser shall be required for the appraisal of the Section 6(f) land subject to conversion and any selected replacement land. Successful Section 6(f) compliance shall also require close coordination with DLG and ultimately, NPS approval.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

OVERVIEW (CONT.) Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES Section 6(f) evaluation identifies and addresses the conversion of a Section 6(f) property by a project.

TRIGGER Section 6(f) evaluation is triggered when it has been determined that a project shall require the conversion of outdoor recreation property that used LWCFA funds. Note that these requirements are applicable to conversion of Section 6(f) land regardless of whether federal funding or approvals are involved.

METHODS

Identify Section 6(f) Properties

Section 6(f) evaluation shall first determine whether Section 6(f) properties are located within, near, or adjacent to the project. An early field review shall assist in the identification of outdoor recreational facilities. The LWCFA website listing of individual projects by state and county should be consulted and may be accessed at:

http://waso-lwcf.ncrc.nps.gov/public/index.cfm

If any of the recreational facilities listed are adjacent to the project, the DLG LWCFA coordinator shall be consulted to confirm the location of Section 6(f) lands near the project area and to obtain detailed mapping and descriptive information showing how and where within those recreational facilities the LWCFA funding was used. It is possible that the funds were restricted to certain geographically limited areas of the facility. Officials with jurisdiction over the recreational facilities may be consulted to determine whether they have additional knowledge or record of LWCFA funds being expended on the property.

Projects with no impact on outdoor recreational lands or that affect recreational land that has never received LWCFA funds will not result in the conversion of Section 6(f) lands. Impact to a recreational facility that used LWCFA funds where the project impacts fall outside of the area where those funds were expended will not result in the conversion of protected land (for example, LWCFA funds may have been used to upgrade playground equipment near the back of a park.

METHODS (CONT.)

If the project was proposing a strip taken from the front of the park, no Section 6(f) land would be converted). A finding that the project will not result in the conversion of Section 6(f) lands shall be documented in the project National Environmental Policy Act (NEPA) document, or in the project file.

Evaluate Conversion

If it appears that a project may result in the conversion of Section 6(f) land, the project team shall evaluate all practical alternatives to the conversion and reject only those alternatives with a sound basis for rejection. Officials with jurisdiction of the Section 6(f) lands and the DLG LWCFA program coordinator shall be consulted to:

- Provide input regarding minimization alternatives
- Identify recreational needs that are being met by the affected recreational facility
- Identify types of outdoor recreational resources and opportunities available on the portion of the Section 6(f) property proposed for conversion
- Evaluate recreational viability of the (remaining) unconverted part of the Section 6(f) property
- Discuss possible options for suitable replacement property

Determine Fair Market Value of Section 6(f) Land Proposed for Conversion

The project team shall ask the district Right of Way Section or Central Office Division of Right of Way and Utilities for a determination of the fair market value of the portion of the Section 6(f) property proposed for conversion. The determination shall meet the requirements of the *Uniform Appraisal Standards for Federal Land Acquisitions*.

Identify and Evaluate Potential Replacement Property

In accordance with 36 CFR 59.3, replacement property for converted Section 6(f) land must:

- Be of at least equal fair market value as established by an approved appraisal following the *Uniform Appraisal Standards for Federal Land Acquisitions*

METHODS (CONT.)

- Be of reasonably equivalent usefulness and location as the property to be converted

- Meet the eligibility requirements for LWCFA acquisition and constitute or be a part of a viable recreation area

The NPS has final discretion for approving replacement property. However, 36 CFR 59.3 does not require that replacement property provide identical recreational experiences or be located at or adjacent to the same site. Generally, the selected site serves the same community or area as the converted site, but there may be exceptions. For example, if the demographics of the area are changing and there is no existing or anticipated future need for outdoor recreation facilities at that location, another more suitable location within the jurisdiction may be considered for replacement property.

It is possible that one parcel of land may address more than one approved Section 6(f) conversion. The project team shall work with the DLG LWCFA program coordinator and the officials with jurisdiction to identify the most suitable replacement land.

After a suitable replacement property is identified, the project team shall request a determination from the district Right of Way Section or Central Office Division of Right of Way and Utilities of the fair market value of the replacement property, with the understanding that the determination shall meet the requirements of the *Uniform Appraisal Standards for Federal Land Acquisitions*. If the appraised value of the preferred replacement property equals or exceeds the appraised value of the Section 6(f) conversion land, the project team is ready for the next step. If not, the identification of replacement property shall need to be revisited until suitable property with an appropriate value is identified.

DOCUMENTATION & SUBMITTAL

The project team shall prepare a formal request to the DLG LWCFA program coordinator requesting the Section 6(f) conversion. The cover letter and supporting documentation shall:

- Discuss practical alternatives for avoiding and minimizing the Section 6(f) land conversion, which shall be consistent with Section 4(f) documentation, when required

- Identify the Section 6(f) land proposed for conversion and the proposed replacement land, including a location map for each

DOCUMENTATION & SUBMITTAL (CONT.)

- Discuss the recreation needs being fulfilled on the property proposed for conversion and the facilities, resources, and opportunities available
- For properties that will be partially converted, discuss the effect of the proposed conversion on the remaining portions of the property
- Include a determination of the extent to which the replacement property will meet the recreation needs being impacted by the conversion
- Document the fair market value of the property proposed for conversion and the property proposed for replacement
- Verify that all other necessary coordination with other federal agencies has been satisfactorily completed (for example, compliance with Section 4(f) and Section 106)
- Include correspondence between KYTC and the agency with jurisdiction (**Exhibit 9028**) demonstrating good faith intent to acquire the identified replacement property

Once finalized and approved, the Section 6(f) documentation shall be appended to the project NEPA document or included in the project file.

DISTRIBUTION & TERM

These shall follow that of the NEPA document, of which the Section 6(f) evaluation is a part.





Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Governing Documents & Requirements

GOVERNING DOCUMENTS

All work conducted pertaining to the Ecology and Permitting Branch of the Division of Environmental Analysis is governed by the following laws, statutes, regulations, executive orders, and directives:

- U.S. Fish and Wildlife Service (USFWS) Programmatic Guidance for the Department of Transportation
- Fish and Wildlife Coordination Act of 1934, as amended (16 USC 661-667e)
- Endangered Species Act of 1973 (16 USC 35 Section 1531 et seq.)
- Clean Water Act of 1972 (33 USC 26 Section 1251 et seq.)
- Highway Department to Eradicate Noxious Weeds on Right of Ways (KRS 176.051)
- Federal Highway Administration (FHWA) Mitigation of Impacts to Wetlands and Natural Habitat (23 CFR Part 777) (2000)
- Executive Order 13112 on Invasive Species (1999)
- Kentucky Endangered Species of Fish and Wildlife (301 KAR 3:061) and Kentucky Rare Plant Recognition (KRS 146.600-619)
- Kentucky State Nature Preserves Commission (KRS 146.410-146.530 and 146.610)
- Kentucky Department of Fish and Wildlife Resources (KRS 150)
- Executive Order 13186 on Responsibilities of Federal Agencies to Protect Migratory Birds (2001)
- Federal Cave Resources Protection Act of 1988 as amended (16 USC 63 Sections 4301-4310)
- Kentucky Transportation Cabinet (KYTC) TC 58-34 form, *Ecological Study Format Guidance and Accountability Form* (**Exhibit 9009**)

GOVERNING DOCUMENTS (CONT.)

- KYTC TC 58-36 form, *Biological Assessment Guidance and Accountability Form* (**Exhibit 9004**)
- Memorandum of Understanding Between the Federal Highway Administration and the Kentucky Transportation Cabinet for Determinations of No Effect Pursuant to Section 7 of the Endangered Species Act (2005)

  http://transportation.ky.gov/Environmental-Analysis/Pages/Streamlining-Agreements.aspx

- USFWS *Biological Opinion for Minor Road Construction Projects in Kentucky and Their Effects on the Indiana Bat* (FWS #06-0466, June 9, 2006, as amended)



Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Introduction

INTRODUCTION

Ecological impact assessment is undertaken to identify instances when unique or critical habitat, endangered species, or water quality may be impacted by project construction and to develop a plan to address those potential impacts. The assessment process is specialized and is carried out by KYTC subject matter experts (SMEs) or by prequalified consultants. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant.

The level of effort for assessment shall be commensurate with the anticipated project impacts based upon context and intensity. Some projects may be located in areas such as urban landscapes that do not harbor sensitive terrestrial or aquatic resources. Other projects may occur in areas that require extensive investigations of multiple resources. Early in the process, records research is conducted and, if necessary, followed by field reconnaissance. More detailed studies may be needed to further define areas of concern, quantify potential impacts, and develop plans to mitigate unavoidable impacts.

The season of fieldwork may be an important consideration for investigating certain resources, especially streams, wetlands, and threatened or endangered species. Seasonal requirements shall be considered when developing project schedules. Ecological impact assessment often provides important data for completing regulatory processes, such as obtaining water quality permits (see **EA-1101**) and carrying out Section 7 consultation (see **EA-804**, **EA-805**, and **EA-806**). Schedules for these processes shall be considered when developing overall project schedules.

DOCUMENT TYPES

Depending upon the project scope, the investigation process shall result in the development of one or more of the following project documents:

- Ecological Overview (**EA-803**)
- Habitat Assessment (No Effect Finding) (**EA-804**)

DOCUMENT TYPES (CONT.)

- Ecological Base Studies (**EA-805**)
- Biological Assessment (**EA-806**)

Each of these document types is discussed in more detail in subsequent chapters.





Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Ecological Overview

OVERVIEW

Ecological overview investigations are conducted in the early stages of project planning and development. These studies identify instances where unique or critical habitat, endangered species, or water quality may be impacted by project construction, and develop a plan to address those potential impacts. An ecological overview may be all that is necessary to identify terrestrial, aquatic, and water quality concerns for small-scale projects (below CE level 3; see *Categorical Exclusion Evaluation User's Manual* and **EA-404**).

Ecological overviews are not a substitute for ecological base studies, which are sometimes needed for CE level 3 and are typically required for environmental assessment/finding of no significant impact (EA/FONSI) or environmental impact statement/record of decision (EIS/ROD) documents (see **EA-405** through **EA-409**). Some project types, such as those addressed with a CE for minor projects, have low potential for encountering ecological concerns and do not typically require an ecological overview.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the district environmental coordinator (DEC), Division of Environmental Analysis subject matter experts (DEA SMEs), or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the environmental project manager (EPM), DEC, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The ecological overview determines whether sensitive environmental conditions exist along the project corridor. The results of the overview shall determine the need for further study or action.

TRIGGER

The ecological overview is conducted during project planning or early in the project development process and can be triggered by any of the following:

- Preparation of CE documentation
- Preparation of water quality permits
- Scope of work under design, environmental, or planning contract
- Planning study or environmental overview

METHODS

Overview-level documentation varies depending upon the trigger for the ecological overview. Planning-level projects often cover a large area and include record checks from recognized data sources and resource agencies (such as USFWS Species List and Wetlands Inventory, Kentucky Department of Fish and Wildlife Resources, and Kentucky State Nature Preserves Commission) that may be consulted to identify known unique or critical habitat, waters (such as wetlands and streams), and other areas of concern.

The DEC, DEA SME, or a prequalified consultant shall visit the project area and evaluate whether the project alternatives could affect potential unique or critical habitat, streams, wetlands, state-listed special-use waters (or their tributaries), special aquatic sites, groundwater, drinking water sources, floodplains, or karst features. If further investigations are warranted, the project team may recommend additional work, such as a habitat assessment (**EA-804**) or an ecological base study (**EA-805**).

FORMAT

Findings shall be documented in a manner that is commensurate with the anticipated level of project impacts, project complexity, and project controversy. The documentation shall be of sufficient and appropriate detail to support informed decision making.

Depending upon the trigger initiating the ecological overview, the appropriate sections of the TC 58-48 form, *Categorical Exclusion Environmental Determination Checklist*, shall be completed, and the findings and recommendations shall be incorporated into a project environmental overview (EO), or documentation shall be provided in a format agreed upon during project scoping. This form is located at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Project-Management.aspx

In all cases, supporting documentation such as mapping, tables, photographs, and other exhibits shall be attached or incorporated as appropriate for easy reference and review.

SUBMITTAL

Ecological overviews that are not incorporated into a CE or EO shall be submitted to the project team in an appropriate format to assist in decision making and to provide a record of the investigations. Although these documents are not routinely reviewed by regulatory agencies, they may provide documentation to be used during consultation. When conclusions are to be incorporated into an EO or CE, submittal and review shall follow the guidelines established for those document types (see **EA 403** and **EA-404**).





Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Habitat Assessment (No Effect Finding)

OVERVIEW

Habitat assessments (HAs) are conducted in the early stages of project planning and development, once project details are sufficiently developed to assess potential impacts to endangered species habitat, to determine whether habitat for federally listed endangered species is present and may be impacted by the project. The HA is designed to address Section 7 of the Endangered Species Act (ESA) and does not address other potential ecological concerns.

The HA may appropriately address ESA Section 7 concerns for any level of environmental documentation. In cases where the HA alone is not sufficient to address ecological concerns, the HA shall be done in conjunction with the development of an ecological overview (**EA-803**) or ecological base study (**EA-805**).

Some project types, by definition, are considered to have no effect by agreement between KYTC and FHWA-KY. These project types have low potential for creating ecological impacts and do not require an HA. See the Section 7 *Memorandum of Understanding*, which can be found at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Streamlining-Agreements.aspx

The HA is performed by district environmental coordinators (DECs) and other KYTC staff trained in the use of the *Habitat Assessment Manual* (HAM), or by DEA subject matter experts (SMEs) or prequalified consultants. The HAM was developed as a filtering tool to allow KYTC staff who are not biologists by training to evaluate the habitat potential for each threatened or endangered species known to exist in a given county in Kentucky. The HAM discusses each species in detail, identifying its known range and habitat requirements, life history, physical characteristics, etc. It also provides a structured key for working through each listed species that may occur within Kentucky. Where existence of habitat cannot be dismissed through use of the HAM, a biologist trained in assessment of habitat shall be consulted.

OVERVIEW (CONT.)

The HA, whether completed by a trained KYTC employee using the HAM, an SME, or prequalified consultant, results in a determination of whether habitat exists for federally listed species having potential to occur in the project area. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant.

For all federally funded projects, the HA shall be completed prior to environmental document approval. The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEC, SME, or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the environmental project manager (EPM), DEC, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The HA determines whether habitat for federally listed species occurs within the project area. The assessment results in the completion of a TC 58-54 form, *No Effect Finding* (federal) (**Exhibit 9016**) or the TC 58-55 form, *No Effect Finding – State Funded* (**Exhibit 9015**) or to address each species of concern, a TC 58-53 form, *Not Likely to Adversely Affect Finding Checklist for Indiana Bat where Summer Habitat would be Impacted* (NLTAA IN Bat Checklist) (**Exhibit 9014**), or a determination of the need for an ecological base study (see **EA-805**) or biological assessment (see **EA-806**).

TRIGGER

The HA can be triggered by any of the following:

- Development of NEPA documentation
- Preparation of 404/401 water quality permit
- Other federal agency Involvement

METHODS

The listing of project types contained within the Memorandum of Understanding between the Federal Highway Administration and the Kentucky Transportation Cabinet for Determinations of No Effect Pursuant to Section 7 of the Endangered Species Act shall be consulted to determine whether the project has the potential to affect endangered species. Even if it is a project type on this list, if the project occurs within sensitive areas, further consultation and investigation may be required. The listing is located at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Streamlining-Agreements.aspx

METHODS (CONT.)

The HA consists of both office review and field investigations. The USFWS *Species List* along with other data sources (such as the Kentucky Department of Fish and Wildlife Resources and Kentucky State Nature Preserves Commission) shall be consulted to identify federally listed species or critical habitat in the county in which the project occurs.

For some species and certain environmental settings, the office portion of the investigation may be sufficient to reach conclusions regarding absence of habitat, resulting in a "No Effect Finding" with no further investigation required. When a "No Effect Finding" cannot be reached, a field assessment is required to evaluate the project area for habitat for each specific species being investigated. If habitat is present, or if it is uncertain whether habitat exists, coordination with the SME shall determine the appropriate next steps. Where Indiana bat habitat is determined to exist, the DEC or SME shall follow the process outlined in the NLTAA IB Checklist, which is located at:

http://transportation.ky.gov/Environmental-Analysis/Pages/Guidance-and-Forms.aspx

If further investigations are warranted for any species, such as an ecological base study (see **EA-805**) or biological evaluation or assessment (see **EA-806**), the SME shall notify the project team.

FORMAT

For all federally listed species where habitat is not present, the process shall be concluded by completing either the state or federal version (depending on the funding source) of the TC 58-54 form, *No Effect Finding* (federal) (**Exhibit 9016**) or TC 58-55 form, *No Effect Finding – State Funded* (**Exhibit 9015**). For investigations conducted for Indiana bat by the DEC or SME, the NLTAA IB Checklist shall be completed. Supporting documentation, such as mapping, tables, photographs, and other exhibits, shall be attached or incorporated as appropriate for easy reference and review.

SUBMITTAL

Regardless of the preparer, copies of the form shall be distributed to DEA and the district. The SME or DEC shall note the submittal in the EATS database. There is no expectation for regulatory agency or FHWA review of these document types.

TERM

Determinations of effect concerning federally listed endangered species shall be considered valid for a period of five years from the date of the field investigations that resulted in the determinations. Reevaluation shall consider whether there are outstanding commitments to conduct further work, whether scope changes are sufficient to require additional investigations, or whether there is a change in species status.



Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Ecological Base Studies

OVERVIEW

Ecological base studies are conducted to identify and address potential impacts to unique or critical habitat, endangered species, and water quality. Ecological base studies are conducted early in the project development process in conjunction with preliminary design activities. These studies are conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs).

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant.

The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

Ecological base studies identify ecological resources that may be impacted by project alternatives. These studies evaluate terrestrial and aquatic ecosystems for habitat potential, address threatened and endangered species, and assess potential impacts to water resources. They compare impacts across multiple alternatives so that relative impacts can be considered. They may also recommend avoidance, minimization, and mitigation measures to address potential impacts.

TRIGGER

Ecological base studies are performed for large-scale projects (CE Level 3, EA/FONSI, and EIS/ROD) with the greatest potential to affect the natural environment and for any project where an ecological overview or habitat assessment does not sufficiently address potential ecological impacts.

METHODS

Ecological base studies require aquatic and terrestrial ecosystem analyses. Ecological base studies consist of literature review and early coordination with resource agencies, field investigations, and reporting. Prior to initiating the study, a detailed scope of work shall be developed based upon known and anticipated resources and potential severity of impact.

EARLY COORDINATION & LITERATURE REVIEW

The appropriate agencies involved with the project shall be consulted to initiate early coordination and identify potential problems and areas of special concern. Project complexity shall determine the extent of coordination, but at a minimum shall include a review of the resource listings from:

- United States Fish and Wildlife Service (USFWS), Kentucky Ecological Services Field Office for identification of federally listed species with the potential for occurring within the vicinity of the proposed project
- USFWS National Wetlands Inventory for identification of known wetlands in the project area
- Kentucky State Nature Preserves Commission (KSNPC) for identification of state and federally listed species presence, known nests of rare or protected bird species, maternity colonies, hibernacula, unique ecological areas, state nature preserves, and state natural areas which may occur within the vicinity of the proposed project
- Kentucky Division of Water (KDOW) of the Kentucky Energy and Environment Cabinet (EEC) for identification of significant aquatic concerns such as special use waters (Cold Water Aquatic Habitat, Outstanding State Resource Waters, Exceptional Waters, Reference Reach Waters, Kentucky Wild Rivers, Outstanding National Resource Waters), municipal water intakes, groundwater recharge areas, impaired waters (303[d] and 305[b] listed streams), and streams with an approved total maximum daily load (TMDL)
- Kentucky Department of Fish and Wildlife Resources (KDFWR) for identification of state and federally listed threatened and endangered species presence by county, known nests of rare or protected birds, maternity colonies and hibernacula for endangered bats, critical natural areas such as high-quality fishing streams, spawning areas, concentrated shellfish areas, wetlands, trout streams, bald eagle aeries, etc.
- United States Forest Service (USFS) when activity takes place within or adjacent to a national forest

EARLY COORDINATION & LITERATURE REVIEW (CONT.)

- Kentucky Division of Forestry (KDOF) for identification of state and national champion trees
- United States Natural Resources Conservation Service (NRCS) for identification of prime and unique farmland, soil composition, and hydric soils for jurisdictional wetland determination
- Kentucky Geological Survey (KGS) for karst resources, wells, mines, soils data, downloadable GIS data, and general geological information
- Kentucky Speleological Survey (KSS) for cave locations and historic information

Based upon these findings, additional investigation may be warranted, such as a review of academic research or consultation with recognized ecological experts. These evaluations are critical, as sampling intensity, equipment needs, personnel allocation, sampling duration, and appropriate sampling season are contingent upon them.

FIELD INVESTIGATION

Field investigation shall be designed and based on the early coordination and literature review. Field investigations include, but are not limited to, aquatic surveys, terrestrial surveys, water quality investigations, wetland surveys, habitat assessment, and identification of unique ecological areas such as cedar barrens, prairies, savannahs, karst features, caves, cliffs, rockhouses, vernal pools, unique plant and animal communities, and riparian areas. All sampling methodology shall be documented in the report and all field data forms shall be appended to the submitted report.

- Wetland investigations

  Wetland investigations shall be sufficient to make a determination of importance based on size, type, approximate age, hydrology, position, vegetation, function, productivity, and the acres affected (primary and secondary) by the proposed project. All identified wetlands shall be classified according to *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, Carter, Golet & LaRoe, 1979) (FWS/OBS-79/31). An estimate of wetland acres impacted shall be provided for each alternative. All wetland determinations shall be conducted utilizing the 1987 USACE *Wetlands Delineation Manual* (Technical Report Y-87-1), including any applicable USACE regional supplements or protocols.

FIELD INVESTIGATION (CONT.)

Water quality investigations shall utilize representative samples to establish current conditions for streams found in the project vicinity and anticipated project effects. All water quality samples (chemical and physical) shall be collected and analyzed in accordance with the methods described in the latest edition of the American Public Health Association's *Standard Methods for the Examination of Water and Wastewater*. Chemical parameters may include acidity or alkalinity, chloride, carbon dioxide, hardness, iron, ammonia nitrogen, nitrate nitrogen, dissolved oxygen, pH, sulfate, and orthophosphate. Physical parameters may include color, turbidity, air and water temperature, specific conductivity, and stream discharge.

- Aquatic ecosystem investigations

  Aquatic ecosystem investigations shall be sufficient to allow evaluation of the fish and macroinvertebrate communities existing in the proposed project vicinity. Sampling, as appropriately determined during project scoping, shall be conducted for stream crossings. Sampling methodology shall be sufficient to allow an accurate assessment of species diversity and richness. The habitat potential for threatened, endangered, or special concern aquatic species shall be evaluated during this investigation.

- Terrestrial ecosystem investigation

  Terrestrial ecosystem investigations shall require evaluations of the faunal and floral communities that exist in the project vicinity. Sufficient data shall be collected to allow discussion of the potential project impacts to these floral and faunal communities. Unless otherwise defined in the scope of work, floral surveys shall be conducted in spring, summer, and fall. Floral communities shall be established using *Deciduous Forests of Eastern North America* by E. Lucy Braun, published in 1950, and KSNPC listed communities. Sufficient data shall be collected to allow delineation of distinct vegetation types by species density, basal area, and canopy coverage. Vegetation shall be sampled at tree, shrub, and herbaceous strata. Faunal communities shall be discussed in relation to major habitat types identified during the floristic surveys. The habitat shall be evaluated in qualitative terms by correlating plant and animal study data. The habitat potential for threatened, endangered, or special concern terrestrial species shall be evaluated during this investigation.

REPORT FORMAT

The following report format shall be utilized for the ecological base study. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project coordination and investigations. When possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review. The TC 58-34 form, *Ecological Study Format Guidance and Accountability Form* (Ecological Base Study GAF) (**Exhibit 9009**), shall be followed to ensure document completeness.

- Title page
- Executive summary
- Table of contents
- Project description
- Correspondence with state and federal agencies
- Environmental setting
- Methods
  - Literature and office review
  - Terrestrial sampling methods
  - Aquatic sampling methods
  - Wetland sampling methods
  - State and federal threatened or endangered species
- Results
  - Terrestrial
  - Aquatic
  - Wetland
  - State and federal threatened or endangered species
- Discussion of impacts
  - Significant ecological resources
  - Terrestrial resources
  - Aquatic resources
  - Wetlands
  - State and federal threatened or endangered species
  - Suggested mitigation measures

REPORT FORMAT (CONT.)

- Short-term use vs. long-term productivity
- Irreversible and irretrievable commitment of resources
- Conclusions and recommendations
- References
- Tables
- Exhibits
- Appendices

DRAFT SUBMITTAL

Unless otherwise specified during project scoping, the preparer shall submit:

- One hard copy and one electronic copy of the draft ecological base study and the TC 58-34 form, Ecological Base Study GAF (**Exhibit 9009**), to DEA
- One hard copy of the draft ecological base study to the district office

The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. DEA shall manage the overall review of the ecological baseline study and preparation and compiling of any comments, questions, or required modifications. When the study has been prepared by a consultant, upon completion of the draft review phase, the DEA SME shall generate a comment or acceptance letter to the consultant.

FINAL SUBMITTAL

After revision to address comments resulting from the review of the draft document, unless otherwise specified during project scoping, the preparer shall submit deliverables as follows:

- The updated Ecological Base Study GAF (**Exhibit 9009**) and three hard copies and one electronic copy of the final ecological baseline study to DEA
- One hard copy of the final ecological baseline study to the district office

The SME shall establish the schedule for document review and comment following the same process as for draft ecological base study review.

FINAL SUBMITTAL (CONT.)

When the report is acceptable, the DEA SME shall coordinate the Ecological Base Study GAF with the district office so that any project commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the Six Year Plan database by the project manager. The DEA SME shall send a letter and a copy of the completed Ecological Base Study GAF to the preparer accepting the report and requesting final deliverables.

TERM

Findings within the document shall be considered valid unless the scope of the project changes to the point where the anticipated impacts are changed. Reevaluation shall consider whether there are outstanding commitments to conduct further work, whether scope changes are sufficient to require additional investigations, or whether there is a change in species status.





Chapter

ECOLOGICAL IMPACT ASSESSMENT

Subject

Biological Assessment

OVERVIEW

Biological assessments (BAs) (sometimes referred to as biological evaluations [BEs]) are a part of the consultation process defined in Section 7 of the Endangered Species Act (ESA). They evaluate the potential effects of a project on federally listed resources (proposed and listed species and proposed and designated critical habitat) and determine the need for formal consultation or conference with the United States Fish and Wildlife Service (USFWS). BAs and BEs have the same objectives and follow the same procedures and format, but BAs are required for major construction projects (environmental impact statement/record of decision [EIS/ROD]) (**EA-407**, **EA-408**, and **EA-409**) and may result in a greater level of investigation, documentation, and coordination. Within this guidance, the term biological assessment shall be used to refer to both BAs and BEs.

These studies are conducted by prequalified environmental consultants or by Division of Environmental Analysis (DEA) subject matter experts (SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

BAs evaluate the potential effects of a project on federal proposed and listed species and proposed and designated critical habitat and determine the need for consultation or conference with the USFWS. In cases where federally threatened or endangered species are found to be present, the studies shall also recommend avoidance and minimization measures to address potential impacts.

OBJECTIVES (CONT.) Following Section 7 of the ESA, the BA shall recommend a finding for proposed or listed species or designated critical habitat that may be present in the action area. The report shall explicitly recommend a "no effect," "may affect, not likely to adversely affect," or "may affect, likely to adversely affect" finding for each species or critical habitat studied.

TRIGGER BAs are performed after it has been determined that federally listed threatened or endangered species have the potential to occur in the project area and when suitable habitat for those species exists within the project area. Usually, an ecological overview (EO), habitat assessment (HA), or ecological base study will have identified particular federally listed threatened or endangered species of concern that could be affected by the project.

BAs shall be timed so that consultation with USFWS can be completed according to the schedule established for each environmental document type. Consultation for categorical exclusions for minor projects (CEMP) and CE Level 1–3 projects shall be completed before requesting construction authorization; an environmental assessment/finding of no significant impact (EA/FONSI) project consultation shall be completed before requesting right-of-way (ROW) authorization; and for EIS/ROD projects, consultation shall be completed before issuance of the ROD.

METHODS BAs build upon ecological base studies or other preliminary ecological studies conducted for the project. BAs consist of literature review and early coordination with resource agencies, field investigations, and reporting. The action area for the project shall be delineated according to where physical, chemical, and biotic direct, indirect, and cumulative effects from the project may occur. This is usually larger than the physical footprint of the project. Project plans shall be reasonably complete in order to accurately identify the action area and accurately assess potential impacts. Before initiating the study, a detailed scope of work shall be developed based on the known and anticipated resources and severity of impact. Depending upon the species of concern, there may be seasonal restrictions or requirements for conducting fieldwork.

IDENTIFICATION OF LISTED SPECIES The appropriate agencies involved with the project shall be consulted to initiate early coordination and to identify state and federally listed species that may be present within the action area. An historical account shall be established for each identified species including historic and current range and habitat requirements. Project complexity shall determine the extent of early coordination; at a minimum, this shall include a review of the endangered species listings from:

IDENTIFICATION OF LISTED SPECIES (CONT.)

- Kentucky Ecological Services Field Office of the United States Fish and Wildlife Service (USFWS) for identification of federally listed species with the potential for occurring within the county of the proposed project
- Kentucky State Nature Preserves Commission (KSNPC) for identification of endangered species, known nests of rare or protected birds, maternity colonies and hibernacula of endangered bats, etc., which may occur within the action area of the proposed project
- Kentucky Division of Water (KDOW) of the Kentucky Energy and Environment Cabinet (EEC) for identification of significant aquatic concerns such as special use waters (cold water aquatic habitat, outstanding state resource waters, exceptional waters, reference reach waters, Kentucky wild rivers, federal wild river areas, federal scenic river areas, outstanding national resource waters), municipal water intakes, groundwater recharge areas, and impaired waters (303[d] and 305[b] listed streams)
- Kentucky Department of Fish and Wildlife Resources (KDFWR) for identification of species presence and county records, known nests of rare or protected birds, maternity colonies, critical natural areas such as high-quality fishing streams, spawning areas, concentrated shellfish areas, wetlands, trout streams, hibernacula, bald eagle aeries, etc.
- USFWS recovery plan for listed species within the action area

This information shall determine whether additional investigation, such as a review of academic research or consultation with recognized ecological experts, is warranted. It also provides a basis for sampling intensity, equipment needs, personnel allocation, sampling duration, and appropriate sampling season.

FIELD INVESTIGATION SURVEY METHODS

The field investigation shall be designed and based upon early coordination, literature review, and the relevant USFWS recovery plans. Field investigations shall evaluate habitat for each federally listed threatened or endangered species identified for the action area. Sampling methodology shall be conducted according to guidelines established by the USFWS within the recovery plan for each species listed in the action area. All sampling methodology shall be documented in the report, and all field data forms shall be appended to the submitted report.

REPORT FORMAT

The following report format shall be utilized for the BA. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified and to support the findings of the BA. When possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review. The TC 58-36 form, *Biological Assessment Guidance and Accountability Form* (Biological Assessment GAF) (**Exhibit 9004**), is based upon USFWS guidance for the completion of a BA and shall be followed to ensure document completeness.

- Title page
- Executive summary
- Table of contents
- Project description
- Action area
- Species or critical habitat
- Effects analysis
- Conclusions and determinations of effect
- Appendices
  - Tables (if too large to stay within body of report)
  - Exhibits (maps, photos, and supporting documentation not contained within body of report)
  - References
  - Project map
  - Project plans
  - Copy of collection permit
  - Field data forms
  - Correspondence

DRAFT SUBMITTAL

Unless otherwise specified during project scoping, the preparer shall distribute deliverables as follows:

- Biological Assessment GAF (TC 58-36) and one hard copy and one electronic copy of the draft BA to DEA
- One hard copy of the draft BA to the district office

The DEA SME shall establish the schedule for document review and comment.

DRAFT SUBMITTAL (CONT.)

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments.

The DEA SME shall manage the overall review of the ecological baseline study and preparation and compiling of any comments, questions, or required modifications.

When the study has been prepared by a consultant, upon completion of the draft review phase, the DEA SME shall generate a comment or acceptance letter to the consultant.

FINAL SUBMITTAL

After revision to address comments resulting from the review of the draft document, unless otherwise specified during project scoping, the preparer shall distribute deliverables as follows:

- Biological Assessment GAF (TC 58-36) and three hard copies and one electronic copy of the BA to DEA
- One hard copy of the BA to the district office

The DEA SME shall establish the schedule for document review and comment following the same process as for draft BA review. This document shall be coordinated with USFWS as part of the ESA Section 7 consultation process and may require revisions prior to final approval.

When the report is acceptable, the DEA SME shall coordinate the Biological Assessment GAF with the district office so that any project commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the Six Year Plan database by the project manager. The DEA SME shall send a letter and a copy of the completed Biological Assessment GAF to the preparer accepting the report and requesting final deliverables.

TERM

Determinations of effect concerning federally listed threatened and endangered species shall be considered valid by FHWA for a period of five years from the date of the field investigations that resulted in the determinations. Other findings within the document shall be considered valid unless the scope of the project changes to the point where the anticipated impacts are changed. Reevaluation shall consider whether there are outstanding commitments to conduct further work, whether scope changes are sufficient to require additional investigations, or whether there is a change in species status.

BIOLOGICAL OPINION

When the BA includes a finding of "may affect, likely to adversely affect" for any federally endangered species, DEA shall coordinate with the lead federal agency so that they can initiate formal Section 7 consultation with USFWS. USFWS may request additional documentation, which KYTC shall provide. The formal consultation process shall conclude with a biological opinion (BO), developed and written by USFWS.

Once the information submitted to the USFWS is considered complete, the ESA requires that the BO be completed within 135 days of the initiation of formal consultation. Depending upon the complexity of the project and the severity of impacts, the consultation process may realistically take from 6–18 months.

The BO presents information on federally listed species beginning with the status of the species throughout its range, then the status of the species within the action area, and, finally, the impacts of the proposed action on the species within the action area. The BO concludes by identifying "reasonable and prudent measures" to be incorporated into the project to minimize potential harm to the species and "terms and conditions" to ensure that the "reasonable and prudent measures" are properly implemented.

If the USFWS issues a "no-jeopardy" BO, then the project, with certain conditions, may continue as planned. If the proposed action is found to jeopardize a species, the federal government may propose alternatives, require additional mitigation measures, or deny the project.

Formal Section 7 consultation for CEMP and CE Level 1–3 projects shall be completed before requesting construction authorization; for EA/FONSI projects, consultation must be completed before requesting ROW authorization; and for EIS/ROD projects, consultation must be completed before issuance of the ROD.

A BO does not expire and shall be considered valid unless the scope of the project changes to the point where the anticipated impacts are changed or there is a change in species status.





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Governing Documents

GOVERNING DOCUMENTS

Cultural resource assessments performed and managed in conformance with this section are governed by the following national and state laws, regulations, and guidance:

- Antiquities Act of 1906 (16 USC 431-433)
- National Historic Preservation Act (NEPA) of 1966 (16 USC 470)

  Section 106 requires federal agency officials to consider the effects of their undertakings on properties included in or eligible for inclusion in the *National Register of Historic Places* (*National Register*) prior to the approval or expenditure of federal funds on an undertaking or prior to the issuance of any license or permit.

- Protection of Historic Properties (36 CFR Part 800)
- Secretary of Interior Standards and Guidelines (36 CFR 61)
- Archaeological Resource Protection Act of 1979 (16 USC 470 aa-mm)
- Native American Graves Protection and Repatriation Act (25 USC 3001 et seq.)
- Protection and Enhancement of the Cultural Environment (EO 11593)
- Consultation and Coordination with Indian Tribal Governments (EO 13175)
- Section 4(f) of the Department of Transportation Act (23 CFR 774)
- Kentucky Antiquity Act (KRS 164.705 through 164.735)
- Kentucky Cave Protection Act (KRS 433.870 through 433.885)
- Kentucky Burial and Cemetery Regulations and Guidance

GOVERNING DOCUMENTS (CONT.)

There are numerous Kentucky statutes and regulations relating to burials and cemeteries. Some of the more important regulations are:

- Grave relocation (600 KAR 3:020)
- Evidence of dedication or use of land as burying ground (KRS 381.710)
- Desecration of venerated objects (KRS 525.110)
- KYTC *Right of Way Manual* (Relocation of Human Remains)

- Kentucky State Historic Preservation Office's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*)

- KYTC Cultural and Historic Baseline Guidance and Accountability Form

- KYTC Archaeology Baseline Guidance and Accountability Form

- KYTC Archaeological Overview Guidance and Accountability Form

- Programmatic agreement among the Federal Highway Administration, Kentucky Transportation Cabinet, Kentucky State Historic Preservation Officer, and the *Advisory Council on Historic Preservation Regarding Implementing Section 106 of the National Historic Preservation Act for Federally Funded Road Projects in the Commonwealth of Kentucky* (2011)

- Federal Highway Administration/Kentucky Transportation Cabinet *Handbook for Implementing Section 106 of the National Historic Preservation Act* (2011)





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Introduction

INTRODUCTION

Section 106 of the National Historic Preservation Act (NHPA) requires that federal agencies responsible for projects or permitted undertakings such as the construction of bridges, roads, and highways assess the impact of these undertakings on historic sites and archaeological resources prior to construction. The regulations of the Advisory Council on Historic Preservation (ACHP) specified in 36 CFR 800 outline the manner in which federal agencies shall identify, evaluate, and mitigate impacts to significant historic resources.

In addition, Kentucky's policy regarding historic and archaeological sites located on state lands is established in the Kentucky Antiquity Act (KRS 164.705-735), which states that sites or artifacts on state property cannot be removed, destroyed, or defaced, and which requires a professional archaeological investigation to address impacts to sites on the property of the Commonwealth. Archaeological investigations conducted for the Kentucky Transportation Cabinet shall be performed in accordance with the guidelines provided by the State Historic Preservation Office's (SHPO's) *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*). Investigations shall be performed by qualified professionals who meet the Secretary of the Interior's Standards and the SHPO's minimum standards and who are prequalified for work by both the SHPO and the Kentucky Transportation Cabinet (KYTC).

Cultural resource assessments are undertaken to identify and evaluate potential impacts to historic properties (archaeological and historic architectural resources). This is a specialized process and is performed by KYTC subject matter experts (SMEs) or by prequalified consultants. If local public agencies do not have specialized environmental staff to complete this type of evaluation, they shall engage the services of a prequalified environmental consultant.

INTRODUCTION (CONT.)

Archaeology and historic architectural evaluations are separate disciplines of cultural resource analysis which, although governed by many of the same laws and regulations, are investigated by discipline-specific SMEs and have unique fieldwork, reporting, and review requirements.

The schedule for completing an assessment may vary based upon the anticipated impacts of the project, which are based upon context and intensity. Some projects may have minimal impacts, or be located in areas where it can be demonstrated that there is no potential to impact historic properties. Other projects may occur in areas that require extensive investigations. Early in the process, records research is conducted and, if necessary, is followed by field reconnaissance. More detailed studies may be needed to further define areas of concern, quantify potential impacts, and develop plans to mitigate impacts that cannot be avoided. Consultation with the SHPO, and possibly other consulting parties, is mandated at key points throughout the process.

DOCUMENT TYPES

The following document types are used in assessments:

- Archaeological overviews (**EA-904**)
- Archaeological investigation form (**EA-905**)
- Phase I intensive surveys (**EA-906**)
- Phase II archaeological testing (**EA-907**)
- Phase III archaeological data recovery (**EA-908**)
- Historic architectural overviews (**EA-909**)
- Historic architectural investigation form (**EA-910**)
- Historic architectural survey (**EA-911**)
- Section 4(f) documents (**EA-912**)

Each of these document types is discussed in subsequent chapters. Any of the identified documents may be preceded by a management summary, or be followed by addendum or supplemental reports. These document variations are discussed briefly here rather than being repeatedly discussed in each chapter.

MANAGEMENT SUMMARIES

Management summaries are brief informal reports that may be submitted for early coordination with regulatory agencies when expediency is required. They are most commonly associated with archaeological investigations. These summaries are used to secure FHWA or SHPO concurrence with findings of an investigation prior to receipt of a complete analysis and report conforming to the standards outlined in the SHPO *Specifications*. They are abbreviated versions of the final report but include only those sections of the report necessary for concurrence on project findings. For example, management summaries do not include extensive information on project setting, history, previous research, or contain detailed artifact analysis. Management summary review shall follow the same processes as for a full baseline report.

ADDENDUM OR SUPPLEMENTAL REPORTS

Addendum or supplemental reports may be submitted for most document types listed above. If there is a minor change to the scope of a project after submittal and approval of an initial report, the original author shall complete the addendum reports. For example, if an alignment is shifted in a small section of a project, a report may be submitted as an addendum to the original report.

Addendum reports rely on background information in the original baseline report and focus on new information, such as a description of additional investigations and a discussion of what was found. Addendum reports shall contain appropriate supporting documentation such as mapping, photographs, and analysis to support the final conclusion.

If more than three years have passed since the original report was written, or if the addendum is written by someone other than the original author, addendum or supplemental reports are not appropriate. In these cases, investigations shall be reported in a full baseline report.





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Section 106

OVERVIEW

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires federal agencies to take into account the effects of their undertakings on historic properties, and affords the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. The law is implemented in 36 CFR 800, which also created the ACHP and required each state to establish a state historic preservation officer (SHPO) to oversee the program. The regulation also defined historic properties and created the National Register of Historic Places (NRHP).

Historic property means any prehistoric or historic site, district, building, structure, or object listed in or eligible for inclusion in the NRHP maintained by the Secretary of Interior. This term also includes artifacts, records, remains, archaeological sites, cemeteries, and properties of traditional and cultural importance to a federally recognized Indian tribe that meets the NRHP criteria.

Section 106 findings are recommended by a principal investigator (a Kentucky Transportation Cabinet [KYTC] and SHPO prequalified consultant or by the appropriate KYTC subject matter expert [SME]). Document reviews shall be conducted by KYTC SMEs, the lead federal agency, and SHPO staff. SHPO shall have 30 calendar days to comment.

SECTION 106 PROCESS

Section 106 is a procedural law, requiring that federal agencies follow an established process to address historic properties. It does not mandate a specific outcome, nor does it prohibit impacts to historic properties. The ACHP has developed extensive guidance, which is available on their website at:

www.achp.gov

In 2011, the Federal Highway Administration (FHWA), SHPO, KYTC, and ACHP developed alternate procedures executing Section 106 for FHWA projects. Non-FHWA projects do not fall under this programmatic agreement and remain subject to the regulations of 36 CFR Part 800.

SECTION 106 PROCESS (CONT.)

The Section 106 process is outlined below.

- Establish the activity as a federal undertaking

  Projects that involve federal funding, federal permits, or that take place on federal lands are considered federal undertakings. The federal agency that provides funding, or is responsible for issuing the permit or approval, shall be the lead federal agency for purposes of Section 106. For example, with projects using federal transportation funding, FHWA is the lead federal agency, whereas if the project is state-funded and requires a Section 404 permit, the US Army Corps of Engineers (USACE) shall be the lead federal agency for Section 106 purposes.

- Determine potential to affect historic properties

  Some project types do not result in any effect to a historic property, regardless of the setting or surroundings where the work was undertaken. If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, KYTC has no further obligations under Section 106. These projects shall result in a finding of no historic properties affected.

- Initiate consultation

  Section 106 requires that interested parties be afforded the opportunity to provide input on the undertaking as a consulting party. Those approved as consulting parties are engaged throughout the Section 106 process and provide input to the decision makers regarding identification of historic properties, assessment of effects, and resolution of any adverse effects.

  There are two types of consulting parties identified in 36 CFR 800.2(c): those parties that are specifically identified, and those parties that may be project- or geographic-specific. The first group of consulting parties may be involved on most Section 106 undertakings and includes:

  - SHPOs
  - Tribal Historic Preservation Officers (THPOs), if applicable (**Note:** THPOs are involved in Section 106 on tribal lands, none of which are found in Kentucky. However, some federally recognized Indian tribes with interests in Kentucky do have THPOs as their points of contact for Section 106 coordination.)

SECTION 106 PROCESS (CONT.)

- Federally-recognized Indian tribes and Native Hawaiian organizations
- Representatives of local governments (if the project is within their jurisdiction)
- Applicants for federal assistance, permits, licenses, and other approvals (such as KYTC)
- National Park Service (if project is on federal parklands or involves a National Historic Landmark)

The second group of consulting parties has a demonstrated interest in the undertaking due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties. These consulting parties include:

- Individual citizens
- Property owners
- Local historic preservation organizations or interest groups
- Federal or state agencies with an interest in the project

The manner and methods for engaging consulting parties shall be commensurate with the scale of the undertaking. When projects are small and affect relatively few individuals, the opportunity for involvement as consulting parties may be communicated through personal meetings with property owners. Consultation requirements for "small-scale" projects are further explained in the FHWA/KYTC *Handbook for Implementing Section 106 of the National Historic Preservation Act,* which can be accessed at:

http://www.achp.gov/apptoolkit.html

When projects of a larger scale are involved, public meetings, public advertisements, letters of invitation, or other means shall be used to solicit involvement by interested parties.

Other interested consulting parties shall petition KYTC in writing to formally request recognition as a consulting party. In consultation with the SHPO, KYTC shall either approve or deny those requests. If at any time the KYTC recommends denial of a request to become a consulting party, the DEA SME shall notify FHWA. FHWA shall inform the consulting party that their request was denied.

SECTION 106 PROCESS (CONT.)

Individuals or organizations interested in becoming consulting parties shall have a demonstrated interest in the effects of a project on historic properties. For federally funded projects, consulting party requests are typically processed in the following manner:

- The request is received by the Division of Environmental Analysis (DEA), either directly from the interested party, or after having been forwarded by the district environmental coordinator (DEC).
- DEA reviews the request and forwards to SHPO with a recommendation to either accept or deny the request. FHWA is copied on the transmittal.
- SHPO reviews the request and provides comment on the DEA recommendation regarding whether an individual should be granted consulting party status.
- If acceptable to all parties, DEA notifies the DEC of the SHPO concurrence, and the DEC notifies the individuals that they have been granted consulting party status.
- If SHPO or KYTC disagree with a request for consulting party status, the DEA SME shall notify FHWA to make a final determination.
- Disagreements between FHWA and SHPO shall be resolved with input from the ACHP.

Per Section 304 of the National Historic Preservation Act, Section 9(a) of the Archaeological Resources Protection Act, and 36 CFR 800.11(c), to minimize the potential for endangerment of sites from vandalism or theft, documentation available to the general public shall not identify specific archaeological site locations. When it is necessary to disseminate findings of archaeological investigations, reports shall be modified, redacted, or otherwise altered to prevent disclosure of sensitive site location information.

For projects where FHWA is not the lead federal agency, KYTC shall work with the federal agency to identify, engage, review, and act upon consulting party requests in accordance with that agency's protocols.

➢ Establish the APE

Prior to identifying historic properties, the area of potential effect (APE) shall be established. Section 106 defines the APE as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

SECTION 106 PROCESS (CONT.)

- Identify historic properties

  KYTC shall make a reasonable and good faith effort to identify and evaluate historic properties within the APE, including:

  - Reviewing existing information
  - Seeking the input of all consulting parties and the public
  - Conducting field investigations in accordance with the SHPO's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*)

  Identification efforts may be completed entirely by KYTC SMEs or, at KYTC's discretion, prequalified consultants may be engaged to assist. The investigating party shall consider potential historic properties within the APE and determine whether there are properties listed on or eligible for the National Register of Historic Places. Under Section 106 of the NRHP, properties determined eligible for listing shall be treated with the same deference as those on the National Register.

- Assess effects

  When historic properties are present within the APE, and there is the potential for the properties to be affected by the undertaking, effects shall be assessed by applying the criteria of adverse effect (per 36 CFR 800.5(a)(1)), including an analysis of whether:

  - The project may directly or indirectly alter the characteristics that qualify the property for inclusion on the NRHP
  - The project may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association

  The project assessment shall conclude with a finding of no effect, no adverse effect, or adverse effect on historic properties. While effects to each individual historic property are discussed in the report, there is an overarching determination of effect for the entire project that considers all archaeological sites and above-ground buildings, structures, districts, and objects.

- Resolve adverse effects

  KYTC and the lead federal agency shall work with the SHPO and appropriate consulting parties (including Indian tribes if appropriate) to resolve any adverse effects on historic properties. Resolution shall involve avoidance, minimization, or mitigation of adverse effects to historic properties. The measures to resolve the adverse effects shall be detailed in a memorandum of agreement (MOA), the execution of which concludes the Section 106 process.

MOA

KYTC shall draft the MOA following a format acceptable to the lead federal agency. The MOA shall be as specific as possible in terms of avoidance, minimization, and mitigation measures, and shall be reviewed by KYTC legal counsel.

When the phasing of archaeological work is required, the conditions outlining any work remaining shall be incorporated into the MOA.

The lead federal agency (usually FHWA) and SHPO, as well as KYTC as an invited signatory, shall sign the MOA. All parties with implementation responsibilities shall be signatories. For projects where the ACHP has joined the consultation, FHWA shall coordinate with the ACHP to secure their signature. The opportunity to sign the document may also be extended to any federally recognized Indian tribes that participated in the consultation and, at the discretion of the project team, other consulting parties instrumental in resolving adverse effects may be invited to sign as concurring parties.

The MOA shall be fully executed prior to approval of the final environmental document or issuance of a 404 permit by USACE. The lead federal agency shall send the MOA to ACHP.

DISPUTES

The SHPO and all other consulting parties shall have 30 calendar days from the receipt of the notification to comment on the eligibility and effect determinations. If the SHPO does not respond within 30 days, KYTC shall confirm SHPO receipt of the information before assuming concurrence. If any consulting party disagrees and cannot resolve the disagreement within the 30-day review period, KYTC shall refer the matter to the keeper of the National Register of Historic Places for resolution of eligibility determinations or to the ACHP when adverse effect resolution is warranted. In accordance with 36 CFR 800.5(c)(3)(i), the ACHP has 15 days to make a determination. If the ACHP does not reply within 15 days (or a maximum of 15 additional days if they request an extension), consultation requirements shall be considered fulfilled.

If the SHPO does not agree with the lead federal agency's recommendation on eligibility status and the disagreement cannot be resolved, the lead federal agency shall send a request for eligibility determination to the keeper of the National Register of Historic Places. The keeper's determination is binding. Similarly, if a disagreement regarding effect arises that cannot be resolved, the lead federal agency shall solicit the opinion of the ACHP before making a final determination.

LATE DISCOVERIES

If previously unidentified historic properties or unanticipated effects are discovered after KYTC has completed Section 106 review, no further construction in the area of the discovery shall proceed until the requirements of 36 CFR 800.13 are satisfied. KYTC shall consult with SHPO and appropriate parties to record, document, and evaluate the property's National Register of Historic Places eligibility and the project's effect on any eligible property discovered. KYTC shall also consult with any federally recognized Indian tribes to ascertain if there is traditional cultural or religious significance to the affected historic properties. If the SHPO, consulting parties, or consulting tribes do not submit an objection to KYTC's plan for addressing the discovery within 48 hours, KYTC shall carry out the requirements of 36 CFR 800.13 on behalf of the lead federal agency, and ACHP shall only be notified if there is an adverse effect.

In case of a late discovery of evidence of human remains, all project work in the vicinity of the discovery area shall cease immediately. The on-site KYTC project manager shall secure and protect the area. Procedures for notifying law enforcement officials and the county coroner, as outlined in KRS 72.020, shall be followed. If the county coroner and law enforcement officials determine that the find is not associated with a modern crime scene, coordination shall be initiated with the SHPO and Office of State Archaeology.

Measures shall be taken to minimize or mitigate any project impacts to the find in accordance with the provisions of 36 CFR 800.13 and relevant state regulations regarding appropriate treatment of graves and venerated objects (including, but not limited to, KRS 525.110, KRS 525.115, and KRS 525.120). A professional archaeologist shall conduct an assessment of the find and the level of its cultural significance and shall inspect the remains or objects in situ and record them in accordance with standard archaeological procedures. Such analysis shall be only as extensive as necessary for the purpose of identifying temporal affiliation.

If the find involves prehistoric artifacts or human remains, the lead federal agency shall initiate consultation with the appropriate federally recognized Indian tribes.

When the remains or objects are determined not to be American Indian, KYTC shall document for the lead federal agency, in writing, the basis for the determination. Once such documentation has been received and accepted by the lead federal agency, excavation of the remains or artifacts shall continue according to normal archaeological procedures or grave relocation processes as specified by law, regulation, or policy.

Confidential information concerning the late discovery shall be handled according to 36 CFR 800.6 (a) (5).

PHASED IDENTIFICATION & ASSESSMENT OF PROPERTIES

Circumstances may dictate a phased approach to identification of historic properties. Such circumstances may include denial of property access or the necessity for deep testing or other invasive archaeological methods or techniques on private land. In such or similar circumstances, phased identification of these properties shall be considered prudent.

KYTC shall advise FHWA, or other lead federal agency, and consult with SHPO regarding any proposal for phased identification of historic properties. Conditions for the work shall be specified in the MOA. The MOA shall be signed by SHPO, FHWA (or other lead federal agency), KYTC and, when participating in the consultation, the ACHP.

INDIAN TRIBAL CONSULTATION

Indian tribal consultation (ITC) is required for all projects with federal involvement that have the potential to affect sites of religious or cultural importance to federally recognized Indian tribes. ITC is required for anticipated impacts to Indian tribal archaeological resources. DEA shall work closely with FHWA in fulfilling these responsibilities for federal-aid highway projects. If projects have another lead federal agency, those agencies are responsible for ITC. For projects that either require no new right of way or that are subjected to survey with no finding of Indian tribal archaeological resources, ITC is not required. ITC consists of a transmittal of available reports and SHPO findings. When significant resources are involved, on-site meetings with tribal representatives may be appropriate. ITC shall be completed prior to approval of the final environmental document.

HISTORIC CEMETERIES

Despite efforts to avoid cemeteries, KYTC projects may sometimes impact graves or cemeteries. Cemeteries that contain interments at least 50 years of age shall be assessed for historic potential. The NRHP assessment of the cemetery is completed by DEA staff or by prequalified consultants, usually during phase I archaeological intensive survey. If a cemetery is identified after acceptance of the survey, an assessment of the cemetery shall be completed as a late discovery.

If the lead federal agency and SHPO decide that the cemetery is not considered eligible for the NRHP, DEA shall issue a clearance memorandum to allow the district to proceed with relocation of the cemetery as specified in state law, 600 KAR 3:020, and the KYTC *Right of Way Manual*.

HISTORIC CEMETERIES (CONT.)

Relocation of a cemetery determined to be potentially eligible for the NRHP shall be completed through archaeological excavation. The DEA SME shall work with the district right-of-way relocation agent to notify next of kin, etc., per the KYTC *Right of Way Manual*. Archaeological excavation of the cemetery shall occur only after the DEA SME obtains a permit from the Office of Vital Statistics (Cabinet of Health and Family Services, Department for Public Health). If, after excavation and in consultation with the lead federal agency and SHPO, the cemetery is not considered eligible for the NRHP, KYTC shall report the results of the excavation in the manner of a phase II archaeological testing report, unless the SHPO agrees upon a different format. If, after consultation with the lead federal agency and SHPO, the cemetery is considered eligible for the NRHP, KYTC shall report the results of the excavation in conformance with a phase III data recovery report (see **EA-908**), unless the SHPO agrees upon a different format**.**

After excavations and laboratory analysis are completed, remains shall be reinterred in accordance with KAR 600 and the KYTC *Right of Way Manual*.

Regardless of eligibility status, relocation of graves dated between 1860 and 1920 shall occur only after an evaluation of soils for the presence of toxic materials such as arsenic, mercury, or lead, which were commonly used at the time for embalming. If these inorganic materials are detected or suspected, steps shall be taken to prevent ingestion and inhalation. At a minimum, dust mask and gloves shall be required to prevent exposure to inorganic chemicals that may be present in the interment site. Clothing used at the interment site shall be changed daily and shall not be carried home. Alternatively, disposable coveralls may be used to prevent transporting potential contaminants from the site to vehicles, work places, homes, etc. Eating, drinking, and smoking shall not occur around the interment site. Before partaking in any of these activities, protective clothing shall be removed and the hands and face washed with soap and clean water. (TB-1461)

REEVALUATIONS

The district environmental coordinator (DEC) or environmental project manager (EPM) shall reevaluate federally funded projects periodically to ensure nothing has changed in the project, such as the project scope, permit issues, etc., that may affect or influence previous decisions (see **EA-410**). Reevaluations may also be required prior to a federal action, such as the authorization of funds. The DEC shall inform DEA of any changes to a project scope. Changes in project alignment may necessitate additional investigations.

REEVALUATIONS (CONT.)

Project reevaluations shall be initiated by the DEC or EPM, who coordinates the project through the appropriate KYTC cultural resource SME, informing them of any changes in right of way or project scope. The most current plans shall be checked against the original project boundaries to verify adequacy of existing surveys. If the project footprint or scope has changed from the original survey, additional areas to be impacted shall be assessed for the potential to contain significant resources by the SME. For projects involving large-scale changes, additional investigations may be required.

Project files shall be reviewed for cultural historic and archaeology letters issued by the SHPO for each reevaluated project. Dates of letters, additional recommendations (phase II, phase III, deep testing, right of entry problems), MOAs, issues, and conditions if met or required are noted on the *Section 106 Reevaluation Checklist.* Any progress made in addressing issues that were unresolved at the time of the approval of the environmental document, or since the last reevaluation, shall be clearly noted. All relevant information shall be attached to the *Section 106 Reevaluation Checklist* and provided to the appropriate DEC or EPM for inclusion in the project reevaluation documentation.

SECTION 4(F)

Section 4(f) of the federal Department of Transportation Act of 1966 provides specific protection for public parks and recreation areas, wildlife and waterfowl refuges, and historic sites. Section 4(f) impacts are associated only with projects that involve the expenditure of federal Department of Transportation (DOT) funds. For projects utilizing only state road funds or other types of federal funds, such as a non-FHWA federal earmark, Section 4(f) is not applicable.

Section 4(f) evaluation relies on NRHP criteria and the Section 106 process to identify effects on historic properties. Section 4(f) protects these eligible properties, stipulating that projects may only adversely affect these resources if there is no feasible or prudent alternative. For archaeological sites, Section 4(f) applies only to sites that are determined to be worthy of preservation in place. If the site is eligible under criterion D of the National Register for the information that it contains, it shall not be considered worthy of preservation in place.

SECTION 4(F) (CONT.)

Assuming the action meets criteria that FHWA has determined appropriate for that particular resource (historic bridge, historic site, recreation area, wildlife/waterfowl refuge or trail), minimal involvement of these resources shall be addressed through a programmatic 4(f) determination. For projects with minor impacts to historic properties supported by a finding of "no adverse effect," a *de minimis* finding shall be appropriate. Section 4(f) is discussed in greater detail in **EA-912** and in the socioeconomic chapter (**EA-700**).





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Archaeological Overviews

OVERVIEW

Archaeological overviews are conducted in the early stages of project planning and development. Archaeological overviews are planning documents and are not meant to address Section 106 decision making; therefore, they are not coordinated with the state historic preservation office (SHPO). They are often used to support project-level planning studies and corridor and alignment comparisons; they may also be incorporated into studies for state-funded projects. Overviews identify instances where archaeological resources may be impacted by project construction. Some project types, such as those addressed with a categorical exclusion (CE) for minor projects, have low potential for encountering archaeological resources and do not require an archaeological overview.

If local public agencies (LPA) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the District of Environmental Analysis (DEA) subject matter experts (SME) or consultants, schedules for deliverables shall be clearly established among the parties involved, shall be monitored by the environmental project manager (EPM), district environmental coordinator (DEC), and SME, and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The archaeological overview determines whether known sensitive archaeological resources and the potential for archaeological resources exist along the project corridor. The results of the overview shall be used to guide project decision making.

TRIGGER

The archaeological overview can be triggered by any of the following:

- Preparation of a planning study environmental overview
- Preparation of environmental overview for state-funded project
- Comparison of multiple alignments or corridors in the National Environmental Policy Act (NEPA) process

METHODS

The Office of State Archaeology (OSA) shall be consulted to conduct a record check and a review of available historic mapping. Topographic, aerial, geological, and soils mapping shall be examined to determine the likelihood of archaeology sites occurring in the project area. The DEC, DEA SME, or a prequalified consultant shall visit the project and observe whether there is evidence of archaeological features or undisturbed soils that have not been investigated for archaeological deposits. Intensive fieldwork is not undertaken for overview studies. Local citizens may also provide potential site location information.

FORMAT

The DEA SME or consultant shall document findings in a manner commensurate with the anticipated level of project impacts, project complexity, and project controversy. The documentation shall be of sufficient and appropriate detail to support informed decision making. The documentation shall follow the *Archaeological Baseline Guidance and Accountability Form* (GAF) as appropriate, or be provided in a format agreed upon during project scoping. In all cases, supporting documentation, such as mapping, tables, photographs, and other exhibits, shall be attached or incorporated as appropriate for easy reference and review.

REVIEW

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the SME for inclusion with DEA comments.

The DEA SME shall be responsible for technical review. Coordination with SHPO is not required.

DISTRIBUTION

After document approval, unless otherwise specified during project scoping, the DEA SME or consultant shall distribute deliverables as follows:

- Archaeological overview GAF, two hard copies and one electronic copy of the archaeological overview to DEA
- One hard copy of the archaeological overview to the DEC or Division of Planning as appropriate

The DEA SME shall place an electronic copy of the archaeological overview on ProjectWise or the KYTC's current file sharing platform.

TERM

Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that were not previously considered.





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Archaeological Investigation Form

OVERVIEW

The Archaeological Investigation Form was developed for use by Kentucky Transportation Cabinet (KYTC) staff only on projects where the Federal Highway Administration (FHWA) is the lead agency as specified in the programmatic agreement among FHWA, KYTC, Kentucky State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) regarding implementation of Section 106 of the *National Historic Preservation Act for Federally Funded Road Projects in the Commonwealth of Kentucky* (Section 106 PA). It is used to document the findings of archaeological studies conducted by Division of Environmental Analysis subject matter experts (DEA SMEs), environmental project managers (EPMs), or district environmental coordinators (DEC) during project development. The form was developed to document consideration of archaeological resources for most "small-scale" projects (below CE Level 3; see *Categorical Exclusion Evaluation User's Manual*, Section 106 PA, and **EA-903**). In some instances, with the approval of the SHPO, Section 106 PA allows the form to be used for large-scale projects with low potential to impact historic resources.

Local public agencies (LPAs) and prequalified environmental consultants shall not use the form for documenting archaeology assessment and shall use other document types (archaeology overviews, phase I archaeology survey, etc.) as appropriate to address archaeological concerns.

The schedule for completion of the documentation shall be determined through consultation among project team members. Regardless of whether activities are being completed by the DEC or DEA SME, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the EPM, DEC, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OVERVIEW (CONT.) The archaeological investigation form shall not be used to document sites that are eligible or potentially eligible for listing on the National Register of Historic Places. In such circumstances, phase I intensive survey reporting procedures as detailed in SHPO *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*) shall be followed.

OBJECTIVES The archaeological investigation form documents whether sensitive archaeological resources may exist along the project corridor. The form may appropriately document the conclusion of the Section 106 process, or the need for further study or action.

TRIGGER Archaeological investigations are completed and documented using the form during the project development process for "small-scale" (as defined in the Section 106 PA), federally-funded projects that are being investigated internally by KYTC staff (DECs, EPMs, and DEA SMEs). Investigations shall be appropriately initiated when plans are sufficiently developed to understand the area of potential effect of the project. The archaeological investigation form may be used for FHWA-funded projects but is not appropriate for addressing state-funded projects with other federal involvement. Those projects shall be addressed following SHPO *Specifications* or other means agreed upon by the lead federal agency.

METHODS The archaeological investigation form contains embedded instructions telling the investigator how to proceed. Depending upon project-specific conditions, the investigator shall either complete the form or seek additional information. The early sections of the document may be completed by the DEC, but later sections, if necessary, shall be completed by an archaeological SME.

The form may be used to document projects with no potential to impact archaeological resources such as projects addressed by a categorical exclusion for minor projects (see **EA-404**) but may also be used to document projects with potential to impact archaeological sites that are not eligible or potentially eligible for listing on the National Register of Historic Places (NRHP). Projects that may affect eligible or potentially eligible archaeological sites shall be documented in accordance with SHPO specifications.

FORMAT Findings shall be documented as directed by the embedded instructions in the form. The form specifies the appropriate supporting documentation, such as mapping, tables, photographs, and other exhibits, that shall be attached for easy reference and review.

SUBMITTAL The archaeological investigation form contains submittal instructions depending upon the level of analysis needed to reach a conclusion. The signature block and "cc" list provide guidance on distribution of the document.





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Archaeological Phase I Intensive Surveys

OVERVIEW

Phase I intensive surveys are undertaken to identify archaeological sites that might be eligible for the National Register of Historic Places (NRHP) and that might be impacted by projects utilizing or requiring federal funding or federal permits. Phase I intensive surveys consist of a combination of records research, grid-based shovel probing, and surface observation of the area of potential effect (APE) within the right-of-way or disturb limits of the project, including easements and staging areas.

The Kentucky State Historic Preservation Office's (SHPO) *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*) provides guidelines and specifications for the completion of phase I intensive surveys. The lead federal agency is responsible for evaluating the project's impacts on sites that may lie within the area of potential effect (APE) and shall consult with SHPO regarding its findings. The Kentucky Transportation Cabinet (KYTC) shall develop the report of the phase I intensive survey to provide the federal agency with the information needed to reach their conclusions and properly consult with SHPO. For Federal Highway Administration (FHWA) projects, a protocol has been established with KYTC for document review. When FHWA is not the lead federal agency, the review shall be coordinated in accordance with the lead agency's process.

Investigations shall be carried out by qualified professionals who meet the Secretary of the Interior's and the SHPO's minimum standards and who are prequalified for work by both the SHPO and KYTC. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

OVERVIEW (CONT.) Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES Phase I intensive surveys are designed to locate any archaeological resources within the APE, provide a description of these resources, and, when possible, make recommendations concerning National Registration of Historic Places (NRHP) eligibility. When archaeological sites are identified, phase I investigations document an archaeological site's boundaries, age, condition, and significance within the project limits. This information may be used to compare project alternatives or to assess the impacts of a preferred alternative.

A phase I intensive survey shall serve as the appropriate base study when the archaeology checklist is not adequate for documenting archaeological sites.

The results of the phase I intensive survey are used to determine the need for phase II archaeology testing or phase III archaeology data recovery.

TRIGGER Phase I intensive survey is triggered by any of the following:

- Necessity for survey indicated by archaeology overview or checklist processes
- Development of NEPA document
- Development of a United States Army Corps of Engineers permit pursuant to Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act
- Project encroachment onto federal land
- Ground-disturbing activities taking place on state-owned property (State Antiquities Act)
- Potential presence of unique and sensitive resources

METHODS Phase I intensive surveys include archival research supplemented by field investigations to reach conclusions regarding presence or absence of significant archaeological resources within the APE. The SHPO *Specifications* details appropriate methods for conducting phase I intensive surveys. These specifications shall be followed unless alternative methods are agreed upon in advance by KYTC, SHPO, and the lead federal agency.

METHODS (CONT.)

The investigator (DEA SME or consultant) shall initiate a phase I intensive survey after reviewing previously identified sites and archaeological investigations in the project area by conducting a file check at the Office of State Archaeology (OSA) at the University of Kentucky in Lexington. The research area shall extend to a minimum of 2 kilometers distance from the project area. Other resources include site survey forms, reports and associated maps on file at OSA or SHPO, county atlases, early twentieth-century 15 minute topographic maps, county highway maps, archived highway plans, geological survey reports, and maps and historical descriptions of archaeological sites that may be relevant.

Field investigations shall be designed to address all undisturbed accessible areas within the project APE. Appropriate methods shall depend upon field conditions and surface visibility, but may include pedestrian survey, screened shovel probes, and, when working in areas with known Revolutionary War or Civil War battles or camps, the use of metal detectors. Areas of substantial soil deposition may have the potential to contain significant buried archaeological deposits. These areas shall be appropriately examined using machine trenching, machine coring, or hand bucket auguring. The use of heavy equipment during phase I investigations shall be preapproved by SHPO and KYTC and shall not be implemented prior to the completion of standard phase I methods. Any excavation shall follow the Kentucky Occupational Safety and Health Program and OSHA standards (Section 18 of the OSH Act, 29 CFR 1926.650, 29 CFR 1926.651, and 29 CFR 1926.652), and directives related to trenching and excavation.

When archaeological sites are encountered, the investigator (DEA SME or consultant) shall collect field data, including location (using GPS if possible), color photographs, physical integrity, horizontal and vertical extent, and range and density of cultural material. Each positive shovel probe shall be given a unique field designation, and records shall be kept of their location, depth, soil profile, artifact yield, and other pertinent information. All identified features and structural remains (ruins) shall be sufficiently photographed, mapped, and documented to enable their interpretation and accurate relocation. Additional archival research may be helpful in interpreting historic archaeological sites.

All standing structures, historic graves, and cemeteries over 50 years of age within the archaeological APE shall be photographed, mapped, and described, and the surrounding area shall be evaluated for archaeological potential.

All artifacts collected during field investigations shall be cleaned, analyzed, and curated according to SHPO *Specifications*.

REPORT FORMAT

Phase I intensive survey reporting shall follow requirements contained in SHPO *Specifications*. The TC 58-35 form, *Archaeological Baseline Guidance and Accountability Form* (archaeological baseline GAF) (**Exhibit 9002**), shall be followed to ensure document completeness.

SUBMITTAL FOR FINAL REVIEW

Unless otherwise specified during project scoping, the investigator (DEA SME or consultant) shall submit copies for final review as follows:

- The archaeological baseline GAF and three hard copies and one electronic copy of the phase I intensive survey to DEC

  Note: The DEA SME shall be responsible for scheduling document review and comment with SHPO and the lead federal agency.

- One hard copy of the phase I intensive survey to the DEC

  Note: The DEC shall be responsible for coordinating the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments.

FHWA JOINT REVIEW

Specific review protocols have been established if FHWA is the lead federal agency. FHWA shall be involved in document review when the report has a finding that requires additional work (such as a recommendation for phase II testing investigations) or when there is a recommendation that a site is eligible for the NRHP. For reports that do not recommend additional work, KYTC shall coordinate directly with SHPO. In those cases, FHWA involvement is not required unless there is a dispute. If the SHPO does not agree with KYTC's determination recommending no additional work, FHWA shall be contacted immediately to resolve the disagreement. For federally funded projects, FHWA shall be copied on all correspondence between KYTC and SHPO.

The DEA SME shall work with the EPM and DEC to understand project schedule and urgency. Schedules may be accelerated or relaxed based upon the complexity of the project or report and the urgency of the review to the critical path of the project. In all cases, the schedule and progress of the review shall be clearly communicated to the project team by copy of review correspondence to core team members (such as the DEC, EPM, PM, and FHWA).

For consultant submittals, the DEA SME shall log the report and perform a cursory review for any glaring errors or omissions. If the report is glaringly deficient, the DEA SME shall return it to the consultant with a deficiency letter within two working days.

FHWA JOINT REVIEW (CONT.)

Reports that appear complete and that recommend additional work shall be transmitted to SHPO and FHWA. Reports that appear complete and that do not recommend additional work shall be transmitted to SHPO. If previous concurrence on the findings has occurred, reports shall also be transmitted to SHPO. A cover letter shall accompany the report requesting concurrent review within 14 days (FHWA) or 21 days (SHPO), as appropriate. If necessary, a joint review meeting between KYTC and FHWA shall be scheduled within two weeks of transmittal.

For reports recommending additional work, there shall be a KYTC and FHWA concurrent review, after which FHWA shall transmit a letter to SHPO summarizing the report findings and including a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting between KYTC, FHWA, and SHPO shall be scheduled.

For reports that do not recommend additional work, prior to the KYTC and SHPO concurrent review, the DEA SME shall transmit a letter to SHPO summarizing the report findings, including a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting between KYTC and SHPO shall be scheduled. It is essential that SHPO receive a formal statement of findings and concurrence to comply with Section 106 requirements. By agreement, SHPO findings shall be issued within nine days of the joint review meeting, thus completing consultation within 30 days of document receipt by KYTC.

There are three possible outcomes from the KYTC/FHWA/SHPO concurrent document review:

- When the report is adequate to evaluate conclusions, is editorially sufficient, and all parties agree on findings, SHPO shall draft a letter to KYTC concurring with findings and copy FHWA. If SHPO does not comment within 30 days after the document receipt by KYTC, their concurrence is assumed.

- When the report is adequate to evaluate conclusions and all parties agree on the findings, but the report has editorial deficiencies that must be addressed, SHPO shall draft a letter to KYTC concurring with findings that are conditional on correcting deficiencies identified in the report. For consultant submittals, the DEA SME shall, within two working days of receipt of the SHPO review letter, draft a letter to the consultant identifying deficiencies and requesting revisions in accordance with the findings of the joint review. Upon completion of the revised report, the joint review process shall be reinitiated.

FHWA JOINT REVIEW (CONT.)

- When it is determined that the report is not sufficient to evaluate conclusions, SHPO shall draft a letter to KYTC identifying deficiencies in the report. Within two working days of receipt of the SHPO review letter, the DEA SME shall draft a letter to the consultant identifying deficiencies that must be addressed, allowing no more than a 30-day response time for the consultant. Upon receipt of the revised report, the joint review process is reinitiated.

DISPUTES

If SHPO or another consulting party does not concur with KYTC or lead federal agency findings, and these differences cannot be resolved, the dispute processes outlined in **EA-903** shall be followed.

DISTRIBUTION OF FINAL DOCUMENT

After final document approval, unless otherwise specified during project scoping, the investigator (DEA SME or consultant) shall distribute deliverables as follows:

- Archaeological baseline GAF and seven hard copies and one electronic copy of the Phase I intensive survey to DEA
- One hard copy of the Phase I intensive survey to the district office

Additional copies may be needed for Indian Tribal consultation.

DEA shall submit three hard copies of the phase I intensive survey to SHPO, and one hard copy of the phase I intensive survey to the lead federal agency. SHPO shall forward one copy of the final, accepted report to OSA. The DEA SME shall forward the completed archaeological baseline GAF to the DEC for signature, identifying any outstanding project commitments. The DEC shall coordinate results with the project team so that any commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the Six Year Plan database before returning the signed archaeological baseline GAF to DEA.

The DEA SME shall distribute SHPO and lead federal agency findings correspondence to the PM, EPM, DEC, and consultants.

CURATION

Upon completion of the phase I survey, OSA site survey forms shall be completed or revised, incorporating any new information concerning the sites investigated. Artifact curation and OSA form submittal shall follow SHPO *Specifications* and William S. Webb Museum of Anthropology (or other approved curation facility) curation guidelines. When a consultant is involved, the consultant is responsible for curation.

TERM

Findings reached by KYTC and FHWA, which are based on the document, shall be considered valid unless the scope of the project changes, incorporating areas into the project that were not previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations (see **EA-410**).

COMBINED PHASE I INTENSIVE SURVEY/ PHASE II TESTING

In some circumstances, to reduce the amount of time associated with survey and testing, a combined approach may be used. If a determination of potential significance requiring testing is made prior to initiation or completion of a phase I report, it is possible to combine the phase I and phase II investigations and include the findings in a single report. Combining these investigations saves both time and money. In most cases, this approach is contingent upon landowner approval because of the level of investigation and ground disturbance required for phase II testing. The SHPO *Specifications* for the completion of phase I surveys and phase II testing shall be followed.

When phase II level work is recommended by the phase I level of investigation, the investigator shall give DEA a detailed management summary. The summary shall, at a minimum, include site maps, photographs, a thorough discussion of soils found at the site, mapping and discussion of artifact concentrations, and archival research if the component recommended for additional testing is historic. The information in the management summary shall be adequate to support the recommendation for further work or no further work at each site identified during phase I investigations.

The management summary shall be provided within two weeks of completion of fieldwork and prior to submittal of a formal report. The management summary shall include recommendations for the level of additional investigation for each site requiring evaluation, with an accompanying scope of work and budget. The management summary and proposed scope of work shall be coordinated with the lead federal agency, after which the lead federal agency shall transmit a letter to SHPO summarizing the report findings and including a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting shall be scheduled between the KYTC, SHPO, and the lead federal agency. A concurrent review of the summary and scope shall be completed within two weeks of receipt.

COMBINED PHASE I INTENSIVE SURVEY/PHASE II TESTING (CONT.)

If the information in the management summary is adequate to reach concurrence on recommendations, SHPO shall transmit a letter with findings identifying which sites require no further work and which sites can advance to phase II testing. If the management summary is not adequate, either a revision or a submittal of a full phase I intensive survey report shall be required.

If all agencies agree in advance, phase I and phase II investigations may be combined in a single field investigation. In those cases, decisions shall be made in the field about whether to perform phase II investigations on a particular site. The DEA SME shall ensure that decisions made in the field are appropriately documented and communicated to the project team, SHPO, lead federal agency, and any consultant involved in the investigation.

The final report shall reference the management summary and address all phase I and phase II findings. The report title shall indicate that it addresses both phase I and phase II findings. Reporting and submittal shall follow the same procedure and schedule as phase II archaeological testing reports (**EA-907**).





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Archaeological Phase II Testing

OVERVIEW

Phase II archaeological testing is required when the results of a phase I intensive survey are not sufficient to determine if a site is eligible for nomination to the National Register of Historic Places (NRHP). Phase II testing is also used to collect data needed to develop an archaeological data recovery plan.

Phase II testing requires additional fieldwork, and possibly archival research, to assess the deposits and context of the site in question. Fieldwork may include hand excavation of test units and shovel probes, mechanical removal of the plow zone, excavation of trenches to assess site stratigraphy and integrity, and use of geophysical survey equipment (such as ground-penetrating radar, resistivity, magnetometer, etc.).

The Kentucky State Historic Preservation Office's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*) provides guidelines and specifications for the completion of phase II testing. The lead federal agency shall evaluate the project's impacts on sites that may lie within the area of potential effect (APE) and shall consult with SHPO regarding its findings. KYTC shall produce the phase II archaeological testing report to provide the federal agency with the information needed to reach their conclusions and properly consult with SHPO. For Federal Highway Administration (FHWA) projects, a protocol has been established with the Kentucky Transportation Cabinet (KYTC) for document review. When the FHWA is not the lead federal agency, the review shall be coordinated in accordance with the lead agency's process.

Investigations shall be performed by qualified professionals who meet the Secretary of the Interior's and the SHPO's minimum standards and who are prequalified for work by both the SHPO and KYTC. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

OVERVIEW (CONT.) Regardless of whether activities are being completed by the DEA subject matter expert (SME) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES Phase II testing shall include archival and field investigations sufficient to make definitive statements concerning the historical or scientific significance of each identified site and its eligibility for inclusion in the NRHP. Sites shall be evaluated to determine the nature and extent of archaeological resources and the site's physical integrity, and to document the site's research potential as it relates to the current state historic preservation plan and *The Archaeology of Kentucky: An Update* (Pollack, editor 2008). Phase II testing shall be of sufficient intensity to evaluate significance and effectively plan the mitigation of project impacts through data recovery if it is required.

Any areas that have been added to the project, or were not previously addressed, shall be subjected to phase I intensive survey concurrent with the phase II testing.

TRIGGER Phase II testing is triggered when the archaeology phase I intensive survey identifies archaeological sites where eligibility for listing in the NRHP has not been determined and the site(s) cannot be avoided by the alternatives being carried forward.

METHODS The SHPO *Specifications* addresses appropriate field methods for conducting phase II testing. These specifications shall be followed unless alternative methods are agreed upon in advance by KYTC, SHPO, and the lead federal agency. Specific methodologies employed at a site shall be determined through consultation between the lead federal agency, SHPO, and KYTC archaeologists, based upon what is known about the site.

The most common testing strategies include controlled surface collection, shovel probes or test units, mechanical stripping and trenching, remote sensing, and archival research. Each of these strategies is discussed in the SHPO *Specifications*. Most sites require a combination of testing strategies. Any excavation shall follow the Kentucky Occupational Safety and Health Program (OSH), and OSHA standards (Section 18 of the OSH Act, 29 CFR 1926.650, 29 CFR 1926.651, and 29 CFR 1926.652) and directives related to trenching and excavation.

METHODS (CONT.)

Upon completion of the phase II testing, the lead investigator shall complete a revised (OSA) site survey and incorporate any new information concerning the site and its NRHP potential. For sites determined eligible for NRHP listing, a data recovery plan shall be developed.

Because this activity can be disruptive to a property owner or business, a right-of-entry agreement for each affected parcel shall be secured prior to any phase II activities. When a consultant is completing phase II testing, he or she is responsible for initially contacting property owners and requesting permission to access the property. Field work shall be conducted in a manner that does not hinder access to the property. After investigations are complete, the property shall be restored to its original contour and condition, unless otherwise directed in the right-of-entry agreement. If the property owner does not grant access to KYTC or its agents, the matter shall be referred to the KYTC Office of Legal Services, or, with permission of the federal agency, deferred in a memorandum of agreement (MOA) until the property is acquired through the right-of-way process.

REPORT FORMAT

Phase II testing shall follow reporting requirements contained in the SHPO *Specifications*. The TC 58-35 form, *Archaeological Baseline Guidance and Accountability Form* (Archaeological Baseline GAF) (**Exhibit 9002**), shall be followed to ensure document completeness.

SUBMITTAL

Unless otherwise specified during project scoping, the consultant or lead investigator shall submit copies as follows:

- The archaeological baseline GAF, three hard copies and one electronic copy of the phase II archaeological testing report to DEA
- One hard copy of the phase II archaeological testing report to the district office

The consultant or lead investigator shall also submit updated OSA site forms to OSA when new information about a known site is discovered.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments.

The DEA SME shall schedule document review and comment with SHPO and the lead federal agency.

FHWA JOINT REVIEW

Specific review protocols have been established if FHWA is the lead federal agency. FHWA shall be involved in document review when the report has a finding that a site is eligible for the NRHP. For reports that do not recommend additional work, KYTC shall coordinate directly with SHPO. FHWA involvement is not required unless there is a dispute. If the SHPO does not agree with KYTC's determination recommending no additional work, the DEA SME shall contact the FHWA immediately to resolve the disagreement. On federally funded projects, FHWA shall be copied on all correspondence between KYTC and SHPO.

The DEA SME shall work with the EPM and DEC to understand project schedule and urgency. Schedules shall be accelerated or relaxed based on the complexity of the project or report and the urgency of the review to the critical path of the project. In all cases, the schedule and progress of the review shall be clearly communicated to the project team by copy of review correspondence to core team members (such as the DEC, EPM, PM, and FHWA).

For consultant submittals, the DEA SME shall log the report and perform a cursory review for any glaring errors or omissions. If the report is glaringly deficient, the DEA SME shall return it to the consultant with a deficiency letter within two working days.

The DEA SME shall transmit reports that appear complete and that do not recommend additional work to SHPO and shall include a cover letter summarizing the report findings, including a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting between KYTC and SHPO shall be scheduled within 21 days.

In cases where the report is being resubmitted and there has been previous concurrence on the findings, the DEA SME shall transmit those reports to SHPO. The cover letter shall explain the previous concurrence and request a final acceptance letter from the SHPO.

The DEA SME shall transmit reports that appear complete and that recommend additional work to SHPO and FHWA. A cover letter shall accompany the report requesting concurrent review within 14 days (FHWA) and 21 days (SHPO). After the KYTC and FHWA concurrent review, FHWA shall transmit a letter to SHPO summarizing the report findings and include a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting between KYTC, FHWA, and SHPO shall be scheduled.

FHWA JOINT REVIEW (CONT.)

To comply with Section 106 requirements, the DEA SME shall give SHPO a formal statement of findings and concurrence. By agreement, SHPO findings shall be issued within 9 days of the joint review meeting, thus completing consultation within 30 days of document receipt by KYTC.

There are three possible outcomes from the KYTC/FHWA/SHPO concurrent document review:

1. When the report is adequate to evaluate conclusions, is editorially sufficient, and all parties agree on findings, SHPO shall draft a letter to KYTC concurring with findings and copy FHWA. If SHPO does not comment within 30 days after the document receipt by KYTC, their concurrence is assumed.
2. When the report is adequate to evaluate conclusions and all parties agree on the findings, but the report has editorial deficiencies that must be addressed, SHPO shall draft a letter to KYTC concurring with findings that are conditional on correcting deficiencies identified in the report. For consultant submittals, the DEA SME shall, within two working days of receipt of the SHPO review letter, draft a letter to the consultant identifying deficiencies and requesting revisions in accordance with the findings of the joint review. Upon completion of the revised report, the joint review process shall be reinitiated.
3. When it is determined that the report is not sufficient to evaluate conclusions, SHPO shall draft a letter to KYTC identifying deficiencies in the report. Within two working days of receipt of the SHPO review letter, the DEA SME shall draft a letter to the consultant identifying deficiencies that must be addressed, allowing no more than a 30-day response time for the consultant. Upon receipt of the revised report, the joint review process is reinitiated.

DISPUTES

In the event that SHPO or another consulting party does not concur with KYTC or lead federal agency findings and these differences cannot be resolved, the processes outlined in **EA-903** shall be followed.

DISTRIBUTION

After acceptance of the document, unless otherwise specified during project scoping, the lead investigator shall distribute deliverables as follows:

- Archaeological Baseline GAF and seven hard copies and one electronic copy of the phase II testing report to DEA
- One hard copy of the phase II testing report to the district office

DISTRIBUTION (CONT.) Additional copies of the report may be needed for Indian tribal consultation or for coordination with other state and federal agencies. DEA shall submit three hard copies of the phase II testing report to SHPO and one hard copy of the phase II testing report to the lead federal agency.

SHPO shall forward one copy of the final, accepted report to OSA.

The DEA SME shall forward the completed Archaeological Baseline GAF to the district for signature; identifying any outstanding project commitments.

The DEC shall coordinate results and commitments with the project team prior to returning the signed Archaeological Baseline GAF to DEA.

The DEA SME shall distribute SHPO and lead federal agency findings correspondence to the project manager, EPM, DEC, and consultants.

CURATION Upon completion of the phase II testing, the lead investigator shall complete revised OSA site survey forms, incorporating any new information concerning the sites investigated. Artifact curation and OSA form submittal shall follow SHPO *Specifications* and William S. Webb Museum of Anthropology (or other approved curation facility) curation guidelines. When a consultant is involved, the consultant is responsible for curation.

TERM Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that were not previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations (see **EA-410**).

COMBINED PHASE II / PHASE III EVALUATION During or at completion of phase II testing, the site may be determined eligible for nomination to the NRHP. If this determination is made prior to initiation or completion of a report, it is possible to combine the phase II and phase III investigations and report into a single effort. Combining testing and data recovery saves both time and money, provided KYTC, SHPO, and the lead federal agency can reach an agreement and all documents (such as data recovery plans and MOAs) can be written, reviewed, and approved in a timely fashion. In most cases, this approach is contingent upon landowner approval for the level of investigation and ground disturbance required for a phase III data recovery. The SHPO *Specifications* for the completion of phase II testing and phase III data recovery shall be followed.

MANAGEMENT SUMMARY

For projects where the site is anticipated to be eligible for the NRHP at or near completion of the phase II evaluation, and combining phase II testing and phase III data recovery is appropriate, a detailed management summary shall be prepared by or provided to DEA. At a minimum, the summary shall include site maps, photographs, a thorough discussion of soils found at the site, mapping and discussion of artifact concentrations, and archival research if the component recommended for mitigation is historic. The information in the management summary shall be adequate to support the recommendation for further work or no further work at each site identified during phase II investigations.

The management summary shall be required within two weeks of completion of fieldwork and prior to submittal of the phase II report. It shall include recommendations for additional investigation for all sites requiring mitigation. It shall be coordinated with the lead federal agency, after which the lead federal agency shall transmit a letter to SHPO summarizing the report findings and including a concurrence statement, which shall serve as the formal coordination request. If necessary, a joint review meeting shall be scheduled between KYTC, SHPO, and the lead federal agency. A concurrent review of the summary shall be completed within two weeks of receipt.

If the information in the management summary is adequate to reach concurrence on recommendations, SHPO shall transmit a letter with findings identifying which sites require no further work and which sites can advance to phase III data recovery. If the management summary is not adequate, either a revision or a submittal of a full phase II archaeological testing report shall be required.

DATA RECOVERY PLAN

One way of mitigating adverse effect is through archaeological data recovery. However, before data recovery is carried out, a research design and data recovery plan shall be developed and approved by the lead federal agency and the SHPO. A data recovery plan shall be consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*, the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation,* and the *Advisory Council on Historic Preservation's Treatment of Archeological Properties: A Handbook*.

The plan shall specify:

- The results of previous research relevant to the project

DATA RECOVERY PLAN (CONT.)

- Research problems or questions to be addressed with an explanation of their relevance and importance
- The field and laboratory analysis methods to be used with a justification of their cost-effectiveness and how they apply to this particular property and these research needs
- The methods to be used in artifact, data, and other records management
- Explicit provisions for disseminating the research findings to professional peers in a timely manner
- Arrangements for presenting what has been found and learned to the public, focusing particularly on the community or communities that may have interests in the results
- The curation of recovered materials and records resulting from the data recovery in accordance with 36 CFR 79 (except in the case of unexpected discoveries that may need to be considered for repatriation pursuant to NAGPRA)
- Procedures for evaluating and treating discoveries of unexpected remains or newly-identified historic properties during the course of the project, including necessary consultation with other parties

The data recovery shall be constructed of explicit hypotheses and an explanation of what specific data from what specific contexts shall be used to test the hypotheses. It shall also identify what classes of artifacts and features will address the research questions.

REPORTING & SUBMITTAL

If a consultant is involved, the DEA SME shall track the consultant's progress as specified in the agreed-upon scope of work for completion of fieldwork and submittal of report with required GAF. The final report shall reference the management summary and address all phase II and phase III findings. The report title shall indicate that it addresses both phase II and phase III findings. Reporting and submittal shall follow the same procedure and schedule as phase III archaeological data recovery reports (**EA-908**).



Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Archaeological Phase III Data Recovery

OVERVIEW

Phase III archaeological data recovery collects information important to understanding history or prehistory. It occurs when there will be an adverse effect to a site listed in or eligible for listing on the National Register of Historic Places (NRHP), and mitigation by excavation of all or portions of the site is determined to be an appropriate treatment. Consultation between the Kentucky Transportation Cabinet (KYTC), the lead federal agency, and the State Historic Preservation Office (SHPO) is required to determine the scope of work needed to address research questions as identified in an approved data recovery plan (DRP).

Fieldwork may include hand excavation of test units, shovel probes, mechanical removal of the plow zone, excavation of trenches to assess site stratigraphy and integrity, and use of geophysical survey equipment such as ground-penetrating radar, resistivity, magnetometer, etc. The evaluation shall also require additional archival research.

On Federal Highway Administration (FHWA) projects, phase III investigations shall be completed prior to approval of the final National Environmental Policy Act (NEPA) document, or provisions shall be made in a memorandum of agreement (MOA) describing how the investigations shall be completed. In all instances, field investigations shall be completed prior to any ground-disturbing activities by the project that would affect the site being investigated.

Information regarding the completion of phase III data recovery may be found in the SHPO's *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*).

Investigations shall be performed by qualified professionals who meet the Secretary of the Interior's and the SHPO's minimum standards and who are prequalified for work by both the SHPO and KYTC. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant.

OVERVIEW (CONT.) The schedule for documentation completion shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter expert (DEA SME) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS*)* database.

OBJECTIVES Phase III data recovery shall include archival, field, and laboratory investigations sufficient to address specific research questions identified in the DRP for each site.

TRIGGER Phase III archaeological data recovery is triggered when phase I intensive survey or phase II testing identifies archaeological sites determined eligible for the NRHP, and the site(s) cannot be avoided or preserved in place.

The commitment to undertake the work is documented in an MOA executed prior to final NEPA document approval. These investigations are conducted after SHPO approval of a DRP.

A DRP outlines the research questions and the methods that shall be used to mitigate adverse effects. The DRP is tailored to each impacted site, addressing questions that relate to the current State Historic Preservation Plan and *The Archaeology of Kentucky: An Update* (Pollack, editor, 2008) and shall be approved in consultation with the SHPO before initiation of data recovery investigations.

The MOA may contain other stipulations, such as requiring a public education component, which shall be tailored to the circumstances of each individual project.

METHODS Specific methodologies employed at a site shall be determined through consultation between the lead federal agency, SHPO, and KYTC SMEs and shall be detailed in a DRP.

Common investigative strategies include controlled surface collection, shovel probes, test units, mechanical stripping and trenching, remote sensing, and archival research. Most sites require a combination of investigative strategies. Detailed mapping and extensive field notes shall be required to document the data recovery effort. All excavations shall follow OSHA standards and directives related to trenching and excavation.

METHODS (CONT.)

The DRP shall require or encourage periodic field visits from KYTC or SHPO archaeologists and shall allow for some flexibility in modifying the field approach based on the field consultation. Field consultation shall also allow for fieldwork to conclude early if it is determined that the data potential of the site has been exhausted. Any agreed-upon changes to the DRP shall be documented in writing to all reviewing parties and noted in the report. Care shall be taken to ensure that any changes are consistent with the MOA.

Data recovery often requires specialized laboratory analysis such as faunal analysis, lithic use-wear analysis, carbon dating, etc. Laboratory analysis techniques shall also be detailed in the DRP and, if a consultant is involved, in the scope of work developed for the project.

Phase III data recovery may occur prior to property acquisition. Because this activity can be disruptive to a property owner or business, a right-of-entry agreement for each affected parcel shall be secured prior to any phase III activities. Field work shall be conducted in a manner that does not hinder access to the property. After investigations are complete, the property shall be restored to its original contour and condition, unless otherwise directed in the right-of-entry agreement. If the property owner does not grant access to KYTC or its agents, the matter shall be referred to the KYTC Office of Legal Services or deferred until the property is acquired through the right-of-way process.

At the conclusion of fieldwork, it is possible to obtain conditional concurrence from the SHPO that the data potential of the site has been exhausted. This finding allows construction to proceed at the site prior to completing laboratory analysis and formal report writing. A management summary is used to document this finding (see **EA-902**), and concurrence is issued with a condition that a formal report following SHPO *Specifications* be completed within a reasonable timeframe.

REPORT FORMAT

Phase III archaeological data recovery reporting shall follow requirements outlined in the SHPO *Specifications*. The TC 58-35 form, *Archaeological Baseline Guidance and Accountability Form* (Archaeological Baseline GAF) (**Exhibit 9002**) shall be followed to ensure document completeness.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments.

REPORT FORMAT (CONT.)

The DEA SME shall establish the schedule for joint document review and comment with SHPO and the lead federal agency, as appropriate. For consultant submittals, the DEA SME shall log the report and perform a cursory review for any glaring errors or omissions. If the report is glaringly deficient, the DEA SME shall return it to the consultant with a deficiency letter.

The DEA SME shall transmit reports that appear complete to SHPO for review. A cover letter shall accompany the report requesting concurrent review within 21 days. Upon completion of the review, the SHPO shall generate a comment or acceptance letter.

The DEA SME shall draft a letter to the consultant identifying deficiencies and requesting revisions in accordance with the findings of the joint review and the completed Archaeological Baseline GAF. Upon submittal of the revised report, the joint review process shall be reinitiated.

DISTRIBUTION

After acceptance of the document, unless otherwise specified during project scoping, the lead investigator shall distribute deliverables as follows:

- Archaeological Baseline GAF and seven hard copies and one electronic copy of the phase III data recovery report to DEA
- One hard copy of the phase III data recovery report to the district office

DEA shall submit two hard copies of the phase III archaeological data recovery report to SHPO and one hard copy of the phase III archaeological data recovery report to the lead federal agency.

SHPO shall forward one copy of the final, accepted report to the Office of State Archaeology (OSA).

The DEA SME shall forward the completed Archaeological Baseline GAF to the district for signature, identifying any outstanding project commitments.

The DEC shall coordinate results and commitments with the project team prior to returning the signed Archaeological Baseline GAF to DEA.

The DEA SME shall distribute SHPO and lead federal agency findings correspondence to the project manager, EPM, DEC, and consultants.

CURATION Upon completion of the phase III data recovery, the lead investigator shall complete revised OSA site survey forms and incorporate any new information concerning the sites investigated. Artifact curation and OSA form submittal shall follow SHPO *Specifications* and William S. Webb Museum of Anthropology (or other approved curation facility) curation guidelines. When a consultant is involved, the consultant is responsible for curation.

TERM Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that were not previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations (see **EA-410**).





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Historic Architectural Overviews

OVERVIEW

Historic architectural overviews are conducted in the early stages of project planning and development. They are planning documents and are not designed to address Section 106 decision making. They are often used to support project-level planning studies and corridor and alignment comparisons. They may also be incorporated into studies for state-funded projects. Overviews identify instances where historic architectural resources may be affected by project construction.

"Historic architectural overview" as discussed here refers to a stand-alone document. Historic architectural evaluations that consist of a chapter or section within a larger planning study or environmental overview document may not conform to the standards set out here, and shall instead follow the requirements agreed upon in the scope of work for that project.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among project team members. Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the environmental project manager (EPM), district environmental coordinator (DEC), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The historic architectural overview locates and documents above-ground sites (buildings, structures, districts, and objects) that are 50 years old or older in the project area and identifies historic sites that may be eligible for the National Register of Historic Places (NRHP). The results of the overview shall be used to guide project decision making.

TRIGGER

The historic architectural overview can be triggered by any of the following:

- Preparation of a planning study environmental overview
- Preparation of environmental overview for state-funded project
- Preliminary comparison of multiple alignments or corridors in the National Environmental Policy Act (NEPA) process

METHODS

The overview consists of a windshield survey and a record search. A windshield survey requires the identification of all structures that are 50 years old or older located in the project area or corridor. A record search consists of a review of files and records at the Kentucky Heritage Council and may include research at other local repositories. This shall include both the use of the historic GIS database maintained by the Kentucky Heritage Council and researching records at the county property valuation administrator (PVA) offices to obtain building ages and addresses. Deed research is not conducted for an historic architectural overview.

Care shall be taken to identify mid-twentieth-century-era housing during the windshield survey, followed by age verification from PVA records. At a minimum, early eligibility recommendations shall be made for criterion C (architecture). In some instances, landscapes may be identified that are potentially eligible under criterion A (association of the property with an event), such as farms, farmsteads, or battlefields, etc. Due to their potential size and influence on alternative alignments, properties and landscapes shall be assessed for the potential of historic districts or rural historic districts. If during the windshield survey significant sites are located, a brief site description and photograph of the property shall be included in the overview. If an association under criteria A or B (significant person) is known, it shall be included in site descriptions.

The overview does not include eligibility determinations for criterion A or criterion B but instead focuses on criterion C. Due to the additional research required, evaluation of properties under criteria A and B is conducted during the development of an historic architectural survey (see **EA-911**). The overview also does not include boundary determinations for each property. For purposes of the overview, the boundaries for historic sites shall be assumed to follow existing property lines. A complete historic context is not developed for the overview. Kentucky Heritage Council inventory forms are not completed during the overview.

METHODS (CONT.) The document only provides an overview of the historic architectural resources that are located in the project area. Only when an historic architectural survey is developed shall conclusions be drawn for the eligibility for each property that meets the 50-year age criterion established for the NRHP.

FORMAT The State Historic Preservation Office (SHPO) does not review the overview nor concur with the findings of the report. Therefore, the overview is not required to conform to the SHPO's *Specifications for Conducting Fieldwork and Preparing Cultural Historic Assessment Reports* (SHPO *Specifications*). Findings shall be documented in a manner that is commensurate with the anticipated level of project impacts, project complexity, and project controversy. The documentation shall be of sufficient and appropriate detail to support informed decision making. The documentation shall be provided in a format agreed upon during project scoping.

In all cases, supporting documentation such as mapping, tables, photographs, and other exhibits shall be attached or incorporated as appropriate for easy reference and review. Each site location shall be labeled or marked on a USGS topographic map that includes a north arrow, scale bar, quad name, and year. Properties shall be listed with known addresses or, if unknown, a description of the property's location. Photographs shall clearly show the façade of the structure. If significant sites are located, a site description of the properties shall be included in the overview. If an association under criteria A or B is known or suspected, that association shall be included in site descriptions.

SUBMITTAL Historic architectural overviews shall be submitted to the project team in an appropriate format to assist in decision making and to provide a record of the investigations. The DEA SME shall review and comment on the overview within 30 days of submittal. Although these documents are not routinely reviewed by regulatory agencies, they may provide documentation to be used during consultation.

DISTRIBUTION After final document approval, unless otherwise specified during project scoping, the lead investigator shall distribute deliverables as follows:

- One hard copy and one electronic copy of the historic architectural overview to DEA
- One hard copy of the historic architectural overview to the district office or Division of Planning as appropriate

DISTRIBUTION (CONT.) The DEA SME shall place an electronic copy of the historic architectural overview on ProjectWise or the Cabinet's current file-sharing platform.

TERM There is no established time period at which the overview is considered to have expired.





Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Historic Architectural Investigation Form

OVERVIEW

The historic architectural investigation form (form) was developed for use by Kentucky Transportation Cabinet (KYTC) staff for projects wherein the Federal Highway Administration (FHWA) is the lead agency as specified in a programmatic agreement among the FHWA, KYTC, the State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) regarding implementing Section 106 of the National Historic Preservation Act (NHRP) for federally funded road projects in the Commonwealth of Kentucky (Section 106 PA) (see link below).

http://transportation.ky.gov/Environmental-Analysis/Pages/Guidance-and-Forms.aspx

The form documents the findings of historic architectural studies conducted by KYTC staff during project development. It was developed to document consideration of historic architectural properties for most "small-scale" projects as defined in the Section 106 PA and further discussed in the *Handbook for Implementing Section 106 of the National Historic Preservation Act* (Handbook)(see link above). In some instances, with the approval of the SHPO, the Section 106 PA allows the form to be used for large-scale projects having low potential to impact historic properties.

Local public agencies (LPAs) and prequalified environmental consultants shall not use the form for documenting historic architectural assessment and shall use other document types (historic architectural overviews, historic architectural survey) as appropriate to address historic architectural concerns.

The schedule for completion of the documentation shall be determined through consultation among project team members. Regardless of whether the form is being completed by the district environmental coordinator (DEC) or Division of Environmental Analysis subject matter experts (DEA SMEs), schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the environmental project manager (EPM), DEC, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OVERVIEW (CONT.) For large-scale projects, historic architectural survey reporting shall follow the SHPO *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*).

OBJECTIVES The form documents the project area of potential effect (APE) and any historic architectural properties (buildings, structures, districts, or objects) within the APE. When historic architectural properties are identified, it shall include eligibility and effects determinations. The form shall appropriately document the conclusion of the Section 106 process, or identify the need for further study or action.

TRIGGER Historic architectural investigations shall be completed and documented using the form during the project development process for small-scale (as defined in the Section 106 PA), FHWA-funded projects that are being investigated internally by KYTC staff (DECs and architectural historians). Investigations shall be initiated when plans are sufficiently developed to understand the project APE. The form shall only be used for FHWA-funded projects and is not appropriate for addressing state-funded projects with other federal involvement. Those projects shall be addressed following SHPO *Specifications* or other agreed-upon means.

METHODS The form's instructions direct the investigator to seek additional information or document the findings. If the project has the potential to affect historic properties, the form offers guidance on selecting the appropriate APE. The DEC, EPM, or DEA SME shall use the form to document the absence or presence of historic properties. When historic properties are identified within the APE, an historic architectural SME shall complete the form. The investigation may require consulting a variety of data sources and may require a field visit to identify and document potential historic properties.

FORMAT The form specifies the appropriate supporting documentation, such as mapping, tables, photographs, and other exhibits that shall be attached for easy reference and review.

SUBMITTAL The form contains submittal instructions depending on the level of analysis needed to reach a conclusion. The signature block includes a "cc" list to direct document distribution.



Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Historic Architectural Survey

OVERVIEW

Historic architectural surveys are performed to identify historic architectural sites (districts, sites, buildings, structures, and objects) that may be eligible for the National Register of Historic Places (NRHP) and that may be affected by projects that utilize federal funding or that require federal permits. Historic architectural surveys consist of a combination of records, research and field investigation of the area of potential effect (APE), identification of historic properties present within the APE, and a determination of the direct and indirect effects of the project on these resources.

The Kentucky State Historic Preservation Office's (SHPO's) *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports* (SHPO *Specifications*) provides guidelines and specifications for the completion of historic architectural surveys. The lead federal agency shall evaluate the project's effects on sites that may lie within the APE and shall consult with SHPO regarding its findings. When adverse effects exist, consultation with the Advisory Council on Historic Properties (ACHP) is also required. The Kentucky Transportation Cabinet (KYTC) develops the report of the historic architectural survey to provide the federal agency with the information needed to reach their conclusions and properly consult with SHPO. On Federal Highway Administration (FHWA) projects, a protocol has been established with KYTC for document review. When FHWA is not the lead federal agency, the review shall be coordinated in accordance with the lead agency's process.

Investigations are carried out by qualified professionals who meet the Secretary of the Interior's and the SHPO's minimum standards and who are prequalified for work by both the SHPO and KYTC. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among project team members.

OVERVIEW (CONT.) Regardless of whether activities are being completed by the Division of Environmental Analysis (DEA) subject matter expert (SME) or consultants, schedules for deliverables shall be clearly established among parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and the SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES Historic architectural surveys are designed to locate any historic architectural resources within the APE, provide a description of these resources, and, when possible, make recommendations concerning NRHP eligibility. When historic architectural sites are identified, the survey shall document the site's boundaries, age, condition, and significance. This information shall be used to assess the impacts of study alternatives.

The historic architectural survey shall serve as proper documentation when the historic architectural checklist is not appropriate for documenting historic architectural sites. The results of the historic architectural survey shall be used to guide project decisions and may also form the basis for identifying appropriate mitigation measures if impacts to historic resources are unavoidable.

TRIGGER An historic architectural survey is triggered by any of the following:

- Historic architectural overview or checklist processes indicate the need for survey.
- A NEPA document is developed during alternative analysis.
- A United States Army Corps of Engineers 404 Permit is developed.
- A project encroaches upon federal land.
- The project team requests a survey because potential effects to historic properties are anticipated.

METHODS Historic architectural surveys include archival research supplemented by field investigations to reach conclusions regarding the presence or absence of significant historic architectural resources within the APE. Appropriate methods for conducting historic architectural surveys are detailed in SHPO *Specifications*. These specifications shall be followed unless alternative methods are agreed upon in advance by KYTC, SHPO, and the lead federal agency.

METHODS (CONT.)

Depending upon the size and scope of the project, the APE is determined by viewshed and topography. The final APE shall be expanded to include entire historic properties that lie partially within the preliminary APE. Consultation with the SHPO on the APE is required for all projects having federal involvement. Complex or controversial projects may benefit from consultation with SHPO and other consulting parties on additional matters prior to beginning fieldwork.

An historic architectural survey shall be initiated by reviewing previously surveyed sites in the APE on file at the Kentucky Heritage Council (KHC). Research shall identify all previously surveyed historic sites within the APE utilizing KHC *Kentucky Individual Building Survey Forms* (KHC survey form), reports, and associated maps on file at KHC. Other sources include county atlases, early twentieth-century 15 minute topographic maps, county highway maps, which may be accessed at:

http://transportation.ky.gov/planning/pages/historical-maps.aspx

http://maps.kytc.ky.gov/ProjectArchives

Field survey shall examine and document all buildings, structures, districts, and objects within the APE that are 50 years old or older. Documentation shall follow SHPO *Specifications* and include a KHC survey form for each site. KHC survey forms for previously recorded sites shall be updated, especially if the forms are more than 5 years old.

All historic resources identified during preliminary investigations and fieldwork shall be evaluated for NRHP eligibility. Sites listed in or previously determined to be eligible for the NRHP shall be reevaluated to determine if the original assessment remains accurate. Unless approved by the DEA SME and the SHPO prior to the completion of the historic architectural survey, resources shall not be evaluated under criterion D. (This criterion is for resources that have yielded, or may be likely to yield, information important to history or prehistory and is commonly applied to archaeological resources and only rarely to above-ground resources).

For each historic architectural resource recommended as eligible, the project effects shall be described. Project effects to historic properties shall be determined using the terminology of “no historic properties affected,” “no adverse effect,” and “adverse effect.” If “adverse effects” are described, mitigation measures shall not be discussed in the report. KYTC shall consult with the lead federal agency, the SHPO, and other consulting parties to develop appropriate mitigation measures.

METHODS (CONT.) Historic cemeteries over 50 years of age within the APE shall be documented and evaluated in accordance with NHRP evaluation criteria. If documented during the historic architectural survey, a KHC site number shall be obtained and a KHC survey form completed. In instances where a cemetery is associated with a historic complex (such as a farmstead or church), it may be appropriate to document the cemetery as a contributing element of that complex. It is often appropriate to document cemeteries in both the historic architectural survey and the phase I intensive survey (see **EA-906**).

REPORT FORMAT Historic architectural survey reporting shall follow requirements contained in the SHPO *Specifications*. The TC 58-41 form, *Historical Resources Guidance and Accountability Form* (Historical Resources GAF) (**Exhibit 9013**), shall be followed to ensure document completeness.

INTERIM ELIGIBILITY REPORT

An interim eligibility report may be used to reach better project decisions on complex projects where many historic architectural properties are anticipated. All potentially eligible historic architectural resources shall be identified and concurrence on their boundaries obtained before development of alternatives.

Before initiating an interim eligibility report, the project team, lead federal agency, SHPO, and DEA shall understand the schedule implications and be in agreement that the project is a good candidate for this approach.

This approach follows the process of an historic architectural survey. Because the study takes place prior to detailed alternative design, the report shall not include descriptions of project alternatives or effect determinations. All other elements required by SHPO *Specifications* and the Historical Resources GAF shall be included. A generalized APE shall be delineated based on preliminary corridors or a study area established for the project.

After alternatives have been developed, the effects of project alternatives on sites identified in the interim eligibility report shall be evaluated and detailed in a full historic architectural survey. This final report shall tabulate the previously concurred-upon eligibility determinations and include SHPO and FHWA concurrence letters.

SUBMITTAL FOR FINAL REVIEW Unless otherwise specified during project scoping, the lead investigator shall submit copies for final review as follows:

SUBMITTAL FOR FINAL REVIEW (CONT.)

- The Historical Resources GAF and four hard copies and one electronic copy of the historic architectural survey for KYTC Central Office use
- One hard copy of the historic architectural survey for the district office

Additional copies may be required for review by consulting parties.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments.

The DEA SME shall schedule document review and comment with SHPO and the lead federal agency.

FHWA JOINT REVIEW

Specific review protocols have been established for processing historic architectural survey reports if FHWA is the lead federal agency. FHWA shall be involved in review when the report documents a finding of "adverse effect," or when the Section 4(f) *de minimis* rule applies (see **EA-912**). On projects not having an adverse effect or where the *de minimis* rule does not apply, KYTC shall coordinate directly with the SHPO. FHWA involvement is not required unless there is a dispute. If the SHPO does not agree with KYTC's determination of no effect or no adverse effect, the DEA SME shall contact FHWA immediately to resolve the disagreement. For all federally funded projects, FHWA shall be copied on all correspondence between KYTC and SHPO.

The schedule outlined herein is considered standard for routine reports. The DEA SME shall work with the EPM and DEC to understand project schedule and urgency. Schedules shall be accelerated or relaxed based on the complexity of the project or report and the urgency of the review to the critical path of the project. In all cases, the schedule and progress of the review shall be clearly communicated to the project manager by copy of review correspondence. In this review discussion, "days" refers to calendar days.

The DEA SME shall log the report and, using the Historical Resources GAF, check for completeness. The report shall be reviewed for compliance with SHPO specifications and evaluated as to whether the findings are supported by the documentation contained in the report. If there are deficiencies in the report, it shall be returned to the consultant within fifteen days of receipt with a deficiency letter and completed Historical Resources GAF identifying errors within the report. The consultant shall revise the report and resubmit it within 15 days.

FHWA JOINT REVIEW (CONT.)

Within 15 days of receipt of an acceptable report where the finding is "no historic properties affected" or "no adverse effect," and there is no Section 4(f) use, the DEA SME shall transmit the report to SHPO. A transmittal letter summarizing the eligibility and effects status for each site, by Kentucky's historic survey site number, shall serve as the formal coordination request. The transmittal letter shall state whether KYTC concurs with the findings contained in the report.

It is essential that SHPO receive a formal statement of findings and concurrence to comply with Section 106 requirements.

Within 15 days of receipt of the report, if necessary, a KYTC and SHPO meeting or site visit shall be scheduled, at either party's request, to resolve questions that may arise during review. If the additional coordination shall result in changes to the review schedule, the DEA SME shall notify the project team. By agreement, SHPO findings shall be issued within 15 days of receipt of the report, thus completing consultation within 30 days of document receipt by KYTC.

Where the finding is "no adverse effect" and there is a *de minimis* Section 4(f) use of an historic property, the DEA SME shall notify FHWA so that a Section 4(f) *de minimis* finding may be processed (see **EA-912**). FHWA shall coordinate the Section 106 findings with SHPO and notify them of their intent to make a *de minimis* finding.

For reports where the finding is "adverse effect," the DEA SME shall schedule a meeting with FHWA to discuss possible avoidance and minimization measures. The DEA SME shall coordinate with the EPM and DEC to assure that the appropriate project team members are invited to attend the meeting. If the project is modified in a way that changes the finding to "no historic properties affected" or "no adverse effect," the report shall be coordinated according to those findings. The transmittal letter to SHPO shall document the project modifications identified at the meeting and demonstrate how they alter the effect finding.

If the meeting between KYTC and FHWA does not result in modifications to the project that eliminate all findings of "adverse effect," and within thirty days of receipt of the report, the DEA SME shall transmit a letter to FHWA summarizing the report findings. The transmittal letter shall state whether KYTC concurs with the findings contained in the report and request that FHWA initiate consultation with SHPO. If necessary, a meeting between KYTC, FWHA, and SHPO, or a site visit, shall be scheduled within 15 days of receipt of the report, at any party's request, to resolve questions that may arise during review.

FHWA JOINT REVIEW (CONT.)

If the additional coordination will result in changes to the review schedule, the project team shall be notified by the DEA SME. SHPO findings shall be issued within 30 days of receipt of the report, thus completing consultation within 60 days of document receipt by KYTC.

For projects where FHWA is not the lead federal agency, report review shall follow the process established by the lead federal agency. The DEA SME shall be responsible for coordinating the review.

DISPUTES

If SHPO or another consulting party does not concur with KYTC or lead federal agency findings and these differences cannot be resolved, the processes outlined in **EA-903** shall be followed.

DISTRIBUTION OF FINAL DOCUMENT

After final document approval, unless otherwise specified during project scoping, the lead investigator shall distribute as follows:

- Four hard copies of the Historical Resources GAF and one electronic copy of the historic architectural survey to DEA
- One hard copy of the historic architectural survey to the district office

DEA shall provide one hard copy of the historic architectural survey for SHPO, and one hard copy of the historic architectural survey for the lead federal agency.

The DEA SME shall forward the completed Historical Resources GAF to the district for signature, identifying any outstanding project commitments.

The DEC shall coordinate results and commitments with the project team prior to returning the signed Historical Resources GAF to DEA.

The DEA SME shall distribute SHPO and lead federal agency findings correspondence to the project manager, EPM, DEC, and consultants.

TERM

Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that were not surveyed previously. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations (see **EA-410**).



Chapter

CULTURAL RESOURCE ASSESSMENT

Subject

Section 4(f) Documents

OVERVIEW

Section 4(f) of the U.S. Department of Transportation (DOT) Act identifies certain property types for protection. It applies to all agencies within the DOT, but does not apply to other federal actions (such as Section 404 permitting). Section 4(f) prohibits any "use" of protected properties if there is a prudent and feasible alternative to that "use." Among the protected property types are historic properties, as defined by their eligibility for inclusion in the National Register of Historic Places (NRHP). The socioeconomic chapter (**EA-700**) provides a more complete discussion of Section 4(f). The following information focuses on the relationship between Section 106 of the National Historic Preservation Act and Section 4(f).

Because of the close relationship between Sections 106 and 4(f), evaluations are performed by individuals who meet the Secretary of the Interior's standards and who are prequalified for work by both the Kentucky State Historic Preservation Office (SHPO) and Kentucky Transportation Cabinet (KYTC). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant.

The schedule for completion of the documentation shall be determined through consultation among project team members. Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

COMPARING SECTION 4(f) TO SECTION 106

Section 4(f) stipulates that a cultural resource must be considered significant to be afforded protection. Section 106 defines a process for determining whether a cultural resource is significant. Therefore, Section 106 is an integral part of Section 4(f) when cultural resources are involved.

Sections 106 and 4(f) are similar in that they both mandate consideration of cultural resources in the planning of a federal undertaking. However, the two statutes have some key differences.

One key distinction is this: whereas Section 106 requires that consideration be given to the effects a project has on cultural resources, Section 4(f) requires that a special effort be made to avoid the "use" of cultural resources. Under Section 4(f), the DOT shall include all possible planning to minimize harm to historic sites (and other resources types) resulting from "use" of the resources by the project. Section 4(f), supported by stronger case law, is viewed as a more powerful statute than Section 106.

Other differences include:

- Section 4(f) applies only to programs and policies undertaken by agencies of the DOT, while Section 106 applies to programs and policies of any federal agency.

- Section 4(f) applies to the actual "use" or occupancy of a historic site, while Section 106 involves an assessment of adverse effects of an action on historic properties. There is no direct correlation between "use" in the Section 4(f) context and "effect" in the Section 106 context.

- The Section 106 process is integral to the Section 4(f) process when cultural resources are involved. The Section 4(f) process is not integral to the Section 106 process.

- The Section 4(f) process applies a more stringent analysis with respect to totally avoiding cultural resources than does the Section 106 process.

COMPARING SECTION 4(f) TO SECTION 106 (CONT.)

Section 4(f) does not protect archaeological resources. They are most often eligible for the information that they contain which can be addressed through data recovery (see **EA-908**). Section 4(f) shall apply to archaeological resources only when it is determined that they are "worthy of preservation in place."

OBJECTIVE

In the context of Section 106, Section 4(f) evaluation identifies and addresses any "use" of historic properties by a project.

TRIGGER

Section 4(f) evaluation is triggered when sites listed in or eligible for inclusion in the NRHP may be impacted by a DOT project.

METHODS

Because of the variety of processing options and sometimes subtle nuances in applying Section 4(f), this discussion does not attempt to detail all of the considerations for addressing Section 4(f). The socioeconomic chapter (**EA-706**) contains further guidance. FHWA offers extensive guidance, as does the Department of Interior and American Association of State Highway Transportation Officials.

For historic resources, Section 4(f) evaluation shall follow Section 106 findings. When the Section 106 finding is "no historic properties affected," the Section 4(f) evaluation shall result in a finding of "no use."

When Section 106 consultation results in a finding of "no adverse effect," and when there is a "use" of the historic resource (such as a minor acquisition), the *de minimis* rule applies. The SHPO (and the Advisory Council on Historic Preservation [ACHP], if participating in consultation) shall concur with the FHWA or other DOT agency's finding of "no adverse effect," and shall be informed in writing that the finding shall be the basis for making a *de minimis* impact determination.

When considering the use of programmatic evaluations for projects with minor impacts on historic sites or for projects causing a "net benefit" to Section 4(f) properties, consideration shall be given to the possibility of making a *de minimis* impact determination. If impacts are small enough to qualify for programmatic evaluation, it is likely that a *de minimis* impact determination can be made. The *de minimis* impact determination requires less documentation because it does not involve an analysis of avoidance alternatives and does not require a finding that there are no feasible and prudent alternatives.

For projects that will result in a Section 4(f) "use" of a historic bridge, avoidance alternatives shall be evaluated. When there is no feasible and prudent alternative to the "use" of the resource, the programmatic evaluation can be applied.

METHODS (CONT.) Except when a programmatic evaluation is used to address either the "use" of a historic bridge or a net benefit to a Section 4(f) resource, a finding of "adverse effect" shall be processed using an individual section 4(f) evaluation. The socioeconomic chapter (**EA-706**) discusses the individual section 4(f) evaluation.

DOCUMENTING COMPLIANCE Ways to document compliance with Section 4(f) include:

- Finding of No "Use"

  This is often straightforward and requires little documentation. In some cases more detailed analysis and documentation shall be required.

- *De Minimis* Impact Determination

  This is not an exemption from Section 4(f); it is an authorization for a minor "use" of a Section 4(f) property that does not require a finding of no prudent and feasible alternatives. This determination is not allowed when there is a 4(f) constructive "use."

- Programmatic Evaluation

  FHWA has issued five programmatic evaluations, three of which may apply to projects affecting historic properties. A programmatic evaluation can be applied to an individual project without some of the process steps required for an individual Section 4(f) evaluation. Therefore, the Section 4(f) approval can be granted more quickly. Programmatic evaluations have been issued for projects that "use" historic bridges, for projects with minor impacts on historic sites, and for projects causing a "net benefit" to a Section 4(f) property.

- Individual Section 4(f) Evaluation

  An individual Section 4(f) evaluation authorizes the "use" of one or more Section 4(f) properties. It requires legal sufficiency review by the agency's legal counsel, and generally is included as a separate chapter or appendix in the project's NEPA document. It shall include two findings that:

  1. There is no feasible and prudent alternative that completely avoids the "use" of Section 4(f) property
  2. The project includes all possible planning to minimize harm to the Section 4(f) property

REPORT FORMAT Section 4(f) documentation varies, depending upon the project findings. A finding of no "use" shall be supported in the Section 4(f) discussion contained within the project environmental document.

REPORT FORMAT (CONT.)

De minimis findings for historic properties shall be documented by written concurrence between FHWA or other DOT agency and SHPO and shall also be discussed in the environmental document.

KYTC and FHWA have developed the TC 58-57 form, *Programmatic 4(f) for Historic Bridges* (**Exhibit 9025**), to address projects that "use" a historic bridge. This programmatic evaluation checklist shall be completed by the DEA SME, signed by FHWA, and included in an appendix to the environmental document. This checklist, along with the memorandum of agreement (MOA) addressing impacts to the bridge, shall be coordinated with FHWA.

Individual Section 4(f) evaluations shall follow the format detailed in the socioeconomic chapter (**EA-706**).

SUBMITTAL

Section 4(f) findings shall be submitted as part of the final environmental document, with supporting documentation included in an appendix (such as the *de minimis* coordination letter [**Exhibit 9029**]). Programmatic evaluations and the Section 106 MOA for the project shall be included.

Individual 4(f) documentation shall be included either as a separate chapter or as an appendix of the project environmental document and shall follow the submittal process outlined in the socioeconomic chapter (**EA-706**).

DISTRIBUTION

Section 4(f) documentation shall be distributed as part of the project environmental document.

VALIDITY

Section 4(f) findings shall be valid unless the scope of the project changes. If scope changes result in additional or reduced Section 106 impacts, the project shall be evaluated to determine whether Section 4(f) findings must be updated.



Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Governing Documents & Requirements

GOVERNING DOCUMENTS

The following codes, regulations, statutes, and guidance documents shall govern all work performance for the Kentucky Transportation Cabinet (KYTC) pertaining to underground storage tanks (UST) and hazardous materials (HazMat), as well as other wastes subject to regulation including:

- Resource Conservation and Recovery Act 40 CFR 260-299 (RCRA)
- Comprehensive Environmental Response, Compensation, and Liability Act 40 CFR 312 (CERCLA)
- Underground Storage Tank Regulations 40 CFR 280, 401 KAR 42
- Kentucky Waste and Underground Storage Facilities Regulations KRS 224.40-60
- Reportable Quantities & Release Notification KRS 224.01-400
- Kentucky Laboratory Certification 401 KAR 42:340
- National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 61 (Asbestos)
- Kentucky Division of Air Quality Regulations for Asbestos 401 KAR 58
- Jefferson County Air Pollution Board (in Jefferson County)
- Superfund Amendments and Reauthorizations Act (SARA) Title III 42 USC 116 (a.k.a. Community Right to Know Act)
- Toxic Substances Control Act (TSCA) 40 CFR 700-766
- Occupational Safety & Health Administration (OSHA) 29 CFR, 803 KAR 2
- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Practice E-1527)

GOVERNING DOCUMENTS (CONT.)

- Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (ASTM Practice E-1903)

- Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (ASTM Practice E-2247)

- KYTC *Categorical Exclusion Evaluations User's Manual* (CE Manual)

- TC 58-44 form, *UST/HazMat - Guidance and Accountability Form* (**Exhibit 9024**) for Phase I, Phase II, and Phase III documents



Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Introduction

INTRODUCTION

UST and hazardous materials impact assessments are undertaken to identify instances when underground storage tanks (USTs) or hazardous materials (HazMat) may be encountered during project construction and to develop a plan to address those potential impacts. The assessment process is specialized and is performed by Kentucky Transportation Cabinet (KYTC) subject matter experts (SMEs) or by prequalified consultants. Local public agencies (LPAs) may not have the expertise on staff and shall utilize prequalified consultants when performing this type of work. If these materials are encountered, they shall be addressed, regardless of the funding source for the project (see **EA-1006**).

KYTC may assume liability and responsibility for cleanup if it becomes necessary to acquire contaminated property, which may lead to exorbitant costs or project delays. It is imperative that the project team take adequate measures to identify and avoid, when possible, HazMat and UST sites before the initiation of final design and plan preparation.

Regulated materials, wastes, or contaminants commonly encountered during transportation projects include soil and water contaminated by petroleum products, commercial and industrial solvents, heavy metals, poly-chlorinated bi-phenols (PCBs), and pesticides. Sources of these environmental concerns may be USTs, above-ground storage tanks, waste storage areas, and certain commercial and industrial process locations.

Materials may be subject to specific regulation or to overlapping regulations. Each material, waste, or contaminant has action levels associated with the current and proposed land uses, tied to toxicity and risk for human exposure. There is also a requirement to evaluate structures (buildings and highway structures) for asbestos-containing materials (ACM) during the right-of-way acquisition phase of projects.

INTRODUCTION (CONT.)

The investigation process is iterative, utilizing records research and field reconnaissance early in the process, followed by more detailed studies as necessary to define areas of concern, and finally to remediate regulated materials that cannot be avoided. Following standard industry practices, these levels are classified as:

- Overviews (**EA-1003**)
- Phase I environmental assessments (**EA-1004**)
- Phase II environmental assessments (**EA-1005**)
- Phase III environmental corrective actions (**EA-1006**)

An inspection for ACM is conducted when residential or commercial buildings or KYTC-owned or -managed facilities are to be modified or demolished, when bridges or culverts are being impacted by projects, or when suspected ACM are encountered during construction. **EA-1005** and **EA-1006** discuss ACM inspection and abatement.

All projects shall anticipate and include plans to address regulated materials, wastes, and contaminants that are discovered late in the project, up to and throughout construction.

DOCUMENT TYPES

Depending upon the project scope, the investigation process shall result in one or more of the following project documents:

- Environmental site assessment overview
- Phase I environmental site assessment
- Phase II environmental site assessment
- Phase III environmental corrective action
- Corrective action plan (CAP)
- ACM inspection report
- Asbestos abatement report

Each of these document types is discussed in more detail in subsequent chapters. The phase I environmental site assessment shall be considered acceptable as the baseline study for UST/HazMat for incorporation into NEPA documents.





Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Environmental Site Assessment Overview

OVERVIEW

UST/HazMat investigations are conducted in the early stages of project planning and development. An environmental site assessment (ESA) overview may be all that is necessary to identify UST/HazMat concerns for environmental overview and categorical exclusion (CE) projects below CE Level 3 (see *Categorical Exclusion Evaluations User's Manual*, **EA-403**, and **EA-404**). ESA overviews are not considered adequate to be used as base studies for CE Level 3, environmental assessment/finding of no significant impact (EA/FONSI), or environmental impact statement/record of decision (EIS/ROD) documents. These require the development of a phase I ESA (see **EA-1004**).

Some project types have low potential for encountering regulated material. In most cases, projects that are processed as a CE for minor projects (CEMP) take place on existing right of way and do not typically require an ESA overview to address UST/HazMat concerns.

Local public agencies (LPAs) may not have specialized environmental staff to complete this level of evaluation and shall engage the services of a prequalified environmental consultant.

The schedule for completion of the documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the district environmental coordinator (DEC), DEA subject matter experts (SMEs), or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the environmental project manager (EPM), DEC, and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The ESA overview determines whether known or potentially contaminated sites exist along the project corridor. The results of the ESA overview will determine if a phase I ESA (see **EA-1004**) is needed.

TRIGGER

The ESA overview is conducted during project planning or early in the project development process and can be triggered by any of the following:

TRIGGER (CONT.)

- Request from project team
- Request from DEA environmental project management staff
- Request from other KYTC offices
- Request for CE documentation

METHODS

Overview-level documentation varies depending upon the trigger for the ESA overview. Planning-level projects often cover a large area and typically will not include record checks on individual properties; however, there are recognized data sources such as, EPA website, Division of Waste Management, or commercial databases that may be consulted to identify known regulated sites, property types, and areas of concern. These data sources may not provide meaningful information for lower-level CE projects (CEMP, CE L1, and CE L2) where the range of alternatives is limited geographically. The DEC, DEA SME, or a prequalified consultant shall visit the project and make a determination, based upon site conditions, surrounding areas, and site history, as to whether there are known or potential hazardous material sites present. EPA's *Managing Your Hazardous Waste: A Guide for Small Businesses* provides a list of land uses typically associated with UST/HazMat. It can be accessed at:

http://www.epa.gov/osw/hazard/generation/sqg/handbook/k01005.pdf

If further investigations are warranted, the project team shall recommend initiation of a phase I ESA.

FORMAT

Depending upon the trigger initiating the ESA overview, the CE checklist shall be completed, the findings shall be summarized in a memorandum, or incorporated into a project environmental overview (EO). In all cases, supporting documentation (such as mapping, tables, photographs, and other exhibits) shall be attached or incorporated as appropriate for easy reference and review. There is no guidance and accountability form (GAF) for ESA overviews.

SUBMITTAL

Submittals and reviews for CEs and EOs will follow the guidelines established for those document types (see **EA-403** and **EA-404**). ESA overviews that are not incorporated into a CE or EO shall be submitted to the project team in memorandum format to assist in decision making and to provide a record of the investigations. At the discretion of the project manager and project team, memorandum format documents may be reviewed by DEA SMEs. There is no expectation for regulatory agency review of these document types.



Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Phase I Environmental Site Assessment (ESA)

OVERVIEW

A phase I environmental site assessment (ESA) is conducted in the early stages of project development when there is some concern that known or potentially regulated materials may be encountered by the project. A recommendation to pursue phase I investigations may result from an ESA overview or may be based upon known site conditions, surrounding areas, and site history.

If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the Division of Environmental Analysis subject matter experts (DEA SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The initial phase I ESA determines the actual or potential presence of recognized environmental concerns (REC) including:

- Underground storage tanks
- Aboveground storage tanks
- Hazardous wastes or materials
- Solid and special wastes
- Areas of potential hazardous waste concern

OBJECTIVES (CONT.) The phase I ESA is the appropriate base study for the purposes of documenting environmental conditions for alternative analysis in NEPA documents for projects processed as CE Level 3 and above. The results of the phase I investigation are also used to determine the need for a phase II ESA (see **EA-1005**). There are separate processes appropriate for smaller-scale projects processed as CE Level 2 and below (see **EA-1003**).

TRIGGER The phase I ESA is triggered by any of the following:

- Request from the project team
- Request from DEA EPM
- Request from other KYTC offices
- Request for categorical exclusion (CE) documentation
- Development of NEPA document

A request for a phase I ESA shall include:

- Project mapping identifying the study area
- Property owner names and addresses (if available)
- Parcel numbers (if known)
- Information on any suspected sites of concern

METHODS The phase I ESA relies on records research, field reconnaissance, and local interviews to evaluate environmental conditions and identify known and potentially regulated sites.

The DEA SME or consultant shall conduct a records search for facilities located within 1000 feet of proposed alternatives unless otherwise agreed during project scoping. A records search shall consult the files maintained by appropriate federal and state environmental agencies that contain information on:

- Facility registrations
- Waste streams
- Regulatory compliance
- Violations
- Remediation of sudden and non-sudden releases
- Closure reports

METHODS (CONT.)

The SME or consultant shall record:

- Site location (street address and KYTC parcel number if known) and the name and address of the property owner for each site identified through the records review as a known or potential UST or HazMat concern
- Identification number for each site that has registered waste management activity or registered USTs

Record research or on-site inspection may indicate the need for a land use or ownership history. For example, the design or the location of an existing structure may appear typical of businesses that handle petroleum or waste. This information can be found in:

- Property titles
- Business licenses
- Insurance records
- Government agency records
- Historic maps
- Aerial photographs
- Interviews with:
  - Local residents
  - Property owners
  - Local fire department
  - Local health department

The SME or consultant shall conduct an on-site inspection of the project area and document any:

- Suspect areas
- Stressed vegetation
- Soil discoloration
- Odors
- Discolored water
- Sheen on water surfaces
- Drums
- Open dumping
- Other indications of potential contamination, including but not limited to:
  - Aboveground storage tanks
  - Vent pipes
  - Pump islands

METHODS (CONT.)

For sites identified during field reconnaissance that were not identified during the original records search, the state and federal agency listings discussed above shall be reviewed.

REPORT FORMAT

The DEA SME or consultant shall prepare a written report that follows the format below. Discussion shall be clearly written and of sufficient detail to address the issues and concerns identified during project investigations. When possible, supporting documentation (mapping, photographs, tables, etc.) shall be appropriately placed within the body of the report to facilitate easy reference and review. The TC 58-44 form, *UST/HazMat Guidance and Accountability Form* (UST/HazMat GAF) (**Exhibit 9024**), shall be followed to ensure document completeness.

- Title page
  - Project
  - Location
  - Item number (if available)
  - Names of authors
- Executive summary
  - Main concerns identified
  - Number of sites
  - Findings
- Project description and setting
  - Purpose and need
  - Location and limits
  - Alternatives
  - Topography
  - Geology
  - Soils
  - Water quality
  - Land use
- Site investigations (that discuss the items below for each site)
  - Records review
  - Field reconnaissance
  - Terrain
  - Receiving or nearby waters
  - Karst areas
  - Current land use
  - Known waste activity (current or past)
  - Description of areas of concern (such as staining, stressed vegetation)
  - Inventory of chemical or hazardous materials on site
  - Past or present PCB electrical equipment

REPORT FORMAT (CONT.)

- Conclusions and recommendations
  - Identify sites excluded from further investigation and summarize why they were excluded.
  - Identify each site and area of concern recommended for phase II ESA, identify the suspected contaminant or problem, and discuss the evidence that supports the recommendation.
  - Specify recommendations for further investigation, such as geophysical survey, soil sampling, surface water and groundwater sampling, etc.

- Appendices
  - Maps and site plans (if unable to place within body of report)
  - Photographs (if unable to place within body of report)
  - Supporting documentation, such as:
    - Certificates of registration
    - Laboratory analysis
    - Deeds
    - Release reports
    - Closure letters
    - UST-related reports
    - Tank tightness tests

DRAFT SUBMITTAL

Unless otherwise specified during project scoping, the preparer shall submit one hard copy and one electronic copy of the draft phase I ESA along with the UST/Hazmat GAF to DEA and one hard copy of the draft ecological base study to the district office. The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. DEA shall manage the overall review of the phase I ESA and preparation and compiling of any comments, questions, or required modifications. When the study has been prepared by a consultant, upon completion of the draft review phase, the DEA SME shall generate a comment or acceptance letter to the consultant.

FINAL SUBMITTAL

After revision to address comments resulting from the review of the draft document, unless otherwise specified during project scoping, the preparer shall submit deliverables as follows:

- The updated UST/HazMat GAF and three hard copies and one electronic copy of the final phase I ESA to DEA
- One hard copy of the final phase I ESA to the district office

FINAL SUBMITTAL (CONT.)

The DEA SME shall establish the schedule for document review and comment following the same process as for draft phase I ESA review. Upon completion of the final review phase, the DEA SME shall generate an acceptance letter to the consultant who prepared the report.

TERM

Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that have not been previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations.





Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Phase II Environmental Site Assessment

OVERVIEW

A phase II environmental site assessment (ESA) is conducted after the completion of a final National Environmental Policy Act (NEPA) document, but prior to right-of-way acquisition, at sites where there is a likelihood that known or potentially regulated materials may be encountered by the project. A recommendation to pursue phase II investigations usually results from a phase I ESA, but can be based upon known site conditions, surrounding areas, or site history.

The Kentucky Transportation Cabinet (KYTC) and local public agencies (LPAs) may not have specialized environmental staff or equipment to complete this level of evaluation and shall engage the services of a prequalified environmental consultant. The scope and schedule for completion of the work and associated documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the Division of Environmental Analysis (DEA) subject matter experts (SMEs) or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The phase II ESA determines presence or absence and defines the location and extent of releases from:

- Underground storage tanks
- Aboveground storage tanks
- Hazardous wastes or materials
- Solid and special wastes

The results of the phase II investigation are used to determine the need for a phase III environmental corrective action (ECA) (see **EA-1006**) and to provide an estimated cost for the phase III action, if needed.

TRIGGER

The phase II ESA is triggered by any of the following:

- Phase I ESA noting recognized environmental concerns (RECs) that require more thorough study
- Suspect material discovered during the utility or construction phase of the project
- Request from the project team

A request for phase II ESA shall include:

- Current project plans identifying the study area
- Detailed plan and profile sheets
- Cross sections (if available)
- Property owner names and addresses (if available)
- Parcel numbers (if known)
- Any other pertinent information that is not documented in the phase I ESA or ESA overview

METHODS

The field approach for the phase II ESA shall comply with ASTM Practice E-1903. An approach and work plan shall be coordinated with and agreed to by the DEA SME. This work requires truck-mounted equipment to extract soil columns from each site being investigated. Because this activity can be disruptive to a property owner or business, a written right-of-entry agreement for each parcel accessed shall be in place prior to any phase II activities (see TC 71-14 form, *Consent and Release*). If the property owner does not grant access to KTYC or its agents, the matter may be referred to the KYTC Office of Legal Services. Site field work shall be conducted in a manner that does not hinder access to the property. After investigations are complete, the property shall be restored to its original contour and condition, unless otherwise directed in the right-of-entry agreement.

Underground utilities shall be marked for all activities having the potential to damage or interfere with utility operations. The *Before-U-Dig* program and any local utility companies not participating in the *Before-U-Dig* program shall be contacted a minimum of two working days before site activities commence.

METHODS (CONT.)

A direct-push drill rig shall suffice for the majority of phase II investigations and will limit the amount of waste generated from sampling activities. All waste shall be containerized and properly handled in accordance with local, state, and federal regulations. Waste is assumed to be nonhazardous unless information is available that indicates otherwise.

The sampling activities shall be conducted in a manner to sufficiently delineate potential contamination so its horizontal and vertical extent can be estimated. The estimated extent of the area of contamination is utilized to estimate the cost of and plan for phase III activities, if required. A Hazardous Waste Manifest (see 40 CFR 262) documenting possession of all samples and waste from collection to reception at the laboratory shall be maintained by the author.

REPORT FORMAT

The DEA SME or consultant shall prepare a written report that includes the following sections:

- Title page
  - Project
  - Location
  - Item number if available
  - Name of authors
- Executive summary
  - Main concerns identified
  - Number of sites
  - Findings
- Project description and setting
  - Purpose and need
  - Location and limits
  - Alternatives
  - Topography
  - Geology
  - Soils
  - Karst areas
  - Receiving or nearby waters
  - Land use
- Summary of work plan
  - Field methods
  - Laboratory procedures

REPORT FORMAT (CONT.)

- Site investigations that discuss the items below for each site:
  - Records review
  - Terrain
  - Current land use
  - Known waste activity (current or past)
  - Description of areas of concern (such as staining, stressed vegetation)
  - Inventory of chemical or hazardous materials on site
  - Past or present PCB electrical equipment
  - Relationship between REC and proposed right of way
  - Results of field investigations
- Conclusions and recommendations
  - Identify each site that was evaluated and is excluded from further investigation and explain the information discovered during the phase II investigation that supports the conclusion.
  - Identify each site and REC recommended for phase III ECA (sites found to have environmental conditions that could adversely impact the project).
  - Identify specific environmental conditions and the evidence discovered during the investigation that supports a recommendation for a Phase III ECA.
  - Estimate and quantify the vertical and horizontal extent of any contamination and the anticipated Phase III remediation cost.
  - Recommend specific approaches to remediate the sites.
  - State whether a formal corrective action plan for submittal to the Energy & Environment Cabinet's Division of Waste Management is recommended based upon the nature of contamination, complexity of site, and risk for public exposure to contaminants
- Appendices
  - Maps (if unable to place within body of report) showing topography and location of each site investigated
  - Site plans (if unable to place within body of report) showing the area of investigation and soil-boring locations, with laboratory and analytical data, and showing the estimated area of impacted soils and groundwater including cross sections to delineate the vertical limits
  - Photographs (if unable to place within body of report)

REPORT FORMAT (CONT.)

- Supporting documentation, such as:
  - Certificates of registration
  - Laboratory analysis
  - Deeds
  - Release reports
  - Closure letters
  - UST-related reports
  - Tank tightness tests
  - Hazardous waste manifest

DRAFT SUBMITTAL

Unless otherwise specified during project scoping, the preparer shall submit one hard copy and one electronic copy of the draft phase II ESA along with the TC 58-44 form, *UST/HazMat Guidance and Accountability Form* (UST/HazMat GAF) (**Exhibit 9024**), to DEA and one hard copy of the draft ecological base study to the district office. The DEA SME shall establish the schedule for document review and comment.

The DEC shall coordinate the review of the document with the project manager and other appropriate district personnel and shall submit any comments from the review to the DEA SME for inclusion with DEA comments. DEA shall manage the overall review of the phase II ESA and preparation and compiling of any comments, questions, or required modifications. When the study has been prepared by a consultant, upon completion of the draft review phase, the DEA SME shall generate a comment or acceptance letter to the consultant.

FINAL SUBMITTAL

After revision to address comments resulting from the review of the draft document, unless otherwise specified during project scoping, the preparer shall submit deliverables as follows:

- The updated UST/HazMat GAF and three hard copies and one electronic copy of the final phase II ESA to DEA
- One hard copy of the final phase II ESA to the district office

The DEA SME shall establish the schedule for document review and comment following the same process as for draft phase II ESA review. Upon completion of the final review phase, the DEA SME shall generate an acceptance letter to the consultant who prepared the report.

TERM

Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that have not been previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations.



Chapter

UST & HAZARDOUS MATERIALS IMPACT ASSESSMENT

Subject

Phase III Environmental Corrective Action

OVERVIEW

When a phase II environmental site assessment (ESA) identifies contaminants within the proposed project right of way, phase III environmental corrective action (ECA) may be required to remediate or remove recognized environmental conditions (RECs). Phase III ECA is conducted after right-of-way acquisition.

In rare cases, based upon the nature of contamination, complexity of site, and risk for public exposure to contaminants, the phase III ECA may be directed by a corrective action plan approved by the Kentucky Energy and Environment Cabinet's Division of Waste Management (DWM). The Division of Environment Analysis (DEA) subject matter expert (SME) shall determine whether to consult with DWM on the use of a corrective action plan. Once approved, a corrective action plan shall be executed in the same manner as a phase III ECA but may have a more detailed scope, and regulatory personnel shall be more involved in the process. At the discretion of the project team, a formal corrective action plan may be developed and coordinated with DWM prior to initiation of a phase III ECA, or its development may be included as a preliminary step of the phase III ECA (see "Scope of Work" section below).

KYTC and local public agencies (LPAs) may not have specialized environmental staff or equipment to complete this level of action and shall engage the services of a prequalified environmental consultant. The scope and schedule for completion of the work and associated documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the Environmental Analysis Tracking System (EATS) database.

OBJECTIVES

The phase III ECA remediates RECs that will be impacted by the proposed project. Remediation activities may include a combination of natural attenuation, on-site treatment, or removal and disposal of contaminated soils or groundwater.

The completion of the phase III remediation allows for ground-disturbing activities like utility relocation and construction to proceed without exposing workers or the public to potentially hazardous materials in the environment.

TRIGGER

Data collected during phase II activities indicating an REC that will be impacted by the proposed project trigger the phase III ECA. These environmental conditions include:

- Underground storage tanks
- Aboveground storage tanks
- Hazardous wastes or materials
- Solid and special wastes
- Areas of potential hazardous waste concern

To initiate a phase III ECA, the DEA SME or consultant shall obtain:

- Current project plans identifying the study area
- Detailed plan and profile sheets
- Cross sections (if available)
- Property owner names and addresses
- Parcel numbers (if known)
- Any other pertinent information on sites of concern that has not been previously documented

SCOPE OF WORK

Because environmental conditions shall be unique to each site, a scope of work or corrective action plan (if determined appropriate based on phase II ESA recommendations and coordination by DEA with DWM) shall be approved by the project team prior to the initiation of remediation activities. The scope of work or corrective action plan shall include the following:

SCOPE OF WORK (CONT.)

- A strategy to remediate the REC based on:
  - Previously obtained information
  - Available technology
  - Cost effectiveness

- A soil or groundwater remediation plan that:
  - Designates the target area, media, and constituents to be treated
  - Includes a detailed description of methodologies and technologies that will be utilized
  - Includes the rationale used to determine why the methods chosen are optimal for the site
  - Includes an estimated timeframe to achieve closure at the site
  - Includes an estimated cost
  - Includes transportation and disposal recommendations

- A sampling and monitoring plan that:
  - Details and describes the sampling, measuring, and testing to be conducted during and after the phase III ECA
  - Details the sample locations, collection methods, estimated sample count, collection procedures, preservation, and analysis
  - Demonstrates whether remediation goals have been met

    Note: This should involve soil sampling at the horizontal and vertical extents of soil cleanup or the placement of groundwater monitoring wells to periodically analyze groundwater to ensure that the remediation techniques were successful.

- A discussion of how the property will be restored after the fieldwork is completed

  Note: This shall detail what type of material will be used to backfill excavation pits, whether specific compaction techniques will be required, and include seeding, paving, or other surface treatment requirements.

METHODS

If a corrective action plan is required, it shall be coordinated and approved by DWM prior to initiating remediation activities.

Unless the parcel has been acquired for the project, a written right-of-entry agreement for each parcel accessed shall be in place before any Phase III ECA or corrective action plan field activities begin. If the property owner does not grant access to KTYC or its agents, the matter

shall be deferred to the KYTC Office of Legal Services.

METHODS (CONT.)

For parcels that have not been acquired for the project, work shall be conducted in a manner that does not hinder access to the property. After remediation is complete, the property shall be restored to its original contour and condition or to an appropriate condition specified by KYTC in a scope of work.

Underground utilities shall be marked for all activities having the potential to damage or interfere with utility operations. The *Before-U-Dig* program and any local utility companies not participating in the *Before-U-Dig* program shall be contacted a minimum of two working days before site activities commence.

The DEA SME or consultant shall:

- Conduct site remediation fieldwork following procedures detailed in the scope of work or corrective action plan, noting any deviations from the work plan
- Document site activities while in the field and include information such as:
  - Field observations
  - Amount of material removed from the site
  - Equipment and material usage
  - Post-fieldwork site improvements
  - Copies of manifests or similar material-tracking documents
  - Deviations from the approved scope of work due to field conditions
- Keep "Chain of Custody" forms documenting possession of all samples from collection to reception at the laboratory

REPORT FORMAT

The DEA SME or consultant shall prepare a written report that follows the format below. Where possible, mapping, photographs, tables, and other supporting documentation should be contained within the body of the report for easy reference and review.

- Title page
  - Project
  - Location
  - Item number (if available)
  - Name of authors
- Executive summary that identifies:
  - Each site remediated
  - Main concerns addressed
  - Remaining concerns

REPORT FORMAT (CONT.)

- Project description and setting
  - Purpose and need
  - Location and limits
  - Alternatives
  - Topography
  - Geology
  - Soils
  - Karst areas
  - Receiving or nearby waters
  - Land use

- Summary of work plan
  - Field methods
  - Laboratory procedures

- Site data that discusses the items below for each site:
  - Description of target area and limits of treated area
  - Description of chemical or hazardous materials on site
  - Relationship between REC and proposed right of way
  - Results of mitigation activities, including quantities
  - Sampling points and laboratory results
  - Description of any remaining areas of concern

- Conclusions and recommendations
  - Summarized data of the area that was addressed during field activities
  - Maps illustrating the target area and physical limits of the treated area
  - Data that indicate conditions and areas that still may be of concern
  - Possible anomalies or inconsistencies in the data
  - Any newly found concerns that were identified but not addressed during field activities
  - Recommendation for regulatory closure of site, if applicable

- Maps

- Site plans

- Photographs

REPORT FORMAT (CONT.)

- Supporting documentation such as:
  - Certificates of registration
  - Laboratory analysis
  - Deeds
  - Emergency release reports
  - Certified clean closure letters
  - UST closure reports or related reports
  - Tank tightness tests

SUBMITTALS

When the report is acceptable, the DEA SME shall coordinate the UST/HazMat GAF (TC 58-44 form) with the district office so that any project commitments can be captured and recorded in the "Communicating All Promises" (CAP) section of the Six Year Plan database by the project manager. The DEA SME shall send a letter and a copy of the completed UST/HazMat GAF to the preparer accepting the report and requesting final deliverables.

TERM

Findings within the document shall be considered valid unless the scope of the project changes, incorporating areas into the project that have not been previously surveyed. Reevaluation shall consider whether there are outstanding commitments to conduct further work and whether scope changes are sufficient to require additional investigations.





Chapter

WATER-RELATED PERMITS

Subject

Governing Documents & Requirements

GOVERNING DOCUMENTS

All work conducted pertaining to the Permitting Section of the Ecology and Permitting Branch of the Division of Environmental Analysis is governed by the following laws, statutes, regulations, executive orders, and directives:

- Federal Water Pollution Control Act [commonly referred to as the Clean Water Act (CWA)] of 1977 and 1987
- Safe Drinking Water Act of 1974, as amended (42 USC 300F-300J)
- Tennessee Valley Authority Act of 1933
- River and Harbors Act of 1899, Sections 9 and 10
- Fish and Wildlife Coordination Act of 1934, as amended (16 USC 661-667e)
- Endangered Species Act of 1973 (ESA), Section 7
- National Historic Preservation Act, Section 106
- Bald and Golden Eagle Protection Act of 1940
- Wild and Scenic Rivers Act of 1968
- Kentucky Wild Rivers Act of 1972 (KRS 146.200 to 146.360)
- USEPA Interim Regulations on Discharge of Dredged or Fill Material into Navigable Waters (40 CFR Part 230)
- Emergency Wetlands Resources Act of 1986 (16 USC 3901-3932)

GOVERNING DOCUMENTS (CONT.)

- Executive Order 11990 on Protection of Wetlands (1977)
- FHWA Mitigation of Impacts to Wetlands and Natural Habitat (23 CFR Part 777) (2000)
- Federal Guidance on the Use of the TEA-21 Preference for Mitigation Banking to fulfill Mitigation Requirements under Section 404 of the Clean Water Act (2003)
- National Wetlands Mitigation Action Plan (2002)
- Executive Order 13112 on Invasive Species (1999)
- Executive Order 11988 Floodplain Management (1977)
- Executive Order 13186 on Responsibilities of Federal Agencies to Protect Migratory Birds (2001)
- Various Kentucky regulations pertaining to water quality standards (401 KAR Chapter 5)





Chapter

WATER-RELATED PERMITS

Subject

Introduction

INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) is required to obtain appropriate permits or certifications for stream and wetland impacts, regardless of state or federal funding type. In accordance with Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Sections 401 and 404 of the Clean Water Act, these permits are required for impacts to the waters of the United States (lakes, rivers, streams, or wetlands) or for conducting an activity that discharges a pollutant into the waters of the United States. Such activities typically involve an obstruction or alteration by excavating, filling, or crossing any of the waters of the United States.

KYTC is also required to receive prior approval from the Tennessee Valley Authority (TVA) for activities that affect TVA waters.

This chapter is devoted to water-related permits or certifications; the decisions, responsibilities, and procedures followed by the subject matter experts (SMEs); and the resulting authorizations that are issued by the U.S. Army Corps of Engineers (USACE), Kentucky Division of Water (KDOW), and TVA.

For construction or modification of bridges across a navigable waterway requiring a Coast Guard Bridge Permit, see the KYTC *Structural Design Guidance Manual*, **SD-204**.

DOCUMENT TYPES

EA-1104 Nationwide Permits (Section 404) and Below Notification Requirements
EA-1105 Letter of Permission (Section 404)
EA-1106 Individual Permit (Section 404)
EA-1107 State Water Quality Certification (Section 401)
EA-1108 Kentucky Pollutant Discharge Elimination System (KPDES) General Permit and Individual Permit
EA-1109 TVA Permit



Chapter

WATER-RELATED PERMITS

Subject

Section 404 Introduction

INTRODUCTION

Section 404 of the Clean Water Act (the Act; 1977 33 USC 1344, 33 USC 1341) prohibits the discharge of dredged or fill materials into waters of the United States, except when authorized by a permit issued by the U.S. Army Corps of Engineers (USACE). Waters of the United States—also called jurisdictional waters—include wetlands, streams, lakes, and rivers, as well as oceans.

The USACE is assigned the lead role as the permitting agency, but the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), and state water quality agencies all have important roles as well. Under Section 404, EPA was charged with developing and issuing guidelines, and EPA retains veto authority over permits. USFWS is directed to submit comments on Section 404 permit applications within 90 days after receiving notice from the USACE. Finally, Section 401 of the Act requires applicants to obtain a certification from the state that a proposed project meets the state's water quality standards.

JURISDICTIONAL DETERMINATION

The USACE has permitting authority under the Rivers and Harbors Act as well as the Act. Section 404 of the Act gives the EPA permitting authority over the "waters of the United States" (waters of the U.S.) which is delegated to the USACE. The extent of the USACE's jurisdiction has been the subject of extensive litigation. The legal jurisdiction includes traditional navigable waters and their tributaries, as well as other aquatic resources with a "significant nexus" to those waters. Under this standard, wetlands are considered jurisdictional "if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of traditional navigable waters."

The USACE and the EPA have issued joint guidance clarifying standards and process for making jurisdictional determinations. However, there is also an allowance for applicants to request a "preliminary jurisdictional determination," which allows the applicant to concede jurisdiction and proceed with the permit application process, thereby avoiding the potentially time-consuming process of determining jurisdiction.

INDIVIDUAL VS. GENERAL PERMITS

The USACE issues two types of permits under Section 404: "individual permits" and "general permits." Individual permits are issued for specific projects. An individual permit can be issued as a standard permit or as a "letter of permission," which involves a more limited review for a project with minor impacts. General permits are issued for categories of projects that are presumed to have similar effects and not more than minimal impacts on the aquatic environment. General permits can be issued on a nationwide or regional basis.

As early in the project development process as practical, the Division of Environmental Analysis subject matter expert (DEA SME), with the help of the project team, shall assess the proposed alignment and identify any impacts to waters of the U.S. The magnitude of the project's impacts shall determine what applicable permit(s) will be required. It is imperative that the permitting process begins as early as is practical to avoid being on the critical path and delaying the project. This can be challenging, because grade and drain design shall need to be nearly complete to get accurate final measurements of the impact.

RESPONSIBILITIES

Permit applications are usually prepared by environmental consultants or by DEA SMEs. If local public agencies (LPAs) do not have specialized environmental staff to complete this level of evaluation, they shall engage the services of a prequalified environmental consultant. The schedule for completion of the application process shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and SME; and shall be routinely tracked in the appropriate database.

MITIGATION

Generally, mitigation shall be required when project impacts to perennial or intermittent streams: are greater than 300 linear feet; involve the filling of greater than 0.10 acre of waters of the U.S.; or require work causing more than minimal effects. Ultimately, mitigation requirements are dictated by the USACE and Kentucky Division of Water (KDOW) (see **EA-1110**).





Chapter

WATER-RELATED PERMITS

Subject

Section 404 Nationwide Permits & Below Notification Requirements

GENERAL

General permits have been issued by the U.S. Army Corps of Engineers (USACE) for categories of projects that are presumed to have similar effects and not more than minimal impacts to waters of the U.S. (defined as perennial, intermittent, ephemeral streams as well as wetlands). Each general permit includes general conditions that must be satisfied in order to qualify for permit coverage. General permits can be issued on a nationwide or regional basis. There are a number of nationwide permits (NWPs) that are commonly applied to Kentucky Transportation Cabinet (KYTC) projects. Perhaps the most common is the NWP 14 (Linear Transportation Projects). Other common NWPs used by KYTC include NWP 3 (Maintenance), NWP 13 (Bank Stabilization), and NWP 33 (Temporary Construction, Access and Dewatering).

Projects with minor impacts that fall below notification requirements (BNR) for a specific nationwide permit are authorized without the need to notify the USACE. KYTC has an internal process for documenting BNR determinations.

These permits require an assessment of stream and wetland resources that may be impacted by the project. These stream or wetland assessments are typically conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of assessment, they shall engage the services of a prequalified environmental consultant. The schedule for completion of any necessary documentation shall be determined through consultation among the project team members.

Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the appropriate KYTC database.

OBJECTIVE

In order for the KYTC project to proceed into the construction phase, it is necessary for all appropriate permits to be authorized. The objective of the NWP application or BNR determination is to demonstrate that USACE permit requirements have been met for projects that propose impacts to waters of the U.S.

TRIGGER

Projects with minor impacts that fall below notification requirements (BNR) for a specific nationwide permit are authorized without the need to notify the USACE. The notification thresholds for NWPs commonly used by KYTC are identified in the Table of Impact Limits (**Exhibit 9031**). A complete listing of NWPs is available at the USACE website, which is located at:

http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx

If there are multiple impacts, each below notification thresholds, they may, at the discretion of the USACE, be considered cumulatively to have an overall impact that exceeds notification thresholds. Whether cumulative impacts result in a project that exceeds notification thresholds is solely at the discretion of the USACE. If there is potential for cumulative impacts, consult with the DEA SME to determine whether to contact the USACE for guidance.

If the project exceeds the notification thresholds for a nationwide permit, a formal permit application to the USACE will be required.

METHODS

As early in the project development process as is practical, the DEA SME, with the help of the project team, shall assess the proposed alignment for any impacts to waters of the U.S. Waters of the U.S. are defined as wetlands and perennial, intermittent, and ephemeral streams. The project shall be reviewed, and any impacts to these water types shall be quantified. The magnitude of the project's impacts determines the permit(s) required. It is imperative that the permitting process begins as early as is practical to avoid being on the critical path and delaying the project.

The impacts falling under a BNR have been classified by the USACE as "non-reporting." KYTC addresses these projects by including notes in the project file and in the contract documents indicating that the project falls below notification thresholds. The following items shall be included in the BNR that will become part of the project contract document:

- Narrative summary of impacts
- General conditions for the applicable NWP

METHODS (CONT.)

The following items shall be retained in the project administrative record:

- Evidence of completion of Section 7 consultation (USFWS)
- Evidence of completion of Section 106 consultation (Kentucky Heritage Council)
- Other items as deemed necessary by the DEA SME

The NWP application includes more extensive documentation than what is usually prepared to document a BNR determination. Detailed project plans, along with USGS topographic maps, aerial photographs, and other mapping tools shall assist the preparer in identifying potential impacts to waters of the U.S. If necessary, on-site investigation and consultation with the USACE, the Kentucky Division of Water (KDOW), and other resource agency staff may be necessary to accurately assess impacts. The NWP application shall be prepared according to the KYTC-DEA Section 404 and 401 Permit Application Preparation Guidelines (**Exhibit 9032**).

The components for a NWP application, as well as the BNR documentation, may be gathered, obtained, compiled, or created by the DEA SME, district environmental coordinator, a member of the project team, or a prequalified environmental consultant. Typically, a NWP application is completed in-house by the DEA SME. However, unique circumstances may arise where the services of a consultant may be needed.

SUBMITTAL

The BNR is not submitted to the USACE. It is prepared in both electronic and paper formats, provided to the project team, and included in the administrative record for the project. The NWP application package shall be prepared in both electronic and paper formats. A paper copy shall be submitted to the appropriate USACE district office by the DEA SME. Kentucky is regulated under Section 404 by the Louisville District, Nashville District, Huntington District, and Memphis District Corps.

DISTRIBUTION

After the NWP is approved by the USACE, it is the DEA SME's responsibility to, at a minimum, notify the project team and copy KYTC Division of Construction Procurement. Distribution of the approved permit can be accomplished via several means:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

DISTRIBUTION (CONT.) In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

TERM Usually, NWPs are valid for two years. If authorized construction impacts to waters of the U.S. are not completed within two years, the DEA SME is responsible for requesting a permit renewal.

If the scope of a project is revised and impacts to waters of the U.S. are affected by the change (whether the impacts are increased or decreased), the DEA SME may submit a revised permit application as a result of the scope change(s) to the appropriate USACE district project manager.

The USACE reissues, revises, or updates NWPs every five years. BNRs are valid through the end of the five-year increment of the nationwide permit program. When reissuance takes place, the DEA SME shall confirm that the BNR determination is still appropriate and that the impacts proposed still qualify as “non-reporting.”





Chapter

WATER-RELATED PERMITS

Subject

Section 404 Letter of Permission

GENERAL

Impacts to waters of the U.S.—defined as perennial, intermittent, ephemeral streams as well as wetlands—require a permit from the U.S. Army Corps of Engineers (USACE). A Kentucky Transportation Cabinet (KYTC) project that exceeds maximum allowable linear or acreage impact thresholds of a nationwide permit shall require an individual permit. In 2007 (revised 2010) the USACE districts with Kentucky jurisdiction (Louisville, Huntington, Memphis, and Nashville Districts) issued a Letter of Permission (LOP) that streamlines the individual permitting process for transportation projects having minimal impacts to waters of the U.S. in the Commonwealth of Kentucky.

LOPs require an assessment of stream and wetland resources that may be impacted by the project. These stream or wetland assessments are typically conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of assessment, they shall engage the services of a prequalified environmental consultant. The schedule for completion of any necessary documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the appropriate KYTC database.

OBJECTIVE

In order for the KYTC project to proceed into the construction phase, it is necessary for all appropriate permits to be authorized. The LOP is the preferred expedited method for securing USACE authorization for projects that propose impacts to waters of the U.S. exceeding limits authorized under nationwide permits. The LOP authorizes temporary and permanent fills associated with the construction, expansion, modification, or improvement of public roadways or transportation projects in Kentucky.

TRIGGER

Many KYTC projects that exceed maximum linear or acreage impact thresholds of a nationwide permit may qualify for a streamlined authorization under the LOP. This permit processing option is available for all waters of the U.S. in Kentucky. The criteria for authorization under the LOP include:

- A single stream impact of 500 linear feet or greater
- A single stream or wetland impact of 0.50 acre or greater
- Cumulative impacts (as determined by the USACE project manager) to streams or wetlands exceeding 0.50 acres
- Maximum impact to waters of the U.S., including wetlands, not to exceed 7 acres
- Project is not controversial
- Project does not discharge dredged or fill material in the proximity of a public drinking water supply intake

METHOD

As early in the project development process as is practical, the DEA SME, with the help of the project team, shall assess the proposed alignment for any impacts to waters of the U.S. The project shall be reviewed and any impacts to these waters shall be identified. The magnitude of the project's impacts determines the permit(s) required. It is imperative that the permitting process commence as early as practical in order to avoid being on the critical path and delaying the project.

The LOP application process is initiated by submitting a Pre-Application Meeting Request Form to the USACE. This form can be located at:

http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/comp_mitig_analysis.pdf

Included with this form is any additional project-specific information necessary to introduce the KYTC project and proposed stream/wetland impacts to the USACE. Once a USACE project manager has been assigned, a pre-application meeting shall be scheduled. This meeting has historically served as the official LOP meeting and is usually combined with a site visit. In addition to the applicable USACE district, early coordination is also initiated with the U.S. Environmental Protection Agency, the Kentucky Department of Fish and Wildlife Resources, the Kentucky Division of Water, the U.S. Fish and Wildlife Service, and the Kentucky State Historic Preservation Officer. The DEA SME shall work with the USACE project manager to accomplish this coordination.

METHOD (CONT.)

Early coordination enables the project team to identify and respond to the concerns of the resource agencies and provides the opportunity to avoid and minimize impacts. It also provides the resource agencies an understanding of project constraints that result in unavoidable impacts to jurisdictional waters. Detailed guidance on the LOP process is contained in the Public Notice that was published in the Federal Register on October 28, 2010 (LRL-2006-259), and can be accessed at:

http://www.lrl.usace.army.mil/Missions/Regulatory/obtainaPermit.aspx

http://www.lrl.usace.army.mil/Portals/64/docs/regulatory/Permitting/LRl-2006-259.pdf

The LOP permit application shall be prepared according to the KYTC-DEA Section 404 and 401 Permit Application Preparation Guidelines (**Exhibit 9032**). Once all components of the LOP application package have been completed, KYTC submits the LOP application to the USACE. These components may be gathered, obtained, compiled, and/or created in combination by the DEA SME, district environmental coordinator, a member of the project team, and/or a prequalified environmental consultant.

SUBMITTAL

The LOP application shall be prepared in both electronic and paper formats. The DEA SME shall submit a paper copy to the appropriate USACE district office. The USACE project manager shall review the application. The DEA SME and project team shall be responsible for assisting the USACE in addressing any questions that arise during the review. In accordance with the LOP, the USACE shall review the complete application within 45 days. This includes a 21-day interagency review period.

MITIGATION

Generally, mitigation shall be required for impacts authorized under the LOP, as these projects will typically exceed mitigation thresholds defined as:

- Impacts to perennial or intermittent streams greater than 300 linear feet
- The filling of greater than 0.10 acre of waters of the U.S.
- Work causing more than minimal effects

Note: Ultimately, mitigation requirements are dictated by the USACE. For a more detailed discussion of mitigation options and procedures, see **EA-1110**.

DISTRIBUTION

Once the LOP is approved by the USACE, it is the DEA SME's responsibility to notify the project team and to ensure that the permit conditions are included in the project bid documents. Distribution of the approved permit can be accomplished via several means:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

TERM

An authorized LOP is usually valid for five years. If authorized construction impacts to waters of the U.S. are not completed within the permit term, the DEA SME shall request a permit renewal.

If the scope of a project is revised and impacts to waters of the U.S. are affected by the change, (whether the impacts are increased or decreased), the DEA SME may submit a revised LOP application as a result of the scope change(s) to the appropriate USACE district office.





Chapter

WATER-RELATED PERMITS

Subject

Section 404 Individual Permit

GENERAL

Impacts to waters of the U.S., defined as perennial, intermittent, or ephemeral streams, as well as wetlands, require a permit from the U. S. Army Corps of Engineers (USACE). A Kentucky Transportation Cabinet (KYTC) project that exceeds the linear or acreage maximum allowable impact thresholds of a Section 404 nationwide permit shall require an individual permit (IP). Many projects will qualify for a streamlined process and may be authorized under a Letter of Permission Permit (LOP). (For a full discussion of the LOP, see **EA-1105**.) If total project impacts to waters of the U.S. exceed seven acres, if the project may impact a drinking water supply, or if the USACE considers the project to be controversial, an IP must be used to authorize the project.

Individual permits require an assessment of stream and wetland resources that may be impacted by the project. These stream or wetland assessments are typically conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of assessment, they shall engage the services of a prequalified environmental consultant. The schedule for completion of any necessary documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the appropriate KYTC database.

OBJECTIVE

In order for the KYTC project to proceed into the construction phase, it is necessary for all appropriate permits to be authorized. The IP is the required USACE authorization for projects that propose impacts to waters of the U.S. exceeding that authorized under nationwide permits and not permissible under an LOP. It may be used to authorize activities on public roads by state and local governments or their agents in Kentucky that may result in discharges of dredged or fill material into waters of the U.S.

TRIGGER

KYTC projects not eligible for coverage under a nationwide permit and that exceed the threshold limits of the streamlined LOP process shall require an IP. This permit processing option is available for all waters of the U.S. in Kentucky.

For projects processed as an IP, there is no defined upper threshold for allowable impacts to waters of the U.S. If cumulative project impacts to waters of the U.S. are seven acres or less, the project is not considered controversial, and the project does not affect a drinking water supply, a streamlined LOP process may be preferred (see **EA-1105**).

METHOD

As early in the project development process as is practical, the DEA SME, with the help of the project team, shall assess the proposed alignment for any impacts to waters of the U.S. Waters of the U.S. are defined as perennial, intermittent, ephemeral streams and wetlands. The project shall be reviewed, and any impacts to these water types shall be identified. The magnitude of the project's impacts will determine the permit(s) required. It is imperative that the permitting process commence as early as is practical to avoid being on the critical path and delaying the project.

The individual permit application shall be prepared according to the KYTC DEA Section 404 and 401 Permit Application Preparation Guidelines (**Exhibit 9032**). Once all components of the IP application have been completed, KYTC shall submit the IP application to the USACE. These components can be gathered, obtained, compiled, or created in combination by the DEA SME, district environmental coordinator, a member of the project team, or a prequalified environmental consultant.

SUBMITTAL

If the IP has been prepared by a prequalified consultant, it shall be submitted to DEA in both paper and electronic format (CD-ROM or electronically transferred). The DEA SME is responsible for submitting the application package to the appropriate USACE district office. The USACE project manager shall review the application for completeness and place the application on public notice for a 45-day comment period. The DEA SME and project team shall assist the USACE in addressing any questions that arise during the public comment period.

MITIGATION

Generally, mitigation shall be required for impacts authorized under the IP, as these projects will typically exceed mitigation thresholds, defined as:

- Impacts to perennial or intermittent streams greater than 300 linear feet

MITIGATION (CONT.)

- The filling of greater than 0.10 acre of waters of the U.S.
- Work causing more than minimal effects

Ultimately, mitigation requirements are dictated by the USACE. For a more detailed discussion of mitigation options and procedures, see **EA-1110**.

DISTRIBUTION

Once the IP is approved by the USACE, the DEA SME shall notify the project team and ensure that the permit conditions are included in the project bid documents. Distribution of the approved permit can be accomplished via several methods:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

TERM

An authorized IP is usually valid for five years. If construction on a project is not completed within permit term, the DEA SME shall request a permit renewal for the IP.

If the scope of a project is revised and impacts to waters of the U.S. are affected by the change, (whether the impacts are increased or decreased), the DEA SME may submit a revised IP application as a result of the scope change(s) to the appropriate USACE district office.





Chapter

WATER-RELATED PERMITS

Subject

Section 401 State Water Quality Certification

GENERAL

Kentucky is regulated under Section 401 of the Clean Water Act by the Kentucky Division of Water (KDOW). A Section 401 Water Quality Certification (WQC) confirms that the activities authorized under Section 404 of the Clean Water Act, or Sections 9 and 10 of the Rivers and Harbors Act, both administered by the U.S. Army Corps of Engineers (USACE), will not violate Kentucky's water quality standards (401 KAR 10:031). The certification applies to projects that may impact waters of the Commonwealth. This includes any and all rivers, streams, creeks, lakes, ponds, impounding reservoirs, springs, wells, marshes and all other bodies of surface or underground water, natural or artificial, situated wholly or partly within or bordering upon the Commonwealth or within its jurisdiction (KRS 224.01-010(33)). Prior to finalizing a Section 404 permit, a WQC from KDOW is required.

Section 401 certification may be granted under a nationwide permit (NWP), or, if it exceeds certain thresholds, an individual permit application may be required. Further information is available at:

http://water.ky.gov/permitting/Pages/KYWaterQualityCertProg.aspx

This certification requires an assessment of stream and wetland resources that may be impacted by the project. These stream or wetland assessments are conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of assessment, they shall engage the services of a prequalified environmental consultant. The schedule for completion of any necessary documentation shall be determined through consultation among the project team members. Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the appropriate KYTC database.

OBJECTIVE

In order for the KYTC project to proceed into the construction phase, it is necessary for all appropriate permits to be authorized. The objective of the WQC is to acquire KDOW certification on projects that propose impacts to waters of the Commonwealth. A WQC is required to obtain a Section 404 Permit from the USACE.

TRIGGER

A KYTC project that impacts waters of the Commonwealth exceeding certain thresholds requires an Individual WQC, issued by KDOW (**Exhibit 9033**). This certification is required for impacts to perennial or intermittent streams or wetlands in Kentucky.

Projects authorized under a Section 404 NWP and that fall below certain thresholds for impacts to waters of the Commonwealth may be certified without the need to submit an individual application. Nationwide permits meeting these conditions are certified by the KDOW at the time of their issuance.

METHOD

As early in the project development process as is practical, the DEA SME, with the help of the project team, shall assess the proposed activity for any impacts to waters of the Commonwealth. The project shall be reviewed and any impacts to these water types shall be identified. The magnitude of the project's impacts determines the permit(s) required. It is imperative that the permitting process commence as early as is practical to avoid being on the critical path and delaying the project.

The WQC permit application shall be prepared according to the KYTC-DEA Section 404 and 401 Permit Application Preparation Guidelines (**Exhibit 9032**). The WQC application components are similar to what is submitted in a USACE permit application. After submittal of the WQC application, a KDOW project manager shall be assigned. The WQC application process requires a site visit, which is usually made in conjunction with the Section 404 permit site visit.

The information required for a WQC application may be gathered, obtained, compiled, or created in combination by the DEA SME, district environmental coordinator, a member of the project team, or a design or environmental consultant. A WQC application may be completed by a prequalified environmental consultant or by the DEA SME.

MITIGATION

The mitigation thresholds for an Individual WQC are:

- A single stream impact greater than 300 linear feet
- A single wetland impact of 1 acre or greater
- Cumulative impacts as determined by KDOW

Mitigation is discussed in more detail in **EA-1110**.

SUBMITTAL

The WQC application package shall be prepared in both electronic and paper formats. The DEA SME shall submit a paper copy to KDOW. A KDOW project manager shall review the application. The DEA SME and project team shall assist KDOW in addressing any questions that arise during the review. After a WQC has been deemed complete, there is a 30-day public notice period. Public review is followed by final supervisory review, and a certification is then issued or denied.

DISTRIBUTION

Once the WQC is issued by KDOW, the DEA SME shall, at a minimum, notify the project team. When the approved certification is incorporated into a 404 permit application, it becomes part of and is distributed along with the 404 permit packet (see **EA-1105** and **1106**). Otherwise, distribution of the approved certification can be accomplished via several ways:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

TERM

A WQC is valid for two years from the time of issuance. If construction on a project has not commenced within the two-year permit term, the DEA SME shall consult with the KDOW project manager to determine whether a renewal of the WQC is required.

If the scope of a project is revised and impacts to waters of the Commonwealth are affected by the change, (whether the impacts are increased or decreased), the DEA SME shall consult with the appropriate KDOW project manager and submit a revised WQC application as needed.





Chapter

WATER-RELATED PERMITS

Subject

Kentucky Pollutant Discharge Elimination System (KPDES)

GENERAL

The National Pollutant Discharge Elimination System was established under Section 402 of the Clean Water Act (the Act). Under the Act, each state may establish and administer its own program. The Kentucky Pollutant Discharge Elimination System (KPDES) is administered by the Kentucky Division of Water (KDOW). The "KPDES General Permit for Stormwater Discharges Associated with Construction Activities" (KYR10, 2009) authorizes the discharge of pollutants in storm water discharges associated with both small and large construction activities. These activities refer to the disturbance of one or more acres either from a single construction activity or from a construction activity associated with a larger common plan of development that will ultimately disturb one acre or more.

The KYR10 general permit does not authorize the discharge of stormwater runoff from construction projects where KDOW has determined that an Individual KPDES permit would more appropriately address the discharges. Any project that discharges into a cold water aquatic habitat, an exceptional water, outstanding national resource water, outstanding state resource water, or an impaired water listed in the most recent *Integrated Report to Congress on the Condition of Water Resources in Kentucky* as impaired for sediment and for which an approved total maximum daily load (TMDL) has been developed, shall require an Individual KPDES permit. More information can be found at:

http://water.ky.gov/waterquality/pages/integratedreport.aspx

This permit requires an assessment of stream and wetland resources that may be impacted by the project. These stream or wetland assessments are conducted by prequalified environmental consultants or by Division of Environmental Analysis subject matter experts (DEA SMEs). If local public agencies (LPAs) do not have specialized environmental staff to complete this level of assessment, they shall engage the services of a prequalified environmental consultant. The schedule for completion of any necessary documentation shall be determined through consultation among the project team members.

GENERAL (CONT.) Regardless of whether activities are being completed by the DEA SME or consultants, schedules for deliverables shall be clearly established among the parties involved; shall be monitored by the district environmental coordinator (DEC), environmental project manager (EPM), and DEA SME; and shall be routinely tracked in the appropriate KYTC database.

OBJECTIVE In order for the KYTC project to proceed into the construction phase, it is necessary for all appropriate permits to be authorized. The objective of the KPDES permit is to assure that construction activities do not violate Kentucky water quality standards. Construction activities that do not meet KYR10 general permit criteria shall acquire an individual KPDES permit.

TRIGGER In order to satisfy KPDES requirements, any construction activity that disturbs more than one acre requires the submittal of a Notice of Intent (NOI) to the KDOW a minimum of 10 days prior to the commencement of construction activities. Individual KPDES permit applications for KYTC projects are prepared by DEA or by a prequalified consultant.

METHOD If construction activities fall within the KYR10 general permit criteria, a NOI is required for authorization under the permit. The NOI form is typically prepared by the district office and officially submitted by the selected construction contractor following project award.

http://water.ky.gov/permitting/KPDES%20Documents/NOISMS4.pdf

The components of the individual KPDES permit application include (see example template):

- KPDES Form 1

  http://water.ky.gov/permitting/Pages/WastewaterDischarge.aspx

- KPDES Form F

  http://water.ky.gov/permitting/Pages/WastewaterDischarge.aspx

- KYTC Best Management Practices (BMP) Plan
- Roadway Plan Sheets (identifying outfalls, construction BMPs, post-construction BMPs)
- KYTC Supplemental Data (project background, environmental considerations, anti-degradation implementation)
- Other items as deemed necessary

METHOD (CONT.) The components for an individual KPDES application may be gathered, obtained, compiled, or created in combination by the DEA SME, district environmental coordinator, a member of the project team, or a prequalified environmental consultant. For larger projects, an individual KPDES permit application shall be prepared by a prequalified consultant. Applications for smaller projects are often prepared "in-house."

SUBMITTAL If the individual KPDES application has been prepared by a prequalified consultant, it shall be submitted to DEA in both paper and electronic format (CD-ROM or electronically transferred). The DEA SME shall submit the application package to KDOW. KDOW reviews the application for completeness and, if complete, assigns it to a technical permit writer for technical content. During technical review, the application is placed on public notice for 30 days.

DISTRIBUTION Once the individual KPDES is approved by KDOW, the DEA SME shall notify the project team and ensure that a copy of the permit and any accompanying documents are included in the project bid documents. Distribution of the approved permit can be accomplished via several methods:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

MITIGATION At a minimum, the KPDES general permit requires that KTYC adhere to KYTC's most recent *Standard Specifications for Road and Bridge Construction* regarding erosion control BMPs.

Mitigation for impacts authorized by individual KPDES permits are addressed through "enhanced" BMPs. These may be BMPs incorporated into the project during construction or may be addressed with post-construction BMPs.

MITIGATION (CONT.) Examples of "enhanced" BMPs include:

- Construction:
  - Straw mulching
  - Silt traps
  - Double silt fences
  - Preserving existing vegetation
  - Erosion control inspections twice/week and within 24 hours of a 0.5" or greater rain event

- Post-Construction:
  - Turf reinforcement matting
  - Tree plantings
  - Erosion control blanket

The KYTC project team shall propose appropriate enhanced BMPs in the individual KPDES permit application. KDOW has the final approval on the enhanced BMPs that are to be implemented. These requirements shall be incorporated into the project bid documents.

TERM An authorized individual KPDES permit is valid for 5 years. If construction on a project is not completed within the permit term, the DEA SME shall request a time extension for the individual KPDES permit.

If the scope of a project is revised and impacts to waters of the Commonwealth are affected by the change (whether the impacts are increased or decreased), the DEA SME shall consult with the KDOW project manager and submit a revised application, as required.



Chapter

WATER-RELATED PERMITS

Subject

Section 26a TVA Shoreline Construction Permits

GENERAL

The TVA Act (Act), passed by Congress in 1933, established the Tennessee Valley Authority (TVA). Section 26a of that Act requires that TVA approval be obtained before any construction activities can be carried out that affect navigation, flood control, or public lands along the shoreline of the TVA lakes or in the Tennessee River or its tributaries.

Permit approvals for construction under Section 26a are considered federal actions and are therefore subject to the requirements of the National Environmental Policy Act (NEPA) and other federal laws.

Section 26a applies to anything built across, along, or in the Tennessee River or any of its tributaries. A tributary is any watercourse whose contents, if not obstructed, diverted, or consumed, will ultimately flow into the Tennessee River. TVA's jurisdiction thus extends to the limits of the Tennessee River watershed. That jurisdiction applies to the limits of the 500-year floodplain or to the upper limits of TVA flowage rights, whichever is higher. Along off-reservoir streams and rivers, jurisdiction is typically applied to the limits of the 100-year floodplain.

OBJECTIVE

The objective of the Section 26a authorization is to confirm that projects do not have a negative effect on the agency's management of the river system, and to ensure that shoreline construction activities are compatible with all aspects of TVA's integrated management of the river system, including flood control, navigation, land use, recreation, power generation, and water quality.

TRIGGER

Any project, including construction, maintenance, and operation of facilities and activities on, over, or along the Tennessee River and its tributaries, including all TVA reservoirs, will require a TVA approval. Where specific standards are not available for the intended construction activity, applicants shall contact the appropriate TVA regional watershed office for guidance on proper submittal of their Section 26a application.

METHOD

Preparation of the Section 26a Shoreline Construction Permit requires that a determination be made whether the project is a minor construction project or a major construction project. Roads are considered to be major construction projects. The Joint Application Form (OMB No. 3316-0060) and the Applicant Disclosure Form (OMB No. 3316-0060) shall be prepared. Detailed instructions for completing an application are available on TVA's website, which is located at:

https://tva.com/river/26apermits/

Once all components of the application packet have been completed, KYTC will submit the application to the TVA project manager. The following items shall be included in a Section 26a application:

- Cover letter
- TVA joint application
- Location map
- Project plans
- Site plans
- Location of staging areas, equipment storage, access roads or closure, borrow or spoil areas on or off land
- Evidence of completion of Section 7 coordination (USFWS)
- Evidence of completion of Section 106 coordination (Kentucky Heritage Council)
- Impact summary
- Mitigation summary
- Payment for application fee
- Payment for any applicable TVA real estate fees if on TVA land and a permanent easement will be required

The above components for a Section 26a application document may be gathered, obtained, compiled, or created in combination by the Division of Environmental Analysis subject matter expert (DEA SME), district environmental coordinator, a member of the project development team, or a prequalified consultant. A Section 26a application is usually prepared by a prequalified consultant; however, these applications may also be prepared "in-house."

SUBMITTAL

If the joint application has been prepared by a prequalified consultant, it shall be submitted to DEA in both paper and electronic format (CD-ROM or electronically transferred). The DEA SME shall then submit the application package to the appropriate TVA regional office. TVA shall review the application for completeness and determine whether a hearing is necessary or appropriate.

Upon completion of the review of the application, including any hearings, the Vice President of TVA shall issue a decision approving or disapproving the application. The DEA SME and project team shall assist TVA in addressing any questions that arise during the public comment period.

DISTRIBUTION

Once the Section 26a application is approved by TVA, the DEA SME shall, at a minimum, notify the project team. Distribution of the approved permit can be accomplished via several ways:

- Mailed hard copy
- Electronic copy (email)
- ProjectWise
- KYTC ftp site

In addition to notification and distribution, the DEA SME shall enter the approval into the Six Year Plan database.

TERM

A permit issued pursuant to Section 26a shall expire unless the construction is initiated within 18 months. If construction on a project has not commenced within 18 months, the DEA SME shall request a renewal of the permit.

If the scope of a project is revised and the anticipated impacts are affected by the change (whether the impacts are increased or decreased), the DEA SME shall consult with TVA and submit a revised Section 26a application as required.





Chapter

WATER-RELATED PERMITS

Subject

Compensatory Mitigation

MITIGATION OVERVIEW

Any Kentucky Transportation Cabinet (KYTC) project having "more than minimal impact" to waters of the U.S. or Commonwealth is likely to require some type of compensatory mitigation per the U.S. Army Corps of Engineers (USACE) or the Kentucky Division of Water (KDOW).

Mitigation requirements may be addressed in a variety of ways as outlined in the April 10, 2008 Mitigation Rule (33 CFR Parts 325 and 332 in the Federal Register/Vol. 73). Further information is available at:

http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/final_mitig_rule.pdf

The mitigation rule prefers avoidance and minimization of impacts, then, in order of preference:

- Use of mitigation banks
- In-lieu fees
- On-site mitigation

KYTC has developed a number of mitigation banks around the state. These banks consist of relatively large tracts of land where natural functions of streams and wetlands have been restored or preserved. These banks provide "credits" that can be applied to offset impacts to other jurisdictional waters within the same watershed.

KYTC may also purchase credits in the form of an in-lieu fee from an approved mitigation provider to offset impacts to jurisdictional waters. At the time of the writing of this document, KYTC has chosen to not participate in on-site mitigation due to past failure rates, unattainable success criteria, and freedom to maintain or modify roadways where these sites would exist. If requirements change in the future, the KYTC may revisit this decision.

MITIGATION OVERVIEW (CONT.)

USACE and KDOW establish required mitigation credits to address impacts to waters of the U.S. or Commonwealth. KYTC is responsible for mitigating only the larger of the two amounts of credit requested by either agency but not both amounts. The Kentucky Department of Fish and Wildlife Resources (KDFWR) shall be responsible for assigning a monetary cost to the credits.

MITIGATION THRESHOLDS

USACE and KDOW shall require compensatory mitigation if individual impacts result in greater than 300 linear feet or greater than 0.10 acre of perennial or intermittent stream loss. USACE also requires mitigation if an individual impact results in the loss of 0.5 acre or greater of ephemeral stream. Impacts may be cumulatively added, and mitigation may be required for this amount by either agency on a case-by-case basis.

At this time, stream mitigation credits are calculated by using one of two functional assessment tools that have been developed for the Commonwealth by the USACE Louisville Office:

1. Adjusted Mitigation Units (AMU) for use in central and western Kentucky

2. Eastern Kentucky Stream Assessment Protocol (EKSAP) for the eastern coalfields of Kentucky

Once the number of credits required for mitigation has been established, the cost of the credits may be located on the KDFWR website at:

http://fw.ky.gov/Wildlife/Pages/Stream-Team-Program.aspx

This table shall be checked or KDFWR consulted each time an in-lieu fee needs to be paid, as the rates are subject to change.

USACE requires wetland mitigation for losses of greater than 0.10 acre, and KDOW requires wetland mitigation for losses of greater than 1.0 acre. KYTC may choose to use a KYTC wetland bank credit as mitigation if one is available or make a payment to an in-lieu fee provider. The payment of an in-lieu fee for wetland impacts requiring mitigation is also an option; the base fee is $30,000 per acre. The ratio of mitigation may vary depending upon the quality and function of the wetland(s). A 2:1 mitigation ratio is usually required for wetland impacts, and a temporal loss factor of 20 percent is applied.

METHOD The Division of Environmental Analysis subject matter expert (DEA SME) shall review the permit application to determine what mitigation may be required. The DEA SME shall check with the mitigation banking coordinator to determine availability of mitigation credits in the watershed affected by the project.

SUBMITTAL The permit application (see **EA-1104—1107**) shall include all necessary information for USACE and KDOW to calculate compensatory mitigation requirements. Once the costs have been determined, the DEA SME shall notify the project team so that the project manager can request that funding be programmed for the construction phase. If the permit was secured based on the anticipation of KYTC paying an in-lieu fee, activities impacting waters of the U.S. or Commonwealth shall not commence until the payment has been confirmed.

PAYMENT The DEA SME shall advise the DEA financial administrator to make an in-lieu fee payment prior to initiating project impacts to waters of the U.S/Commonwealth. Most payments shall be completed using an electronic transfer of funds to the appropriate entity. Funds usually come from the construction phase of the project.





Chapter

EXHIBITS

Subject

Table of Exhibits

EXHIBIT #	EXHIBIT TITLE	MANUAL REFERENCE
9001	Air Quality Baseline GAF, TC 58-33	302,603
9002	Archaeological Phase I Investigation GAF, TC 58-35	302,906,907,908
9003	Assistance Request Form, TC 58-50	404,410
9004	Biological Assessment GAF, TC 58-36	302,801,806
9005	CE Environmental Determination Checklist, TC 58-48	404
9006	CE Project Impacts Reevaluation Summary, TC 58-49	404,410
9007	CE Project Reevaluation, TC 58-56	410
9008	Draft Environmental Impact Statement GAF, TC 58-39	302,407
9009	Ecological Study Format GAF, TC 58-34	801,805
9010	Environmental Assessment GAF, TC 58-38	302
9011	Final Environmental Impact Statement GAF, TC 58-52	302,409
9012	FONSI GAF, TC 58-40	302
9013	Historic Resources GAF, TC 58-41	302,911
9014	NLTAA IN Bat Checklist, TC 58-53	804
9015	No Effect Finding – State Funded v3.0, TC 58-55	804
9016	No Effect Finding, v3.0, TC 58-54	804

EXHIBIT #	EXHIBIT TITLE	MANUAL REFERENCE
9017	Noise Analysis and Abatement GAF, TC 58-42	302,503
9018	Project Impact Profile, TC 58-28	302,405,406,407,408
9019	Record of Decision GAF, TC 58-51	302,409
9020	Socioeconomic Impact GAF, TC 58-43	302
9021	Supplier Corrective Action Request (SCAR)	302
9022	Surplus Property CE Impact Summary Sheet, TC 58-46	302
9023	Surplus Property – Notification of Environmental Conditions, TC 58-47	404
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9025	Programmatic 4(f) for Historic Bridges, TC 58-57	912
9026	NEPA Document Distribution	405,406,407,409
9027	NEPA Document Review	405,406,407,408,409
9028	Letter from Parks & Recreation	707
9029	De Minimis Letter	706,912
9030	De Minimis Determination Letter for Non-Historic 4(f) Property	706
9031	404 Table of Impact Limits	1104
9032	Sections 404 and 401 Permit Application Preparation Guidelines	1104,1105, 1106,1107
9033	DOW 401 Water Quality Certifications	1107

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Baseline Prepared by:	Author:	Firm:	
County:	Route:	Item No.:	
Project Description:			
Prime Consultant:			
Due Date:	Submittal Date:	Submittal Draft #:	Approval Date:

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" for yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**GENERAL REQUIREMENTS**	
☐	☐		Discuss climate and meteorology	
☐	☐		Discuss proposed mitigation measures	
☐	☐		Include basic information on indirect impacts	
☐	☐		Include basic information on cumulative impacts	
			PROJECT DESCRIPTION	
☐	☐		Identify the purpose of the project	
☐	☐		Identify the project termini and length	
☐	☐		Discuss roadway geometrics of the existing and proposed facilities	
☐	☐		Discuss alternates to be analyzed	
☐	☐		Analysis of major through facilities performed for projects involving a bypass	
			CARBON MONOXIDE (CO)	
☐	☐		Projected open-to-traffic ADT determined	
☐	☐		KY screening process completed	
☐	☐		CAL3QHC project-level analysis complete (required if ADT > 80,000)	
			or	
☐	☐		Statement included	
			LEAD (Pb)	
☐	☐		Statement included	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**NITROGEN DIOXIDE (NO_2)**	
✓			Statement included	
			8 HOUR OZONE (O_3)	
			Attainment Area	
			Statement included	
	or		**Non-attainment or Maintenance Area (*Boone, Boyd, Bullitt, Campbell, Christian, Jefferson, Kenton, Oldham*)**	
			Designation, attainment status, and TCMs discussed	
			Name of "conforming" TIP and TP, or STIP including page number on which project is listed	
			PARTICULATE MATTER ($PM_{2.5}$)	
			Attainment Area	
			Statement included	
	or		**Non-attainment or Maintenance Area (*Boone, Boyd, Bullitt, Campbell, Christian, Jefferson, Kenton, Oldham*)**	
			PM 2.5 checklist included	
			Interagency verifications included	
			Identify project type (exempt, not-exempt - not of concern, of concern)	
			Name of "conforming" TIP and TP, or STIP including page number on which project is listed	
			Include summary of conclusions for non-exempt projects	
			PARTICULATE MATTER ($PM_{2.5}$)	
			Statement included	

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Required	Complete	DEA	**CATEGORY**	Item No:
Insert checkmark as appropriate			**SULFUR DIOXIDE (SO_2)**	
☐	☐	☐	Statement included	
			MOBILE SOURCE AIR TOXICS (MSATs)	
☐	☐	☐	Identify project type (exempt, lower potential, higher potential)	
	or		**Exempt or No Potential for Meaningful MSATs Effects**	
☐	☐	☐	Provide explanation for determination	
	or		**Lower Potential for Meaningful MSATs Effects**	
☐	☐	☐	Include calculated AADT	
☐	☐	☐	Discuss qualitative analysis	
☐	☐	☐	Provide uncertainty assessment	
	or		**Higher Potential for Meaningful MSATs Effects**	
☐	☐	☐	Include calculated AADT	
☐	☐	☐	Discuss emissions burden analysis	
☐	☐	☐	Statement regarding use of Mobile 6.2 model	
☐	☐	☐	Discussion of the 6 priority MSATs pollutants (acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel particulate matter, formaldehyde)	
☐	☐	☐	Provide uncertainty assessment	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:
Commitments to be implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.	

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

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ARCHAEOLOGICAL PHASE I INVESTIGATION - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description: _____

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1^{st}, 2^{nd}, 3^{rd}) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**GENERAL**
☐			Acid free paper, 8 ½ X 11 paper
☐			Report bound along left margin
☐			Permanent, official site numbers issued by OSA or KHC
☐			In cases where multiple plan maps of the same area or site are included in different locations throughout a report, a common reference point consisting of grid coordinate data is added to all maps.
☐			Report follows most current and applicable SHPO specifications for report writing and guidelines for fieldwork
☐			Total number of artifacts, probes (positive and negative), test units, backhoe trenches, etc., listed in a report is correct and consistent throughout
☐			Archaeological investigations conducted in adjacent states with KYTC as the lead state DOT agency follow the guidelines and procedures of each affected state.
☐			Photographs and illustrations are clear, free of pixilation or digital artifacts, and show accurately the subject of the photo or illustration
☐			Topographic maps that show the overall distribution of archaeological sites within a linear project show the proper shape and orientation of the recorded sites (i.e., the site locations do not consist of point data)
☐			All sections of report have been checked to ensure they contain information relevant to the area discussed; i.e., they don't include background information, research, soil types, geology, etc., for counties other than where the project area is located, unless that information is relevant.
☐			The report is examined to ensure that it is free of typographic and grammatical errors
☐			The spelling or designation of names or site numbers is correct and consistent throughout the report. In addition, the name of the county or counties where the project occurs remains the same throughout the region.
☐			Contributing authors are identified as to the section or sections of they report they have written.
			TITLE PAGE
☐			Project name, report author, report date
☐			Name, address, and contact information of institution, agency, or firm conducting the investigations, including applicable contact numbers
☐			Client information (report prepared for)
☐			Principal investigator's name, affiliation, contact information, and dated signature
☐			Lead federal agency and other involved federal or state agencies, including permit or other project identification numbers
☐			Project team number is included in the report title and on the title page, item number(s) are correct and used consistently throughout report.

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate				
☐	☐	☐	**INTRODUCTORY PAGES**	
☐	☐	☐	Table of Contents	
☐	☐	☐	List of figures, plates, or tables	
☐	☐	☐	Report Abstract summarizing conclusions and cultural management recommendations.	
			REPORT INTRODUCTION	
☐	☐	☐	Purpose of the report and scope of the work	
☐	☐	☐	Dates of field investigations, and amount of time spent in the field	
☐	☐	☐	Names of field directors, supervisors, crew members.	
☐	☐	☐	Restrictions or limitations on survey efforts.	
☐	☐	☐	Detailed project description including project item number and its potential impact on historic and archaeological resources.	
☐	☐	☐	Project sponsors, contract/permit numbers.	
☐	☐	☐	Regulatory or statutory authority under which the assessment is being conducted.	
☐	☐	☐	Explanation of project boundaries, documented on 7.5 minute USGS topographic quadrangle maps, including previously recorded sites and districts.	
☐	☐	☐	Other project planning or construction maps, as necessary.	
☐	☐	☐	Oversized maps to be appended in a map pocket bound within report.	
☐	☐	☐	Color photographs showing overall views of project area and general survey conditions.	
☐	☐	☐	Discuss general physiographic setting, land forms, drainage and major water sources, and dominant soil association.	
☐	☐	☐	Curation information for field notes, artifacts, and other records.	
☐	☐	☐	General overview of survey results, including potential impacts to historic resources.	
☐	☐	☐	All aspects of any fill or disturbance within the project area (logging, road or house construction, grading for a trailer, looting, etc.), including information on type of disturbance or fill, areal extent, depth, age, and potential association with any specific activities in the project area have been documented and described.	
☐	☐	☐	The report includes the total project area size (in acres and hectares).	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate				
			ENVIRONMENTAL BACKGROUND	
☐	☐		Discussion of present and past environmental conditions.	
☐	☐		Potential environmental influences on historic and archaeological resources.	
☐	☐		Reports that include lithic assemblages must include a geology section detailing the chert-bearing formations, members, and beds that occur locally, as well as descriptions and locations for material types identified in the lithic assemblage.	
			PREVIOUS INVESTIGATIONS	
☐	☐		Statement concerning site check at OSA or KHC, and outcome of literature review.	
☐	☐		Overview of the history and/or prehistory of the general project area.	
☐	☐		Discussion of the results of archival investigations.	
☐	☐		Discussion of previous survey work and its results.	
☐	☐		National Register status of previously recorded sites and districts.	
☐	☐		Maps showing locations of previously recorded sites.	
☐	☐		Previous cultural resource management recommendations.	
☐	☐		Non-site landscape features such as abandoned railways and roads, stone fences, etc. have been identified and recorded within the limits of the r/w. An historic, economic, and social context is provided for the construction, use, and abandonment of these non-site landscape features. Where appropriate, these features have been assessed in accordance with the guidelines provided in CRM and National Register Bulletins (i.e., National Register Bulletins #30 and #42, CRM Bulletin Vol. 22, No. 10, etc.).	
☐	☐		The background sections include all relevant information to provide the necessary context (generally for temporal and regional, specific for county and project area) for an accurate depiction, placement, and assessment of identified archaeological sites.	
			PHASE II RESEARCH DESIGN	
☐	☐		Relevant research questions.	
☐	☐		Management issues.	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**FIELD METHODS SECTION**	
☐			Detailed description and evaluation of field methods used.	
☐			Discussion of survey techniques and variations due to different field conditions; subsurface investigations.	
☐			Description and discussion of shovel tests, test units, and any other excavations.	
☐			Maps showing archaeological survey walk routes, vegetation cover, locations of subsurface shovel probes or test units, and areas not surveyed.	
☐			Flotation samples taken from features or other contexts have been processed (i.e. floated) with the appropriate samples or materials submitted for paleobotanical analysis and/or radiocarbon assays. Note that trowel sorting of flotation samples is not sufficient and if the samples are not analyzed the reason and a statement to that effect must be included at the point where the sample is discussed (i.e., test unit or feature description).	
			MATERIALS RECOVERED SECTION	
☐			Discussion of general laboratory procedures.	
☐			Discussion of analytical methods and techniques.	
☐			Techniques used in analysis of any recovered paleoecological data.	
☐			Description and analysis of assemblage from each site, including explanation of classification scheme.	
☐			Illustrations of diagnostic artifacts.	
☐			Discussions of cultural, temporal, and behavioral implications of the assemblages.	
☐			Quantitative and qualitative analysis of artifact assemblages has been completed following appropriate and referenced methodologies.	
☐			Artifacts depicted in photographs are identified as to provenience.	
☐			Artifacts listed in provenience tables match, in number and type, descriptions of the associated assemblage provided in the text.	
☐			Projectile points, bifaces, and tools are described in detail in tables and text, compared to regional types for temporal association, and utilized to assess site function.	
☐			Prehistoric ceramic artifacts are described in detail in tables and text and are compared to regional types for correct temporal association.	
☐			Artifact descriptions and the Artifacts Recovered section contain specific bibliographic references that include associated date ranges for each artifact type listed.	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**SITE DESCRIPTIONS AND SURVEY RESULTS**	
☐			For all survey reports, include maps showing all previous and newly recorded sites, structures or districts. Site numbers shall be labeled directly on the map.	
☐			For archaeological surveys, a description of each individual site investigated, including setting, the results of surface and subsurface investigations, artifacts recovered, and features recorded.	
☐			Individual site plan maps showing site boundaries, survey walk areas or collection areas, placement of shovel or core tests, test units, trenches, and surface or subsurface features. Site datum must be shown on map.	
☐			Photos or drawings of test units, features, soil profiles.	
☐			Artifact illustrations.	
☐			Historic maps from archival investigations, as warranted.	
☐			Color Xerox photos showing general overview of each archaeological site.	
☐			Archival and oral history of a site specific nature.	
☐			For all reports, National Register evaluation of eligibility or ineligibility for each site over fifty years of age in project impact area.	
☐			For all reports, description of project effects on each site.	
☐			For all reports, management recommendation for each site in area of project's impact.	
☐			For all reports, If further investigations are recommended, a brief suggested scope of work.	
☐			Fill or disturbance within or adjacent to identified sites has been described and includes information on the type of disturbance or fill, areal	
☐			The areal extent (dimensions and square meters) of each recorded site.	
☐			Artifacts depicted in photographs are identified as to provenience.	
☐			Artifacts listed in provenience tables match, in number and type, descriptions of the associated assemblage provided in the text.	
☐			The locations of all positive probes, negative probes, test units, trenches, features, etc. are numbered and depicted accurately in all relevant figures.	
☐			Specific justification for site boundaries is included in each site description (such as decreased artifact counts or artifact absence, landform or topographic features that limit, constrain or stop the investigation, or the limits of the R/W).	
☐			A determination of the potential of a site to contain subsurface deposits or features has been conducted in the field and adequately described in the text - this means multiple probes even in a plowed field or in other areas of high surface visibility.	
☐			Statements of eligibility for each site are restricted to those impacted portions of the site, as "the impacted portion of site 15MF632 is determined to be eligible..." or "the portion of the site within the current project r/w is not eligible for listing..."	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**SITE DESCRIPTIONS AND SURVEY RESULTS (continued)**	
☐			The report includes dimensions and detailed descriptions (construction type, height, width, length, aspect, orientation, etc.) of remnant historic foundations, wells, cisterns, cellars, etc., and information relevant to determining the age of construction, the approximate date range of utilization, the approximate date of abandonment, and the potential function of the site.	
☐			Site maps include site boundaries, r/w limits (if applicable), the locations of associated features, structures, diagnostic artifact locations, artifact clusters, etc., and the location of negative probes, positive probes, surface collection units, etc. with appropriate keys for each feature of the map not otherwise identified.	
☐			All site maps have been checked to ensure that scales, north arrows, probe and unit locations, etc. are accurate and error-free.	
☐			Structures within, potentially associated with, or that comprise all or a portion of an archaeological site are shown in photographs.	
☐			Maps of sites are as accurate and detailed as possible, and include information on contour or other topographic or landform constraints that limit or direct the level of investigation possible or required at a site.	
☐			Maps include standard USGS symbols and mapping techniques.	
☐			Isolated finds do not consist of multiple artifacts; if multiple artifacts are present, an attempt must be made at OSA to receive a site number. If rejected, the report states that the OSA would not assign a state number to the artifact concentration and the concentration is referred to as a	
☐			Any potentially associated structures, features, or components are included within the boundaries of an archaeological site.	
☐			Isolated finds and non-site localities are described separately, as their own category distinct from identified sites and as individual artifact locations, both in figures and in the text.	
☐			Historic structure descriptions include a listing of all relevant historic maps where the structures are and are not depicted.	
☐			An assessment of secondary and cumulative impacts has been provided for portions of sites that occur outside the r/w.	
☐			Site maps include site boundaries, r/w limits (if applicable), the locations of associated features, structures, diagnostic artifact locations, artifact clusters, etc., and the location of negative probes, positive probes, surface collection units, etc. with appropriate keys for each feature of the map not otherwise identified.	

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**REPORT SUMMARY AND RECOMMENDATIONS**
☐			Establish baseline conditions (describe Area of Potential Effect (APE) and all archaeological sites identified)
☐			Identify sites recommended for additional work (Phase II) and any parcel(s) for which phase I could not be completed due to lack of property owner permission (document efforts to access property)
☐			Identify any sites eligible or determined to be eligible for the National Register.
☐			Reference coordination with SHPO regarding archaeological sites and recommendations for further work (include letters in Appendix)
☐			Discuss cumulative and indirect impacts
			REFERENCES CITED
☐			All references in the body of the report are to be cited in the bibliography in American Antiquity format.
☐			All citations in the bibliography to appear in the text of the report.
			APPENDICES AND ATTACHMENTS
☐			*Curriculum vitae* for Principal Investigator and Field Supervisors if not already on file with Kentucky SHPO.
☐			Artifact tabulations as an Appendix, as warranted.
☐			Optional cemetery forms as an Appendix, as warranted.
☐			Pocket included in back of report to attach final clearance letter from SHPO (no other correspondence associated with the project is required or needed).

Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its appicability may also be submitted through this section.

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Commitments to be Implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.

Item No:

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SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant _____ Date _____

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer _____ Date _____

Project Manager _____ Date _____

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ASSISTANCE REQUEST FORM

To:	From:	
Project #:	Route:	County:
Env. Subject Matter:	☐ CE Level: ☐ EIS	☐ EA/FONSI ☐ State Funded
Project Description (P/N):		
Type of Assistance Needed/Reason for Request:		
Date by which Assistance Needed:		
☐ Map or Exhibit Attached		
Pc: EPM: SME:	Requestor	Date

Submit request through email to KYTC DEA Request for Assistance.

***** FOR DEA USE ONLY *****

RESPONSE **Response due (rec'd date + 5 workdays):**

Responder

Date

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BIOLOGICAL ASSESSMENT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
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Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**IDENTIFICATION OF LISTED SPECIES**	
☐			Narrative describing the history of the federal endangered species coordination for the subject project. Paragraph must include the Kentucky Transportation Cabinet coordination dates, USFWS response dates, and the species listed by the USFWS and/or other commenting state and/or federal resource agencies.	
			SPECIES STATUS	
☐			Narrative describing the status of each federally threatened/endangered species listed for the subject project. Narrative must include a historical account of each listed species, historic and current range of each species listed for the project, and habitat requirements for each species listed for the project area. Information for this section may be obtained from the " USFWS Recovery Plan" for the respective species listed for the project. Information about listed species may also be obtained by contacting recognized experts for the respective species and/or researching various sources of information.	
			SURVEY METHODS	
☐			Describe the methods utilized to survey for the federally threatened/endangered species listed for the project area.	
☐			Conduct a literature and office review of the project area for information, which may be used during the field survey. Such work may include, but not limited to contacting state and federal resource agencies, recognized experts on specific endangered species, and review of various publications which may aid in the completion of the "Biological Assessment".	
☐			Evaluate habitat for each federally listed threatened/endangered species listed for the project area.	
☐			Sampling for federally listed threatened/endangered species completed according to guidelines established by the USFWS within the "Recovery Plan" for each species listed for the project area.	
			SURVEY RESULTS	
☐			Description of the highway project provided.	
☐			Results from the literature and office review.	
☐			Describe the ecological habitat within the project corridor.	
☐			Discuss the suitable habitat for each federal threatened/endangered species within the project area.	
☐			Results from surveys for each federal threatened/endangered species provided.	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**MITIGATION OF IMPACTS TO ENDANGERED SPECIES**	
☐			*(This section is required only if federal threatened/endangered species are found to occur within the project area. If species are found to occur, mitigation measures will be added to the "Biological Assessment" to minimize potential impacts to federal threatened/endangered species. If federal threatened/endangered species are found not to occur or habitat is not present, there will be no need to attach mitigation measures to the "Biological Assessment.")*	
☐			Mitigation measures added to the "Biological Assessment" based on the fact that the project may impact federal threatened/endangered species. Mitigation measures can be obtained through consultation with the USFWS.	
☐			Mitigation measures added to the construction plans for implementation.	
			CONCLUSION	
☐			Conclusion provided based on the results from the field surveys	
			REFERENCES	
☐			References provided within the report.	
			EXHIBITS	
☐			Sampling sites for all federal threatened/endangered species located on a topographic map with centerline for the project provided.	
☐			Captures and/or finds of federal threatened/endangered species located on a topographic map with centerline for the project provided.	
☐			Photographs for each federal threatened/endangered species sampling site provided and/or a photograph of the typical habitat within project area for each listed species.	
☐			Photographs for each federal threatened/endangered species captured and/or found during the field surveys.	
☐			Habitat for each federal threatened/endangered species delineated on a topographic map with centerline for the project provided.	
☐			Habitat for each federal threatened/endangered species delineated on a topographic map with centerline for the project provided.	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**TABLES**	
☐			Table showing the captures and/or finds for each federal threatened/endangered species during the field survey.	
			APPENDICES	
☐			Field data sheets appended to the report.	

Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section. Item No:

Commitments to be implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

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CATEGORICAL EXCLUSION ENVIRONMENTAL DETERMINATION CHECKLIST

1. PROJECT INFORMATION

SYP Project #	Route:
Work Type:	County:
Project Description	
Roadway Conditions and Setting	Traffic Current Year ( ) ADT Design Year ( ) ADT
Project Length _____ Begin MP _____ End MP _____ Note: If project length is > 1 mile and on a new alignment, project may not be eligible for CE Level 1, and DEA and FHWA must be consulted.	Number of alternative(s) considered, including "No Build" _____ *See "Section 4. Alternatives Summary"*

2. ENVIRONMENTAL DETERMINATION

☐ Categorical Exclusion - **Level** ___ (Attach all project correspondence and documentation.)

APPROVAL SIGNATURES

_____ _____
District Environmental Coordinator Date

_____ _____
Project Manager Date

☐ *All appropriate project commitments/mitigation and identified required future work have been entered into the CAP*

_____ _____
Division of Environmental Analysis Date
(required for Level 2)

_____ _____
Recommended by: FHWA Date

_____ _____
Federal Highway Administration Date
(required for Level 3)

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3. PURPOSE AND NEED *(attach additional pages if needed)*

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4. ALTERNATIVES SUMMARY ***Describe all alternatives that were evaluated, their impacts, and the reason(s) for elimination or selection*** *(attach additional pages if needed)*

Required Attachments ☐ Location Map ☐ Plan Map/Sheet(S)

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5. COMMENTS AND COORDINATION

Attach all letters, meeting minutes, and copies of any newspaper advertisements	YES	NO
1. Will the project have public, local government, and resource agency outreach? *Identify type of outreach used:* Meeting(s) ☐ Date(s) _____ Newspaper Adv. ☐ Newspaper Name(s) _____ Date(s) _____ Meeting(s) with local government and affected property owners Date(s) _____	☐	☐
2. Was there public or agency controversy on the project? *If "Yes", explain in # 4 below.*	☐	☐
3. Additional work needed to resolve all public, resource agency, and property owners' concerns? *If "Yes", explain plans for resolution in # 4 below.*	☐	☐

4. Describe any unresolved issues

6. ENVIRONMENTAL COMMITMENTS, MITIGATION, REQUIRED FUTURE ACTIONS, AND OTHER COMMENTS

	YES	NO
1. Does the project have environmental commitments, mitigation measures, additional environmental investigations, studies, or approvals still to be completed? *If "Yes", DEC should advise project manager for consideration of CAP entry in Oracle.*	☐	☐

2. Identify all issues:

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3. Other unique environmental or engineering factors that require consideration through the remaining project development (excess excavation needs, utility considerations, drainage problems, geotechnical issues, topographic constraints, mines, acidic rock, drinking water wells, etc.)

7. ENVIRONMENTAL CONDITIONS AND CONSEQUENCES

A. Right-of-Way Impacts	NA	YES	NO
1. Does the project require the acquisition of right-of-way?	☐	☐	☐
2. Full or partial property acquisition required. Temporary Easement _____ Estimated acreage: Fee Simple _____ Permanent Easement _____ *	☐	☐	☐
3. Business or residential relocations required. No. of relocations: Residential ___ * Business ___ Suitable properties available: Residential ☐ Yes ☐ No ☐ Unknown *Describe "No" in A.8 below* Business ☐ Yes ☐ No ☐ Unknown * *If total acreage > 10 acres or total relocations are > 5, consult with DEA* * *If total acreage > 25 acres or total relocations are >10, DEA consults with FHWA* * *If > 1 relocation, complete Environmental Justice evaluation (see C.5)*	☐	☐	☐
4. Last resort housing required. ☐ Likely ☐ Unknown 5. Property transfer from a state or federal agency required. *List agency(ies) in A.8 below*			
6. Cemetery affected by project	☐	☐	☐
7. Will excess excavation sites be required? ☐ Designated ☐ Permitted/Available for Contractor ☐ Unknown (must note in Section 8)	☐	☐	☐

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8. Describe Impacts/Comments

B. Economic and Farmland Impacts	NA	YES	NO
1. The project will have economic impacts on the regional and/or local economy, such as effects on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales.	☐	☐	☐
2. The project will affect established businesses or business districts.	☐	☐	☐
3. The project will affect prime farmlands.	☐	☐	☐
4. The project will affect property protected by an agricultural preservation easement.	☐	☐	☐

5. Describe impacts/benefits to the local economy and summarize methodology used in analysis of prime farmlands and agricultural districts, including avoidance, minimization, and mitigation.

C. Social Impacts	NA	YES	NO
1. The project will affect neighborhoods or community cohesion for various social groups.	☐	☐	☐
2. The project will affect travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian).	☐	☐	☐
3. The project will affect school districts, churches, businesses, police or fire departments, etc. *Include direct impacts and indirect impacts that may result from the displacement of households and businesses.*	☐	☐	☐
4. The project will affect the elderly, handicapped, nondrivers, or transit-dependent.	☐	☐	☐
5. The project will have disproportionately high and adverse human health or environmental effects on minorities or low-income populations (Environmental Justice, E.O. 12898).	☐	☐	☐

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6. Describe burdens/benefits and attach documentation describing EJ analysis. If relocation survey was sent, summarize responses here.

D. Local Land Use and Transportation Plan	NA	YES	NO
1. Project is consistent with local land use plan. *(NA if no plan exists)*	☐	☐	☐
2. Project is consistent with local transportation plan. *(NA if no plan exists)*	☐	☐	☐
3. Project would induce adverse or beneficial secondary and cumulative effects.	☐	☐	☐
4. Are there any existing and/or planned bike or pedestrian walkways?	☐	☐	☐

5. Describe impacts

E. Historic Resources	NA	YES	NO
1. Are NRHP listed eligible/potential eligible sites/districts present within the project viewshed?	☐	☐	☐
(Document means for assessing ages of structures within project viewshed or attach Historic Architectural Investigation Form, correspondence, and documentation from DEA historian)			
If "Yes", indicate level of impact:			
☐ "No Effect" *(attach SHPO concurrence letter, Historic Architectural investigation form, or DEA Historian memo)*			
☐ "No Adverse Effect" *(attach SHPO concurrence letter)*			
☐ "Adverse Effect" *(attach FHWA and SHPO concurrence letter) Section 4(f) may need to be completed. **			
Memorandum of Agreement required? SHPO signature date _____ FHWA signature date	☐	☐	☐

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	NA	YES	NO
2. De Minimis coordination required? *Date of Approval* _____ ** If Individual 4(f) is required, project is not eligible for CE Levels 1 or 2*	☐	☐	☐
3. Describe historic resource impacts			

F. Archaeological Resources	NA	YES	NO
1. Will project affect archaeological resources? *If "Yes", list site numbers that cannot be avoided* _____ *(Document means for assessing project and attach Archaeological Investigation Form, correspondence, or documentation from DEA archaeologist demonstrating findings.)*	☐	☐	☐
2. Are/were sites recommended for Phase II work? *(attach SHPO concurrence letter)* *If "Yes", list site number(s):* _____	☐	☐	☐
3. Are NRHP eligible/potentially eligible sites affected by the project? *If "Yes", indicate level of impact. If "No", attach SHPO concurrence letter.* ☐ "No Adverse Effect" *(attach SHPO letter)* ☐ "Adverse Effect" *(attach FHWA and SHPO concurrence letter.) Section 4(f) must be completed if preservation in place is required. **	☐	☐	☐
4. Is Native American Consultation (NAC) required? *If "No", explain why in F.9 below.* *If "Yes", document dates of consultation below and describe the outcome in F.9 below* Dates NAC conducted: Phase I _____ Phase II _____ MOA _____ FHWA closure date: Phase I _____ Phase II _____ MOA _____	☐	☐	☐
Tribal request for additional consultation: Phase I	☐	☐	☐
Phase II	☐	☐	☐
MOA	☐	☐	☐

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5. Describe archaeological resource impacts

G. Section 4(f)	NA	YES	NO
1. Are 4(f) properties affected by the project? *If "Yes", notify DEA EPM, who will consult with FHWA to determine applicability of Section 4(f)*	☐	☐	☐
2. Is the project adjacent to a 4(f) resource? *If "Yes", DEA EPM will consult with FHWA to determine applicability of "constructive use". If Questions 1 and 2 are both "No", go to Section H.*	☐	☐	☐
3. Prudent and feasible means to avoid 4(f) properties were fully considered, but resource cannot be avoided. *Only determined in consultation with FHWA. Indicate 4(f) type below* ☐ De Minimis Finding ☐ Programmatic Section 4(f) ☐ Full Section 4(f) statement *If an Individual 4(f) statement is required, the project **cannot** be completed as a CE Level 1 or 2 document. However, if the impacts can be satisfied by completing a Programmatic 4(f) Statement or a De Minimis Finding, the CE **can** be completed as a CE Level 1 or 2 project.*	☐	☐	☐

4. Describe process followed and consultation completed. Attach documentation developed to resolve 4(f) issue

H. Section 6(f)	NA	YES	NO
1. Are 6(f) properties affected by the project? *If "Yes", consult with DEA and FHWA to determine applicability of Section 6(f) **	☐	☐	☐
2. Has discussion been initiated with the Governor's Office of Local Development and the agency having responsibility for the administration of the publicly owned park, recreation	☐	☐	☐

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	NA	YES	NO
3. Will a Memorandum of Agreement be required? *Final signature date:* _____ * *Project may only be processed as a CE Level 3 if Section 6(f) applies.*	☐	☐	☐
4. Describe parties involved, property involved, process followed, and consultation required to resolve 6(f) issue			
I. Noise Impact (23 CFR Part 772)	NA	YES	NO
1. Indicate if any of the following are applicable, which would necessitate a traffic noise analysis ☐ New roadway on new alignment ☐ Addition of 1 or more through travel or auxiliary lanes ☐ Significant change in vehicle mix or traffic speed ☐ Significant change in horizontal or vertical alignment ☐ Addition or relocation of interchange lanes or ramps ☐ Addition or alteration of weigh station, rest area, ride share, or toll plaza ☐ Change in roadway character that substantially reduces the shielding effect of landforms or noise barriers	☐	☐	☐
2. There are noise-sensitive receivers/land uses adjacent to the proposed project (e.g., residences, businesses, schools, parks, etc.) *See KYTC Noise Analysis and Abatement Policy, Table 1.*	☐	☐	☐
3. Traffic noise analysis demonstrates that KYTC noise abatement criteria will be exceeded.	☐	☐	☐
4. A substantial increase of 10+ db from existing conditions will result from build alternative.	☐	☐	☐
5. There are feasible and reasonable measures that can reduce impacts. *If "Yes", discuss in I.6 below*	☐	☐	☐
6. Describe noise impact and abatement measures (if applicable)			

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J. Air Quality Impacts	NA	YES	NO
1. Is the project located in an air quality non-attainment or maintenance area for ozone (O_3) (part of Boone, Kenton, and Campbell counties)?	☐	☐	☐
2. Is the project listed in an approved STIP and/or TIP? *If not in STIP, notify DEA SME* STIP# _____ Page # _____ TIP Page# _____	☐	☐	☐
3. Is project controversial *or* does the project HAVE or ADD a signalized intersection with a projected "open to traffic" year ADT > 80,000 vehicles per day? *If "Yes", analysis may be required. Clearance memo from DEA SME is required and must be attached. If "No", check box below.* ☐ This project does not exceed the Kentucky CO screening criteria for project-level analysis and is not expected to produce a violation of the CO standards (35 ppm over a one-hour period or 9 ppm over an eight-hour period)	☐	☐	☐
4. Does the project have potential for Mobile Source Air Toxin effects? ☐ **No potential** for meaningful MSAT effects - no analysis required Qualifying CE (23 CFR 771.117c) * Air quality exempt project (40 CFR 93.126) Other projects with no meaningful impacts on traffic volumes or vehicle mix ☐ **Low potential** MSAT effects - Qualitative Analysis and uncertainty assessment required ** ☐ **Higher potential** MSAT effects (AADT . 140,000 by design yr) - Quantitative Analysis required to differentiate alternatives * *Indicate project type as described in the list* _____ ** *Contact DEA SME for assistance and attach related analysis*	☐	☐	☐
5. Is the project in an area requiring PM 2.5 consideration (Boone, Boyd, Bullitt, Campbell, Jefferson, Kenton, or part of Lawrence)? *If PM 2.5 consideration is required, attach checklist, consultation emails, etc., to document findings.*	☐	☐	☐
6. Impacts/Comments (reference attached documentation)			

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K. Hazardous Materials	NA	YES	NO
1. Are known or potentially contaminated sites (service stations, landfills, automotive repair, junkyard, structures with asbestos, etc.) located along the project corridor?	☐	☐	☐
2. Is ROW required from, or extensive excavation required adjacent to, a potentially contaminated site? *If "Yes", Phase II testing is required and should be completed prior to ROW authorization request.*	☐	☐	☐
3. Does Phase II analysis indicate the existing and/or proposed ROW is contaminated? *Extent and estimated remediation cost to be provided by DEA SME to Division of ROW and Project Team.*	☐	☐	☐
4. Will any bridges or standing structures be demolished for completion of the work? Status of inspection of bridges and structures for asbestos -containing materials (ACM) ☐ Complete ☐ Required ☐ Not Required *(Identify bridges and structures and discuss results of assessment, if completed, reason not required, or future work in K.6 and Section 5)*	☐	☐	☐
5. If bridges are to be removed, refurbished, or repainted, will there be lead-based paint wastes to address?	☐	☐	☐
6. Discuss significance of any "Yes" marked in 1-5 and any deferred necessary activities.			

L. Threatened and Endangered Species (T&E)	NA	YES	NO
1. Sources considered to identify potential impacts to federally threatened and endangered species (attach copies): ☐ DEA Combined Species List Species identified: _____	☐	☐	☐
2. Habitat Assessment indicated federally listed T&E habitat present in vicinity No Effect determined for _____	☐	☐	☐
3. Indiana bat *(check all that apply)* ☐ To be determined ☐ No Effect ☐ CMOA ☐ Tree Cutting Restrictions			
4. Is project located upstream of or within Designated Critical Habitat? *(consultation with DEA required)*	☐	☐	☐

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	NA	YES	NO
5. Biological Assessment required: List species: _____ ☐ Completed (attach USFWS letter) ☐ To complete before construction (CAP entry recommended and include in Section 5)	☐	☐	☐
6. Is project likely to adversely affect federally listed T&E? *(formal consultation required)* * * *If the project is likely to affect a federally listed T&E species, excluding Indiana Bat addressed through a CMOA, it is not eligible for CE Level 1 or 2, and DEA and FHWA must be consulted.*	☐	☐	☐
7. Describe T&E species concerns/protective measures			

M. Water Resource Impacts	NA	YES	NO
1. Does project impact State Listed Special Use Waters or tributaries to a Special Use Water? *Indicate all types below and consult DEA Permit SME prior to issuance of the CE* ☐ Cold Water Aquatic Habit ☐ Outstanding National Resource Water ☐ Exceptional Waters ☐ Reference Reach Stream ☐ Outstanding State Resource Water ☐ State Wild River ☐ Federally Designated Wild River ☐ Federally Designated Scenic River ☐ Federal T&E Species	☐	☐	☐
2. Will project involve surface disturbance greater than one acre? *If "Yes", note need for KPDES KYR10 storm water permit box in M.11*	☐	☐	☐
3. Is project located partially or wholly within a designated MS4 community? *If "Yes", identify any local ordinances, restrictions, local permits, or other local requirements that require consideration before, during, and after construction. Specify if box M.13 below and, if appropriate, Section 5.*	☐	☐	☐
4. Does project encroach upon 100 year floodplain? *If "Yes", determinations regarding No Rise Certifications, FEMA Map Revisions, etc., to be made by KYTC Design, Drainage Section, during final design.*	☐	☐	☐
5. Could project potentially affect surface or groundwater drinking water supplies, public or private?	☐	☐	☐

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	NA	YES	NO
6. Does project involve impacts to a stream below Ordinary High Water Mark (OHWM) or to a wetland?	☐	☐	☐
If answer is "No", the replies to questions 7 and 8 will also be "No"			
Anticipate impacts below OHWM: *(check all that may apply)*			
☐ Bridge/Pier Abutment ☐ Relocation/Channelization ☐ Temporary Diversion ☐ Culvert			
☐ Low Water Crossing ☐ Excess Excavation Site ☐ Bank Stabilization ☐ Wetland Fill			
☐ Other (describe) (i.e., Temporary Crossing) _____			
7. Will project impact a lake or pond requiring its draining or filling *(note characteristics below)*	☐	☐	☐
☐ A stream enters the lake or pond ☐ A stream exits the lake or pond			
If stream is exiting lake or pond, 404 permit is required			

	NA	YES	NO
8. Permit Requirements			
401/404 Permits are likely to be required for this project *(indicate type below and in Section 5)*	☐	☐	☐
If any permits are expected to be required, submit CE Request for Assistance to DEA SME			
Stream/Lake/Pond Impacts: ☐ BNR ☐ ACE NW ☐ ACE IP ☐ DOW IWQC			
Mitigation required by: ☐ ACE ☐ DOW			
Wetland Impacts: ☐ BNR ☐ ACE NW ☐ ACE IP ☐ DOW IWQC			
Mitigation required by: ☐ ACE ☐ DOW			
Will this project affect navigable waters of the U.S. as defined by USACE and require a Section 10 permit? *If "Yes", coordination with DEA is required.*	☐	☐	☐
Will this project affect a navigable water body requiring a Coast Guard, Section 9 permit? *If "Yes", coordination with Division of Structural Design is required.*	☐	☐	☐
Will this project require a KPDES storm water permit (KYR10) for construction?	☐	☐	☐
Will this project require any additional permits from a local MS4? *(discuss requirements in box M.10)*	☐	☐	☐
Will construction in the floodplain require analysis and coordination by KYTC Design-Drainage Section to ensure that potential flooding impacts are thoroughly addressed?	☐	☐	☐

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	NA	YES	NO
9. Is project within the watershed of a significant water resource (*Indicate types below* public or private drinking water supply, wellhead protection area, Special Use Waters, etc.)? ☐ Project is candidate for application of KYTC Karst policy	☐	☐	☐

10. Describe water resource investigations conducted, impacts identified, and permits required or anticipated:

N. Construction Impacts

Discuss potential impacts of construction activities pertaining to water quality, stream diversion, air quality, detours and delays of traffic, businesses, noise, etc.

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CATEGORICAL EXCLUSION PROJECT IMPACTS REEVALUATION SUMMARY

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

ENVIRONMENTAL IMPACT	YES	NO	STATUS -- REMARKS
PROJECT CHANGES *	☐	☐	☐ Perm Easements ☐ Temp Easements ☐ Connecting Roads ☐ Additional ROW ☐ Other Utility Areas: ☐ Within ROW ☐ Beyond ROW
AIR QUALITY	☐	☐	
NOISE	☐	☐	
CULTURAL HISTORIC	☐	☐	
ARCHAEOLOGY	☐	☐	
TERRESTRIAL ECOLOGY	☐	☐	
AQUATIC ECOLOGY	☐	☐	
SOCIOECONOMIC	☐	☐	
UST/HAZMAT	☐	☐	
OTHER ISSUES	☐	☐	

* Project changes that incorporate additional area in the project footprint or create affects not previously assessed.

CONDITIONS, MITIGATION, SPECIAL ISSUES:

The environmental document identified above has been reevaluated as required by 23 CFR 771.117. It has been determined that no substantial changes have occurred in the project, the project area, the regulatory requirements, or the environmental effects of the proposed action that would invalidate previous environmental approvals or significantly affect the quality of the human environment. Therefore, the original Administrative Action remains valid. It is recommended that this project be advanced to the next phase of project development.

APPROVAL/CONCURRENCE BY:

District Environmental Coordinator (not required for Level 2 or Level 3 CEs)	Date	Director, Div. of Environmental Analysis (not required for PCE or Level 1 CEs)	Date
District Project Manager (not required for Level 2 or Level 3 CEs)	Date	Federal Highway Administration (not required for PCE, Level 1 or Level 2 CEs)	Date

PC: DEA (PCE & CE1); District (CE2 & CE3); Ronald Rigney, Division of Program Management; FHWA

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PROJECT REEVALUATION

AIR QUALITY IMPACTS

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT IN NON-ATTAINMENT OR MAINTENANCE AREA	☐	☐	☐	
PROJECT SCOPE CHANGES	☐	☐	☐	(If yes, have revised plans been reviewed?)
NEW LAWS/REGULATIONS	☐	☐	☐	
PROJECT IN CURRENT TIP/STIP	☐	☐	☐	(If yes, reference STIP & page number)
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **Air Quality** Assessment remain valid subject to any conditions noted above.

Air Quality _____ Date _____

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PROJECT REEVALUATION

NOISE IMPACTS

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT SCOPE CHANGES	☐	☐	☐	(If yes, have revised plans been reviewed?)
NOISE STANDARDS EXCEEDED	☐	☐	☐	(If yes, give number of residential & commercial sites)
NOISE PUBLIC MEETING REQUIRED	☐	☐	☐	
NOISE ABATEMENT/SENSITIVITY REQUIRED	☐	☐	☐	
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **Noise** Impact Assessment remain valid subject to any conditions noted above.

Noise _____ Date _____

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PROJECT REEVALUATION

AQUATIC AND TERRESTRIAL ECOLOGY IMPACTS

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT SCOPE CHANGES	☐	☐	☐	(If yes, have revised plans been reviewed?)
NEW LAWS/REGULATIONS	☐	☐	☐	
401/404 PERMITS ISSUED Wetland Impacts Channel Change/Stream Impacts	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	(If yes, list date issued)
ENDANGERED SPECIES LISTED	☐	☐	☐	(If yes, list species)
USFWS COORDINATION / RECOORDINATION	☐	☐	☐	(If yes, give date and any new species listed)
BA COMPLETED	☐	☐	☐	(If yes, give approval dates)
MITIGATION REQUIRED	☐	☐	☐	(If yes, describe below)
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **Aquatic Ecology** Assessment remain valid subject to any conditions noted above.

Aquatic and Terrestrial Ecology _____ Date _____

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PROJECT REEVALUATION

SOCIOECONOMIC IMPACTS

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT SCOPE CHANGES	☐	☐	☐	(If yes, have revised plans been reviewed?)
LAND USE CHANGES SINCE ENVIR. DOC. APPROVAL	☐	☐	☐	
IS ENVIRONMENTAL JUSTICE AN ISSUE?	☐	☐	☐	
RELOCATIONS REQUIRED	☐	☐	☐	(If yes, list number of residential & business relocations)
4(f) IMPACTS to SCHOOLS, PARKS, ETC.	☐	☐	☐	(If yes, identify site and describe impact)
MAJOR FARMLAND IMPACTS	☐	☐	☐	
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **Socioeconomic** Assessment remain valid.

_____ _____
Socioeconomic Date

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PROJECT REEVALUATION

CULTURAL HISTORIC/ARCHAEOLOGY IMPACTS

Reevaluation Phase:	Letting Date:	
Type Document:	Approval Date:	
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT SCOPE CHANGES	☐	☐	☐	(If yes, have revised plans been reviewed?)
ARCHAEOLOGICAL SITES INVOLVED	☐	☐	☐	(If yes, list site numbers)
PHASE II/III ARCHAEOLOGY REQUIRED	☐	☐	☐	(If yes, list parcel numbers involved)
SHPO CONCURRENCE RECEIVED FOR ARCHAEOLOGY	☐	☐	☐	(If yes, give date)
HISTORIC SITES IMPACTED	☐	☐	☐	(If yes, list National Register or National Register-eligible sites)
SHPO CONCURRENCE RECEIVED FOR HISTORIC SITES	☐	☐	☐	(If yes, give date)
4(f), 106 INVOLVEMENT	☐	☐	☐	(If yes, list sites; if P4(f), attach copy)
MOA/MITIGATION REQUIRED	☐	☐	☐	(Attach copy of SHPO conditions or executed MOA)
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **Cultural Historic** and **Archaeology** Assessments remain valid.

Cultural Historic/Archaeology _____ Date _____

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PROJECT REEVALUATION

UST/HAZMAT IMPACTS

Reevaluation Phase:		Letting Date:
Type Document: CE		Approval Date:
County:	Route:	Item No.:
Limits:		

REVIEW CATEGORY	*YES*	*NO*	*N/A*	*COMMENTS—EXPLAIN IF YES IS CHECKED*
PROJECT SCOPE CHANGES	☐	☐	☐	(if yes, have revised plans been reviewed))
NEW LAWS/REGULATIONS	☐	☐	☐	
PHASE I SITE ASSESSMENT COMPLETED	☐	☐	☐	(If yes, identify any UST/Hazmat sites identified & list parcel or location)
PHASE II REQUIRED	☐	☐	☐	(If yes, list parcel number or location)
PHASE III (REMEDIATION) REQUIRED	☐	☐	☐	(If yes, list parcel number, cost estimate, & schedule for completion)
OTHER ISSUES	☐	☐	☐	

CONDITIONS, MITIGATION, SPECIAL ISSUES:

I have reviewed the project documentation and determined that no substantial changes have occurred in the project. Therefore, the findings of the original **UST/Hazmat** Assessment remain valid.

UST/Hazmat _____ Date _____

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DRAFT ENVIRONMENTAL IMPACT STATEMENT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description: _____

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**TITLE PAGE**	
☐			Identify level of Environmental Documentation (DEIS)	
☐			Adequate project description (route, termini, city or county, and state)	
☐			Include State and Federal Project Item Number	
☐			Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) By The U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis	
☐			Identify Cooperating Agency(s)	
☐			List KYTC as a Joint Lead Agency	
☐			Date of submittal (month and year)	
			SIGNATURE PAGE	
☐			Identify level of Environmental Documentation (DEIS)	
☐			Include project description (route, termini, city or county, and state)	
☐			Include state and federal Project Item Number	
☐			Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) By The U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis	
☐			Identify Cooperating Agency(s)	
☐			List KYTC as a Joint Lead Agency	
☐			Signature line for FHWA and KYTC	
			PROJECT IMPACT PROFILE	
☐			Fill out Project Impact Profile Sheet and attach to document	
☐			Discuss unresolved issues or further work required to satisfy mitigation measures or other commitments	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**EXECUTIVE SUMMARY**	
☐			A brief description of the proposed FHWA action indicating route, termini, type of improvement, number of lanes, length, county, city, state, etc.	
☐			A description of any major actions proposed by other governmental agencies in the same geographic area as the proposed FHWA action	
☐			Summarize all reasonable alternatives considered and identify the Preferred Alternative and the basis for its selection.	
☐			Summarize all major environmental impacts of the Preferred Alternative, both beneficial and adverse	
☐			Summarize any areas of controversy, including those raised by agencies and the public	
☐			Summarize any unresolved issues and commitments (permit aporovals, land transfers, Section 106, etc.)	
			TABLE OF CONTENTS	
☐			List areas of focus and appropriate page numbers where the information can be found	
☐			Listing of exhibits, figures, and tables	
			PURPOSE AND NEED	
☐			Summarize the purpose and need of the project	
☐			Discuss project description and setting	
☐			Description of existing facility	
☐			Briefly describe the project history including actions taken to date (intermediate planning, scoping etc.). If the project has a long history, consider documenting the history in a separate paragraph.	
			Identify and provide discussion on any of the following that may pertain to the purpose and need:	
☐			Logical termini/independent utility	
☐			System Linkage	
☐			Safety/accident analysis data	
☐			Roadway deficiencies	
☐			Modal Interrelationships – How will the proposed facility interface with and serve to complement airports, rail road facilities, mass transit services, etc.	
☐			Level of service/capacity/congestion mitigation	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**PURPOSE AND NEED (continued)**	
☐			Status of the project relative to the Six Year Plan and STIP	
☐			Economic development enhancement	
☐			Mandated by legislation, if applicable	
☐			Provide an exhibit showing the project area	
			ALTERNATIVES	
			Alternatives Considered but Eliminated	
☐			Briefly summarize basis for elimination of alternatives that were considered but not carried forward as reasonable alternatives for detailed analysis.	
			The No Build Discussion	
☐			Discuss anticipated LOS/ADT/capacity/congestion	
☐			Discuss safety and maintenance improvements, both beneficial and adverse.	
☐			Discuss whether the No Build Alternative will satisfy the purpose and need	
☐			Discuss beneficial and adverse impacts that congestion management, mass transit, and light rail will have on the no build alternative, if chosen.	
			Build Alternatives	
☐			Describe each alternative from their respective logical termini points	
☐			Discuss typical sections/design features for each alternative. Include interchanges, additional collector roads, shoulder and pavement widths, access, grade, turn lanes, etc.	
☐			Discuss congestion management, mass transit, and light rail options for the project.	
☐			Include comparative table to identify the environmental impacts and estimated project cost (design, right-of-way, utilities, and construction) of each alternative . Cost estimates are to be provided for the year of expenditure.	
☐			Discuss congestion management, mass transit, and light rail options for the project.	
☐			Statement that the final selection of an alternative will be made only after consideration of impacts and public hearing comments	
☐			Sufficient (legible, understandable) exhibits showing alternatives	
☐			Discuss 4(f) avoidance alternative(s), if applicable	
☐			If preferred alternative is identified, provide basis for recommendation	

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Required	Complete	DEA	CATEGORY	Item No:
			AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	
			Air Quality	
☐			Discuss baseline conditions, attainment status of the project area	
☐			Discuss studies that have been conducted and identify the air quality model used	
☐			Place Air Quality Conformity statement in document. Project must be in conforming TIP (give page number)	
☐			Discuss regional compliance with National Ambient Air Quality Standards (NAAQS)	
☐			Discuss current and anticipated carbon monoxide levels for each alternative	
☐			Discuss cumulative and indirect impacts	
☐			Discuss mitigation, minimization, or avoidance options that would minimize environmental impacts to air quality	
			Noise	
☐			Establish baseline conditions including existing ambient noise levels	
☐			Discuss studies conducted to analyze noise impacts.	
☐			Discuss sensitive noise receptors (schools, churches, hospitals, etc.)	
☐			Compare existing and predicted noise levels with noise abatement criteria (NAC).	
☐			Discuss noise impacts for each alternative	
☐			Discuss reasonable and feasible noise abatement measures that would likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical separations, speed limits), if necessary	
☐			Statement that final decision on implementation of abatement measures will be made after completion of the project design and the public involvement process	
☐			Statement regarding contractor requirements to restrict or reduce transmission of noise during construction activity	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit that shows sensitive noise receptors and location where noise receptor monitoring took place	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Water Quality and Stream Impacts	
☐			Establish baseline conditions including water quality analysis, existing streams, and aquatic and riparian habitat	
☐			Discuss studies that have been conducted	
☐			Discuss water quality analysis and aquatic and riparian habitat	
☐			Discuss potential impacts (channel changes, culverts, bridges)	
☐			Include comparative table which shows water quality impacts	
☐			Discuss consultation with DOW, USACE, and any other appropriate agencies	
☐			Identify and discuss public water sources, sole source aquifers, wells, wellhead protection areas and roadway runoff	
☐			Discuss efforts to avoid and minimize impacts, and appropriate mitigation	
☐			Discuss permits that may be required	
☐			Discuss cumulative and indirect impacts	
☐			Provide an exhibit that identifies water resources within the corridor	
			Floodplains	
☐			Discuss 100 year floodplains using National Flood Insurance Program maps	
☐			Discuss encroachments of project alternatives onto floodplains	
☐			Discuss efforts to avoid and minimize encroachment	
☐			Discuss coordination required (FEMA, DOW, other agencies)	
☐			Discuss permits that are required if applicable	
☐			Discuss cumulative and indirect impacts	
			Wetlands	
☐			Establish baseline conditions including identification of jurisdictional wetlands and other waters of the U.S.	
☐			Discuss field studies that were conducted	
☐			Discuss results of National Wetland Inventory (NWI) maps	
☐			Discuss potential wetland impacts	
☐			Discuss agency coordination and permits that may be required	
☐			Discuss efforts to avoid and minimize impacts and appropriate mitigation	
☐			Include statement that exact determination of impacts to jurisdictional wetlands will be made by DEA after final design	
☐			Discuss cumulative and indirect impacts	
☐			Table identifying wetland type, number of acres, and approximate area of impact	
☐			Include exhibit showing location of wetlands	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Wild and Scenic Rivers	
☐	☐		Establish baseline conditions (identify designated wild and scenic rivers)	
☐	☐		Discuss studies that have been conducted	
☐	☐		Discuss involvement with any stream designated as "wild and scenic river"	
☐	☐		Discuss cumulative and indirect impacts	
☐	☐		Provide Exhibit showing location and impact of wild and scenic river, if applicable	
			Federally Threatened and Endangered Species	
☐	☐		Establish baseline conditions including identification of jurisdictional wetlands and other waters of the U.S.	
☐	☐		Discuss field studies that were conducted	
☐	☐		Discuss results of National Wetland Inventory (NWI) maps	
☐	☐		Discuss potential wetland impacts	
☐	☐		Discuss agency coordination and permits that may be required	
☐	☐		Discuss efforts to avoid and minimize impacts and appropriate mitigation	
☐	☐		Include statement that exact determination of impacts to jurisdictional wetlands will be made by DEA after final design	
☐	☐		Discuss cumulative and indirect impacts	
☐	☐		Table identifying wetland type, number of acres, and approximate area of impact	
☐	☐		Include exhibit showing location of wetlands	
			Section 106	
☐	☐		Establish baseline conditions (identify designated wild and scenic rivers)	
☐	☐		Discuss studies that have been conducted	
☐	☐		Discuss involvement with any stream designated as "wild and scenic river"	
			Historic Structures or Districts	
☐	☐		Discuss studies that were conducted in determining historic characteristics of the area	
☐	☐		Describe Area of Potential Effect [APE]	
☐	☐		Discuss properties listed or determined to be eligible for National Register	
☐	☐		Discuss potential effects on each historic property for each alternative	
☐	☐		Reference coordination with SHPO and FHWA regarding eligibility and effects (include letters in Appendix)	
☐	☐		Discuss any adverse effects and avoidance alternatives or minimization and mitigation, if required	
☐	☐		Reference MOA in appendix, if applicable	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Historic Structures or Districts (continued)	
☐	☐	☐	Discuss studies that were conducted in determining historic characteristics of the area	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide exhibit which identifies APE, and all historic structures and/or districts within the project corridor	
			Archaeological Sites	
☐	☐	☐	Discuss area of potential effect (APE)	
☐	☐	☐	Discuss archaeological investigations that were conducted for each alternative	
☐	☐	☐	Describe all archaeological sites identified; do not show on map or exhibit	
☐	☐	☐	Discuss any parcel(s) for which Phase I could not be completed due to lack of property owner permission (document efforts to access property). If access to the property is not granted an MOA is required.	
☐	☐	☐	Discuss sites recommended for additional work (Phase II); Do not show on map or exhibit	
☐	☐	☐	Discuss any sites potentially eligible or determined to be eligible for National Register	
☐	☐	☐	Reference coordination with SHPO regarding archaeological sites and recommendations for further work (include letters in appendix)	
☐	☐	☐	In the appendices, include MOU for any sites that require additional work or MOA for sites to be mitigated, as appropriate	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Land Use	
☐	☐	☐	Discuss existing land use	
☐	☐	☐	Discuss project compatibility with existing land use plans/comprehensive land use plans for area, if applicable	
☐	☐	☐	Discuss growth inducement (current development trends; indirect effects of the project on land use patterns, population density and growth rate)	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide exhibit, which shows current land use as well as anticipated changes in land use, if applicable.	
			Community/Social Impacts	
☐	☐	☐	Establish baseline conditions (existing neighborhoods and communities)	
☐	☐	☐	Discuss studies that have been conducted	
☐	☐	☐	Discuss population (past, present and future trends)	
☐	☐	☐	Discuss age distribution	
☐	☐	☐	Discuss community cohesion	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Community/Social Impacts (continued)	
☐	☐	☐	Identify family or socially interdependent clusters (two or more residents share phone, car, etc.)	
☐	☐	☐	Discuss employment and labor force	
☐	☐	☐	Identify community resources (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐	☐	☐	Provide exhibit identifying (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐	☐	☐	Discuss impacts to elderly, disabled, non-drivers, transit-dependent, etc.	
☐	☐	☐	Discuss impacts on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety	
☐	☐	☐	Discuss social and cultural loss to the community by those displaced, if applicable	
☐	☐	☐	Discuss impacts on economic vitality in project area and on established business districts	
☐	☐	☐	Reference any consultation with community, city or county officials	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Discuss minimization, mitigation or avoidance options that would minimize impacts	
			Relocations and Displacements	
☐	☐	☐	Establish baseline conditions (available housing and commercia/industrial facilities based on current market data)	
☐	☐	☐	Discuss studies that have been conducted	
☐	☐	☐	Discuss number & type of relocations (residential, commercial, industrial, non-profit, etc.)	
☐	☐	☐	Discuss housing price ranges and owner/tenant status for those properties to be displaced	
☐	☐	☐	Discuss coordination with the MPO or other governmental agencies to identify any other proposed projects or activities that would compete for available comparable housing	
☐	☐	☐	Discuss Relocation Assistance Program (Last Resort Housing, if applicable), Title VI of the Civil Rights Act of 1966	
☐	☐	☐	Discuss available decent, safe and sanitary housing and commercial/industrial facilities based on current market data.	
☐	☐	☐	Include statement, if applicable, that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	
☐	☐	☐	Include a table to summarize relocations for each alternative	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Discuss minimization, mitigation or avoidance options that would minimize impacts	

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**
			Farmland
☐	☐	☐	Establish baseline conditions (identify farmland in project corridor)
☐	☐	☐	Discuss impacts to farmland
☐	☐	☐	Include NRCS LESA Form AD 1006
☐	☐	☐	Discuss consultation with USCS and feasible alternative(s) to avoid farmland impacts if LESA score exceeds 160 points
☐	☐	☐	Discuss cumulative and indirect impacts
☐	☐	☐	Provide exhibit that identifies prime farmland in the project corridor.
			Environmental Justice
☐	☐	☐	Establish baseline conditions
☐	☐	☐	Discuss studies that have been conducted
☐	☐	☐	Include statement that project complies with Executive Order 12898, Environmental Justice guidance
☐	☐	☐	Discuss impacts to minority and/or low-income population. Do not show on map or exhibit
☐	☐	☐	Discuss avoidance, minimization and mitigation, if applicable
☐	☐	☐	Discuss cumulative and indirect impacts
☐	☐	☐	Provide table showing impacts to minority and/or low income populations for each alternative
			Pedestrian and Bicycle Facilities
☐	☐	☐	Establish baseline conditions (discuss existing facilities and their use for recreation or transportation)
☐	☐	☐	Discuss opportunities for providing pedestrian and bicycle facilities
☐	☐	☐	Discuss cumulative and indirect impacts
			UST/Hazardous Materials
☐	☐	☐	Establish baseline conditions (discuss known and potential sites)
☐	☐	☐	Discuss studies that have been conducted
☐	☐	☐	Discuss sites recommended for Phase II site assessments and/or remediation
☐	☐	☐	Discuss KYTC process for remediation (if remediation is necessary)
☐	☐	☐	Include summary table of sites and identify associated alternative
☐	☐	☐	Include exhibit showing location of all sites
☐	☐	☐	Discuss cumulative and indirect impacts

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Visual Impacts	
☐	☐		Establish baseline conditions (existing view shed)	
☐	☐		Discuss impacts the selected alternative will have on the existing viewshed	
☐	☐		Discuss cumulative and indirect impacts	
			Energy	
☐	☐		Discuss cost/benefit analysis of reasonable alternatives (see FHWA T6640.8a guidance)	
			Impacts of Construction Activities (refer to KYTC Standard Specs for Road and Bridge Construction)	
☐	☐		Discuss potential adverse impacts (noise, traffic congestion, detours, etc.)	
☐	☐		Discuss sedimentation and erosion control plan as it relates to construction activities	
☐	☐		Discuss excess excavation and borrow sites	
			Mitigation Measures	
☐	☐		Discuss mitigation commitments for each viable alternative	
			The Relationship between Local Short-term uses of Man's Environment and Maintenance and Enhancement of Long-term Productivity	
☐	☐		Explain that transportation improvements are based on state and/or local comprehensive planning, which consider(s) the need for present	
			Irreversible and Irretrievable Commitments of Resources which would be Involved in the Proposed Action	
☐	☐		Discuss the proposed action's irreversible and irretrievable commitment of resources. (See G25 of the Technical Advisory T6640.8a)	
			List of Preparers	
☐			Include a list of state (and local agency) personnel, including consultants, who were primarily responsible for preparing the FEIS or performing environmental studies, and a brief summary of their qualifications, including educational background and experience.	
☐	☐		Include the FHWA personnel primarily responsible for preparation or review of the FEIS and their qualifications	
			Distribution	
☐	☐		List of agencies, organizations, and persons to whom copies of the statement are sent	
☐	☐		Identify those entities that submitted comments on the document	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Comments and Coordination	
☐	☐	☐	Summary of correspondence (agencies and public)	
☐	☐	☐	Include a list of participating agencies	
☐	☐	☐	Include agency participation plan	
☐	☐	☐	Discuss coordination plan including a project schedule.	
☐	☐	☐	Discuss the early coordination process, including scoping	
☐	☐	☐	Discuss meetings held with community groups (including minority and non-minority interests)	
☐	☐	☐	Discuss opportunities for involvement to define the Purpose and Need as well as range of alternatives.	
☐	☐	☐	Discuss Public Involvement activities	
☐	☐	☐	Discuss the key issues and pertinent information received from the public and government agencies	
☐	☐	☐	Include all concurrence letters received from government agencies	
☐	☐	☐	Include a summary of all comments received from the above mentioned parties	
☐	☐	☐	Include responses to comments received	
☐	☐	☐	Discuss compliance with all applicable environmental laws, executive orders, and other related requirements	
			Appendices	
☐	☐	☐	Summarizes methodologies and results of technical analyses and research	
☐	☐	☐	Document coordination with outside agencies	
☐	☐	☐	Include coordination and concurrence letters	
			Section 4(f)/Programmatic 4(f) and/or 6(f) Discussion (if applicable)	
☐	☐	☐	Discuss publicly owned parks, recreation areas, or wildlife and waterfowl refuges, if applicable	
☐	☐	☐	Discuss both actual use and proximity impacts on each cultural and/or historic resource for each alternative	
☐	☐	☐	Discuss avoidance alternatives which avoid each and all sites	
☐	☐	☐	Measures taken to minimize harm to the historic resource(s) and any required mitigation measures must also be discussed	
☐		☐	Discuss results of coordination efforts with jurisdictional parties over the 4(f) properties and with the National Parks Service for 6(f) properties	
☐	☐	☐	Include MOU in appendices, if applicable	
☐	☐	☐	Identify and discuss any 6(f) impacts associated with the project	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.		Item No:
Commitments to be implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.		

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

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Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description: _____

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" for yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**PROJECT DESCRIPTION**	
☐			Discussion of the project location provided	
☐			Discussion of the purpose and need of the project provided	
☐			Discuss the proposed alternates and the amount of land each alternate will ultimately impact	
☐			Discussion of the typical section for each alternate provided	
			CORRESPONDENCE WITH STATE AND FEDERAL AGENCIES	
			United States Fish and Wildlife Service (USFWS)	
☐			Coordinate with USFWA for identification of federally listed species with potential for occurring within the impact area of the proposed project	
			Kentucky Department of Fish and Wildlife Resources (KDFWR)	
☐			Coordinate with KDFWR for a listing of species which may be located within the project area. Such elements may include state and/or federally listed threatened/endangered species. KDFWR listing of critical natural areas, wildlife management areas, and any information which may be useful for subsequent field surveys (such as location of hibernaculums, wetlands, and other exemplary ecological communities)	
			Kentucky State Nature Preserves Commission (KSNPC)	
☐			Coordinate with KSNPC for identification of state and federally listed species and state nature preserves that may be impacted by the proposed project	
			Kentucky Division of Water (KDOW)	
☐			Coordinate with KDOW for identification of significant aquatic resources such as wild and scenic rivers, outstanding resource waters, municipal water intakes, groundwater recharge areas, karst aquifers, toxic pollutants, and water quality information	
			Kentucky Division of Forestry (KDOF)	
☐			Coordinate with KDOF for identification of state and national champion trees and/or state forests that may be impacted by the proposed project.	
			U.S. Forest Service (USFS)	
☐			If the project is within a national forest, consultation with the USFS will be needed to determine the level of work required to satisfy USFS	
			U.S. National Park Service (USNPS)	
☐			If the project is within a national park, consultation with the USNPS will be needed to determine the level of work required to satisfy USNPS	

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**ENVIRONMENTAL SETTING**
			Climate
☐	☐		Length of growing season, average annual precipitation, average temperatures, etc.
			Physiography
☐	☐		Discuss which physiographic region of Kentucky the project lies within
			Topography
☐	☐		Within the project area, discuss elevation ranges above seal level. A general description of the project area should also be included (i.e., steep side slopes, narrow ridges, broad bottoms, etc.)
			Geology
☐	☐		Discuss the geology of the project area. Discuss any significant geologic features within the project area such as caves, karst plains, coal reserves, acid-yielding geology, cryptoexplosive structures, etc.
			Soils
☐	☐		Discuss the soils occurring within the project corridor. Discuss "highly erodible" soils and "hydric soils" that may be impacted by the proposed project
			Watershed
☐	☐		Discuss the watershed or watersheds within the project area. For discussion purposes, watersheds need to be broken into eight (8) digit and eleven (11) digit **Hydrologic Unit Codes (HUC)**
			Land Use
☐	☐		Discuss land use within the project area (i.e., agricultural, forested, urban, cropland, pastureland, etc.). Estimate percentage of each land use impacted
			Floral Community
☐	☐		Discuss the forest community or communities located within the project area as categorized by Lucy Braun's book "Deciduous Forest of Eastern North America" published in 1950
			METHODS
			Literature and Office Review
☐	☐		Review of publications by various agencies. Agencies may include USFWS, KSNPC, KDFWR, KDOW, USFS, KDS, etc.
☐	☐		Review of information by academia, which may aid in the preparation of the document
☐	☐		Review of USGS topographic and geologic quadrangles and national wetland inventory maps
☐	☐		Contact recognized experts on ecological issues that may have surfaced during the coordination and literature review process

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**METHODS (continued)**	
			Aquatic Sampling Methods	
☐			Methods for collecting aquatic species for KYTC projects will follow KDOW's most current publication "Methods for Assessing Biological Integrity of Surface Water". USEPA's 1999 publication "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers" will need to be followed as well	
☐			Sample all stream crossings and possible channel changes. Sampling will include fish, mussels, macroinvertebrates, water quality, and physical characteristics of the stream	
☐			Sample all wetlands with suitable aquatic habit. Areas may include, but are not limited to, temporarily flooded wetlands, seasonally flooded wetlands, permanently flooded wetlands, semipermanently flooded wetlands, emergent wetlands, oxbows, swamps, sloughs, etc. Sampling should follow KDOW's 1983 publication "Methods for Assessing Biological Integrity of Surface Water"	
☐			Discuss methods utilized to sample aquatic habitats	
☐			If the project area is within the Eastern Kentucky Coalfield Region, a sample of all 1st order and ephemeral streams using the sample sheets found in the USEPA's 1999 publication "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers" will be required. Samples must include conductivity analysis. If the stream or streams are dry, collect the water after a rain event. This sample will be required in addition to the sampling methods stated above.	
			Terrestrial Sampling Methods	
☐			Project area walked and visually surveyed for plant and animal species	
☐			Floral surveys conducted by recording all plants observed and/or collected within the project area during field survey	
☐			Project area investigated for the presence of caves and/or rock shelters	
☐			Field investigations for plants conducted during the spring, summer, and fall to provide an adequate analysis of the various floral communities within the project area	
☐			Faunal investigations include, but are not limited to, overturning rocks, logs, and other debris for evidence of amphibians, reptiles, snails, and small	
☐			Surveys conducted for avifauna	
☐			Bats sampled according to USFWS guidelines	
☐			Terrestrial habit areas delineated, floral and faunal surveys conducted within each habitat type	
☐			Discuss methods utilized to sample terrestrial habitats	
			Wetland Sampling Methods	
☐			Local county soil survey, NWI maps, aerial photographs, USGS topographic maps used to determine potential wetland habits within project area	
☐			On-site wetland determinations conducted using the 1987 U.S. Army Corps of Engineers "Wetland Delineation Manual"	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**METHODS (continued)**	
			State and Federal Threatened/Endangered Species Sampling Methods	
☐			Evaluate habitat for state and federally threatened/endangered species within the project area	
☐			Sampling for federally listed threatened/endangered species completed according to guidelines established by USFWS with the "Recovery Plan" for each species listed for the project area	
☐			Sampling for state listed threatened/endangered species completed according to recommendations made by KDFWR and/or KSNPC	
			SAMPLING RESULTS	
			Literature and Office Review Results	
☐			Results from historical data, literature, and office review. Results may include such elements as NWI listed wetlands, unique geologic features, endangered species locations, unique ecological habitats, etc.	
			Aquatic Sampling Results	
			Macroinvertebrates	
☐			If unable to sample macroinvertebrates, discuss why	
☐			Establish baseline conditions (append species collected and include location of sample sites)	
☐			Identify macroinvertebrates to species if possible; otherwise, genera identification is sufficient	
☐			Discuss EPS richness and provide MBI for each sampled body of water	
☐			If available, compare results to historical data	
			Fishes	
☐			If unable to sample fishes, discuss why	
☐			Establish baseline conditions (provide table of species collected and include location of sample sites)	
☐			Identify all fish to species	
☐			Calculate IBI for each sampled body of water	
☐			If available, compare results to historical data	
			Mussels	
☐			If unable to sample mussels, discuss why	
☐			Establish baseline conditions (provide table of species collected and include location of sample sites)	
☐			Identify all mussels to species	
☐			If available, compare results to historical data	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**SAMPLING RESULTS (continued)**	
			Water Quality	
☐	☐	☐	If unable to sample water quality, discuss why	
☐	☐	☐	Establish baseline conditions (existing water quality, including tables, location of sample sites, etc.)	
☐	☐	☐	Discuss physical characteristics for sample area using data sheets found in the 1999 EPA publication "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers" A-5	
☐	☐	☐	Discuss physical parameters collected. Parameters include color, turbidity, air and water temperatures, conductivity, and stream discharge	
☐	☐	☐	Discuss chemical parameters such as acidity/alkalinity, chloride, carbon dioxide, hardness, iron ammonia nitrogen, dissolved oxygen, pH, sulfate and orthophosphate	
			Terrestrial Sampling Results	
			Floral Surveys	
☐	☐	☐	Discuss plants observed and/or collected during field surveys	
☐	☐	☐	Discuss any unique plants that may have been observed during field surveys	
			Faunal Surveys	
☐	☐	☐	Discuss results from faunal surveys	
☐	☐	☐	Discuss any unique faunal species observed during field surveys	
			Terrestrial Habitats	
☐	☐	☐	Discuss each terrestrial habitat located within the project area. Discussion needs to include the major floral and faunal components of each habitat,	
☐	☐	☐	Compare sample results with historical data	
			Wetland Sampling Results	
☐	☐	☐	Provide the Cowardin Wetland Classification for each wetland within the project area	
☐	☐	☐	Discuss all wetlands in terms of biological significance and/or function regardless of jurisdiction	
☐	☐	☐	Separate wetlands that are jurisdictional or non-jurisdictional according to the USACE field verification	
☐	☐	☐	Discuss each non-jurisdictional wetland within the project area and its role in the existing landscape	
☐	☐	☐	Provide acreage of each non-jurisdictional wetland	
☐	☐	☐	Discuss each jurisdictional wetland within the project area and its role in the existing landscape	
☐	☐	☐	Provide acreage of each jurisdictional wetland	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**SAMPLING RESULTS (continued)**	
			State and Federal Threatened/Endangered Species Samples Results	
☐			Provide results from surveys conducted for state and/or federally threatened/endangered species	
☐			Discuss potential habitat for state and/or federal threatened/endangered species that is located with the project area	
☐			Acreage of state and/or federal threatened/endangered species habitat present within the project area. Habitat brok3en down by each species (Indiana bat habitat, running buffalo clover habitat, gray bat habitat, etc.)	
			IMPACTS AND SUGGESTED MITIGATION MEASURES	
			Significant Ecological Resources	
			Impacts	
☐			Impacts to significant ecological resources provided. Significant ecological resources are issues that may have surfaced during the Correspondence with state and Federal agencies phase and/or the Literature and Office Review phase. Such impacts may include KDFWY WMA, State and/or National Champion trees, a unique geological feature, Outstanding Resource Water, KDOW Special Use Waters, etc.	
			Suggested Mitigation Measures	
☐			Suggested mitigation measures provided	
			Aquatic Ecosystem	
			Impacts	
☐			Discuss cumulative and indirect impacts to the aquatic ecosystem	
☐			Compare results with historical data and evaluate anticipated project effects on the existing and future conditions	
☐			Discuss impacts of each alternate on the aquatic ecosystem	
			Suggested Mitigation Measures	
☐			Suggested mitigation measures provided	
			Streams	
			Impacts	
☐			All streams listed by impacts (culvert, channel change, bridge)	
☐			Determine stream order of each stream impacted by the project (1st order, 2nd order, etc., as well as designating each stream as perennial, intermittent, ephemeral, etc.	
☐			Drainage area will be calculated for watershed area above each impact site	
☐			Length of disturbance determined for each stream impacted by a culvert, channel change, and/or bridge	
			Suggested Mitigation Measures	
☐			Discuss potential mitigation measures (DEA will ultimately be responsible for the mitigation of stream impacts as they pertain to permit)	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**IMPACTS AND SUGGESTED MITIGATION MEASURES (continued)**	
			Terrestrial Ecosystem	
			Impacts	
☐			Discuss impacts to the floral community within the project area. Identify any unique plants which may be impacted by the proposed project	
☐			Discuss impacts to the faunal community within the project area. Identify any unique faunal species which may be impacted by the proposed project	
☐			Discuss impacts to each terrestrial community located within the project area. Identify any unique terrestrial communities impacted by the proposed project	
☐			Discuss impacts of each alternate on the terrestrial ecosystem	
			Suggested Mitigation Measures	
☐			Suggested mitigation measures provided	
			Wetlands	
			Impacts	
☐			Impacts of jurisdictional wetlands field verified by the USACE	
☐			Amount of jurisdictional wetlands, in acres, impacted by each alternate of the project	
☐			Impacts to each jurisdictional wetland, in acres, provided	
☐			Amount of non-jurisdictional wetlands, in acres, impacted by each alternate of the project	
			State and Federal Threatened/Endangered Species	
			Impacts	
☐			Discuss impacts to state and/or federal threatened/endangered species as a result of the project	
☐			Discuss impacts to state and/or federal threatened/endangered species habitat within the project area	
☐			Discuss impacts of each alternate on state and/or federal threatened/endangered species	
☐			Discuss impacts of each alternate on state and/or federal threatened/endangered species habitat	
			Suggested Mitigation Measures	
☐			Suggested mitigation measures provided	
			SHORT-TERM USE VERSUS LONG-TERM PRODUCTIVITY	
☐			Discuss in general terms the proposed project's relationship of local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**	
☐			Discuss in general terms the project's irreversible and irretrievable commit of resources	
			ALTERNATE ANALYSIS AND RECOMMENDATIONS	
☐			Discuss the potential impacts of each alternate on the overall ecological community within the project area	
☐			Based on the overall impacts of each alternate, choose the alternate that will minimize the impacts to the overall ecological community	
			SUMMARY	
☐			Summary of the project included in the report	
☐			Summary includes list of mitigation measures that will minimize impacts of the project as well as the preferred alternate from an ecological perspective	
			REFERENCES	
☐			References provided within the report	
			TABLES	
			Project Limits	
☐			Table showing the total amount of land, in acres, impacted by each alternate of the project	
			Significant Ecological Resources	
☐			Table showing each significant ecological resource impacted and the amount impacted by each alternate	
			Aquatic	
☐			Table of macroinvertebrates species collected	
☐			MBI for each sampled body of water included	
☐			Table of fish species collected	
☐			IBI for each sampled body of water included	
☐			Table of mussels collected	
☐			Tables of water quality analysis provided	
☐			Table showing each alternate's impact on the aquatic ecosystem	

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**TABLES (continued)**
			Streams
☐			All streams listed by impact (culvert, channel change, bridge) per alternate
☐			Table showing stream order of each stream impacted by the project (1st order, 2nd order, etc., as well as designating each stream as perennial, intermittent, ephemeral, etc.)
☐			Table showing the calculated drainage area for the watershed area above each impact site
☐			Table showing the length of disturbance determined for each stream impacted by a culvert, channel change, and/or bridge
			Terrestrial
☐			Table showing a list of floral species observed and/or collected and the habitat(s) they were found to occur within
☐			Table showing a list of faunal species observed and/or collected and the habitat(s) they were found to occur within
☐			Table showing each terrestrial habitat type within the project area and the acreage impacted by each alternate
			Wetlands
☐			Table showing the total acreage of each jurisdictional wetland and the impacted acreage of each jurisdictional wetland
☐			Table showing each alternate and the total amount of jurisdictional wetland impacted by each alternate
			State and Federal Threatened/Endangered Species
☐			Table showing state and federal threatened/endangered species listed for the project
☐			Table showing the amount of each state and federal threatened/endangered species habitat impacted by each alternate
			EXHIBITS
			Project Limits
☐			A topographic map of the project area with right-of-way (ROW) limits for each alternate delineated on the map
☐			A soils map of the project area with the ROW limits for each alternate delineated on the map
☐			An aerial photograph of the project area with the ROW limits for each alternate delineated on the map
			Significant Ecological Resources
☐			A topographic map of the project area with the significant ecological resources and the ROW limits delineated on the map
			Aquatic
☐			Macroinvertebrate sampling sites, fish sampling sites, mussel survey sites, and water quality analysis locations delineated on a topographic map showing the ROW limits
☐			Photographs of each aquatic sampling site provided

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**EXHIBITS (continued)**	
			Streams	
☐	☐		Stream impacts located on topographic map with the ROW limits delineated on the map	
☐	☐		Photographs of each stream impact site provided	
			Terrestrial	
☐	☐		Floral and faunal sampling sites located on a topographic map with the ROW limits delineated on the map	
☐	☐		Photographs of each terrestrial sampling site provided	
☐	☐		Terrestrial habitats delineated on a topographic map with the ROW limits for each alternate	
☐	☐		Terrestrial habitats delineated on an aerial photograph with the ROW limits for each alternate	
			Wetlands	
☐	☐		Jurisdictional wetlands delineated on a topographic map with the ROW limits for each alternate	
☐	☐		Jurisdictional wetlands delineated on an aerial photograph with the ROW limits for each alternate	
☐	☐		Photographs of each jurisdictional wetland provided	
☐	☐		Non-jurisdictional wetlands delineated on a topographic map with the ROW limits for each alternate	
☐	☐		Each jurisdictional wetland surveyed and placed on the preliminary plan sheet for each alternate	
			State and Federal Threatened/Endangered Species	
☐	☐		Sampling sites for all state and federal threatened/endangered species located on topographic map with ROW limits for each alternate	
☐	☐		Photographs for each state and federal threatened/endangered species sampling site provided	
☐	☐		Habitat for each state and federal threatened/endangered species delineated on a topographic map with ROW limits for each alternate	
			APPENDICES	
☐	☐		Coordination letters and coordination response letters from all resource agencies enclosed	
☐	☐		Field data sheets provided (data sheets include routine wetland determination forms, data sheets, "A-5", found in the EPA publication "Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers", aquatic sampling data sheets, terrestrial sampling data sheet, etc.)	
☐	☐		Laboratory data sheets provided	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:

Commitments to be implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.	Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Team Review of Commitments

The findings of the report, including impacts to the project and project commitments, have been presented to the Project Team and will be considered during the development of this project.

KYTC/DEA Environmental Coordinator — Date

Project Manager — Date

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ENVIRONMENTAL ASSESSMENT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3ra) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
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"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Item No:

Required	Complete	DEA	CATEGORY
		Insert checkmark as appropriate	**TITLE PAGE**
☐			Identify level of Environmental Documentation (ED)
☐			Include adequate project description
☐			Project Item Number
☐			Statement: "Submitted pursuant to 42 U.S.C. 4332(2)© by the U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"
☐			Identify cooperating agency(ies)
☐			Date of submittal (month and year)
			SIGNATURE PAGE
☐			Identify level of Environmental Documentation (ED)
☐			Include adequate project description
☐			Project Item Number
☐			Statement: "Submitted pursuant to 42 U.S.C. 4332(2)© by the U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"
☐			Identify cooperating agency(ies)
☐			Signature line for FHA and KYTC
			PROJECT IMPACT PROFILE
☐			Complete Project Impact Profile sheet and attach to document
☐			Identify further work required for unresolved issues

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Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**TABLE OF CONTENTS**
☐	☐	☐	List areas of focus and appropriate page numbers where the information can be found
☐	☐	☐	Listing of exhibits, figures, and tables
			PURPOSE AND NEED
☐	☐	☐	Identify the purpose and need of the project
☐	☐	☐	Discuss project description and setting
☐	☐	☐	Description of existing facility
☐	☐	☐	Briefly describe the project history, including actions taken to date (intermediate planning, scoping, etc..)
			Identify and provide discussion on the following as it pertains to the purpose and need:
☐	☐	☐	Logical termini/independent utility
☐	☐	☐	System linkage
☐	☐	☐	Safety/accident analysis data
☐	☐	☐	Roadway deficiencies
☐	☐	☐	Modal interrelationships - how will the proposed facility interface with and serve to complement airports, railroad facilities, mass transit services, etc.
☐	☐	☐	Level of service/capacity/congestion mitigation
☐	☐	☐	Status of project relative to the Six Year Plan and STIP
☐	☐	☐	Economic development enhancement
☐	☐	☐	Mandated by legislation, if applicable
☐	☐	☐	Provide an exhibit showing the project area

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ALTERNATIVES CONSIDERED BUT ELIMINATED**	
☐			Briefly summarize basis for eliminating other alternatives previously considered but rejected during the project development process.	
			ALTERNATIVES	
			The No Build Discussion	
☐			Discuss anticipated LOS/ADT/capacity/congestion	
☐			Discuss safety and maintenance improvements, both beneficial and adverse	
☐			Discuss whether or not the no build alternative will satisfy the purpose and need	
☐			Discuss current pedestrian and bicycle facilities. Also discuss the beneficial and adverse impact the no build alternative, if chosen, would have on these facilities.	
☐			Discuss beneficial and adverse i8mpacts that congestion management, mass transit, and light rail will have on the no build alternative, if chosen	
☐			Discuss public transit	
			Build Alternatives	
☐			Describe each alternative from their respective logical termini points	
☐			Discuss typical sections/design features for each alternative. Include interchanges, additional collector roads, shoulder and pavement widths, Access, grade, turn lanes, etc.	
☐			Discuss design speeds, anticipated LOS, and traffic data	
☐			Include comparative table to identify the environmental impacts of each alternative	
☐			Discuss opportunities for providing pedestrian and bicycle facilities	
☐			Discuss Congestion Management, Mass Transit, and light rail options for the project.	
☐			Statement that the final selection of an alternative will be made only after consideration of impacts and public hearing comments	
☐			Sufficient (legible, understandable) exhibits showing alternatives	
☐			Discuss 4(f) avoidance alternative(s), if necessary	
☐			Identify Preferred Alternative, if applicable, and provide justification	
☐			Include comparative table of estimated project cost (design, right-of-way, utilities, construction) for each alternative	

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Required	Complete	DEA	CATEGORY	Item No:
		Insert checkmark as appropriate	**ENVIRONMENTAL IMPACTS**	
			Air Quality	
☐	☐	☐	Discuss current conditions and attainment status of the project area	
☐	☐	☐	Discuss studies that have been conducted and which air quality model was used	
☐	☐	☐	Place Air Quality Conformity statement in document. Project must be in conforming TIP (give page number)	
☐	☐	☐	Discuss regional compliance with National Ambient Air Quality Standards (NAAQS)	
☐	☐	☐	Discuss current and anticipated carbon monoxide levels for each alternative	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Discuss mitigation, minimization, or avoidance options that would minimize environmental impacts to air quality	
			Noise	
☐	☐	☐	Discuss current conditions, including existing ambient noise levels	
☐	☐	☐	Identify sensitive noise receptors (schools, churches, hospitals, etc)	
☐	☐	☐	Compare existing and predicted noise levels with noise abatement criteria (NAC) for each alternative.	
☐	☐	☐	Discuss noise impacts for which each alternative	
☐	☐	☐	Discuss reasonable and feasible noise abatement measures that would likely be incorporated into the project (i.e. noise barrier walls, berms, truck restrictions, vertical separations, speed limits), if necessary	
☐	☐	☐	Statement that final decision on implementation of abatement measures will be made after completion of the project design and the public involvement process	
☐	☐	☐	Statement regarding contractor requirements to restrict or reduce transmission of noise during construction activity	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide exhibit that shows sensitive noise receptors and location where noise receptor monitoring took place	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			Water Quality and Stream Impacts	
☐	☐	☐	Establish baseline conditions including water quality analysis, existing streams, and aquatic and riparian habitat	
☐	☐	☐	Discuss studies that have been conducted	
☐	☐	☐	Discuss water quality analysis and aquatic and riparian habitat	
☐	☐	☐	Discuss potential impacts for each alternative (channel changes, culverts, bridges)	
☐	☐	☐	Include comparative table which shows water quality impacts for each alternative	
☐	☐	☐	Discuss consultation with DOW, USACE, and any other appropriate agencies	
☐	☐	☐	Identify and discuss public water sources, wells, and groundwater runoff	
☐	☐	☐	Discuss efforts to avoid and minimize impacts, and appropriate mitigation	
☐	☐	☐	Discuss permits that may be required	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide an exhibit which shows blueline streams	
			Floodplains	
☐	☐	☐	Identify 100 year floodplains using National Flood Insurance Program maps	
☐	☐	☐	Identify encroachments of project alternatives onto floodplains	
☐	☐	☐	Discuss efforts to avoid and minimize encroachment	
☐	☐	☐	Discuss coordination required (FEMA, DOW, other agencies)	
☐	☐	☐	Discuss permits that are required if applicable	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Wetlands	
☐	☐	☐	Establish baseline conditions (discuss and identify location of jurisdictional wetlands and other waters of the U.S.)	
☐	☐	☐	Discuss field studies that were conducted	
☐	☐	☐	Discuss results of National Wetland Inventory (NWI) maps	
☐	☐	☐	Discuss potential wetland impacts	
☐	☐	☐	Discuss agency coordination and permits that may be required	
☐	☐	☐	Discuss efforts to avoid and minimize impacts and appropriate mitigation	
☐	☐	☐	Include statement that exact determination of impacts to jurisdictional wetlands will be made by DEA after final design	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Table identifying wetland type, number of acres, and approximate area of impact for each alternative	
☐	☐	☐	Include exhibit showing location of wetlands for each alternative	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			Wild and Scenic Rivers	
☐	☐	☐	Establish baseline conditions (identify designated "wild and scenic rivers")	
☐	☐	☐	Discuss involvement with any stream designated as "wild and scenic river"	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide exhibit showing location and impact of wild and scenic river, if applicable	
			Federally Threatened and Endangered Species	
☐	☐	☐	Establish baseline conditions (terrestrial ecosystems; habitat types, quality and distribution etc.)	
☐	☐	☐	Discuss coordination with USFWS, KDFWR, and KNPC	
☐	☐	☐	Identify any federally threatened or endangered species and/or designated or proposed critical habitat that may be impacted	
☐	☐	☐	Discuss how the project would affect wildlife migration patterns, if applicable	
☐	☐	☐	Include exhibit showing location of critical habitat, if present, and avoidance alternatives	
☐	☐	☐	Discuss Biological Assessment (BA) requirements and, if applicable, Section 7 Consultation requirements	
☐	☐	☐	Discuss mitigation of impacts to T&E species or critical habitat, if necessary	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Section 106	
☐	☐	☐	Identify consulting parties, including federally recognized Native American tribes	
☐	☐	☐	Discuss efforts to consult with Native American tribes, local governmental agencies, and other interested parties	
☐	☐	☐	Discuss an involvement that other agencies/organizations (public groups, citizens advisory groups, resource agencies, etc.) may have had	
			Historic Structures or Districts	
☐	☐	☐	Discuss studies that were conducted in determining historic characteristics of the area	
☐	☐	☐	Describe Area of Potential Effect [APE]	
☐	☐	☐	Identify properties eligible or determined to be eligible for National Register	
☐	☐	☐	Discuss potential effects on each historic property for each alternative	
☐	☐	☐	Reference coordination with SHPO and FHWA regarding eligibility and effects (include letters in Appendix)	
☐	☐	☐	Discuss any adverse effects and avoidance alternatives or minimization and mitigation, if required	
☐	☐	☐	Reference MOA in the appendix, if applicable	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide exhibit which identifies APE, and all historic structures and/or districts within the project corridor	

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Required	Complete DEA	CATEGORY	Item No:
Insert checkmark as appropriate		**ENVIRONMENTAL IMPACTS (continued)**	
		Archaeological Sites	
☐	☐	Discuss Area of Potential Effect (APE)	
☐	☐	Discuss archaeological investigations that were conducted for each alternative	
☐	☐	Describe all archaeological sites identified	
☐	☐	Discuss any parcel(s) for which Phase I could not be completed due to lack of property owner permission (document efforts to access property) If access to the property is not granted an MOA is required.	
☐	☐	Identify sites recommended for additional work (Phase II)	
☐	☐	Identify any sites eligible or determined to be eligible for National Register	
☐	☐	Reference coordination with SHPO regarding archaeological sites and recommendations for further work (include letters in appendix)	
☐	☐	Include MOU in appendix for any sites that require additional work	
☐	☐	Discuss cumulative and indirect impacts	
		Land Use	
☐	☐	Discuss existing land use	
☐	☐	Discuss project compatibility with existing land use plans	
☐	☐	Discuss growth inducement (current development trends; indirect effects of the project on land use patterns, population density and growth	
☐	☐	Discuss cumulative and indirect impacts	
☐	☐	Provide exhibit, which shows current land use as well as anticipated changes in land use, if applicable.	
		Community Impacts	
☐	☐	Establish baseline conditions (existing neighborhoods and communities)	
☐	☐	Discuss population	
☐	☐	Discuss age distribution	
☐	☐	Discuss community cohesion	
☐	☐	Identify family or socially interdependent clusters (two or more residents share phone, car, etc.)	
☐	☐	Discuss employment and labor force	
☐	☐	Identify community resources (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐	☐	Provide exhibit identifying (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐	☐	Discuss impacts on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety	
☐	☐	Discuss social and cultural loss to the community by those displaced, if applicable	
☐	☐	Discuss impacts on economic vitality in project area and on established business districts	
☐	☐	Reference any consultation with community, city, or county officials	
☐	☐	Discuss cumulative and indirect impacts	

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Item No:

Required	Complete DEA	CATEGORY	ENVIRONMENTAL IMPACTS (continued)
Insert checkmark as appropriate			
		Relocations and Displacements	
☐	☐	Establish baseline conditions (available housing and commercial/industrial facilities based on current market data)	
☐	☐	Identify number & type of relocations (residential, commercial, industrial, non-profit, etc.) for each alternative	
☐	☐	Discuss coordination with the MPO or other governmental agencies to identify any other proposed projects or activities that would compete for	
☐	☐	Discuss Relocation Assistance Program (Last Resort Housing, if applicable), Title VI of the Civil Rights Act of 1966	
☐	☐	Include statement, if applicable, that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	
☐	☐	Include a table to summarize relocations for each alternative	
☐	☐	Discuss cumulative and indirect impacts	
		Farmland	
☐	☐	Establish baseline conditions (identify farmland in project corridor)	
☐	☐	Discuss impacts to farmland	
☐	☐	Include NRCS LESA Form AD 1006	
☐	☐	Discuss feasible alternative to avoid farmland impacts if LESA score exceeds 160 points	
☐	☐	Discuss cumulative and indirect impacts	
☐	☐	Provide exhibit that identifies prime farmland in the project corridor.	
		Environmental Justice	
☐	☐	Establish baseline conditions	
☐	☐	Include statement that project complies with Executive Order 12898, Environmental Justice guidance	
☐	☐	Identify impacts to minority and/or low income population	
☐	☐	Discuss avoidance, minimization and mitigation, if applicable	
☐	☐	Discuss cumulative and indirect impacts	
		Pedestrian and Bicycle Facilities	
☐	☐	Establish baseline conditions (identify existing facilities and their use for recreation or transportation)	
☐	☐	Discuss opportunities for providing pedestrian and bicycle facilities	
☐	☐	Discuss cumulative and indirect impacts	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			UST/Hazardous Materials	
☐	☐	☐	Establish baseline conditions (identify known and potential sites)	
☐	☐	☐	Identify sites recommended for Phase II site assessments and/or remediation	
☐	☐	☐	Discuss KYTC process for remediation (if remediation is necessary)	
☐	☐	☐	Include summary table of sites and identify associated alternative	
☐	☐	☐	Include exhibit showing location of all sites	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Visual Impacts	
☐	☐	☐	Establish baseline conditions (existing view shed)	
☐	☐	☐	Discuss view of proposed road from surrounding area and view from the proposed road	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Impacts of Construction Activities	
☐	☐	☐	Discuss potential adverse impacts (noise, traffic congestion, detours, etc.)	
☐	☐	☐	Discuss waste and borrow sites	
☐	☐	☐	Refer to KYTC Standard Specs for Road and Bridge Construction	
			Mitigation Measures	
☐	☐	☐	Identify mitigation commitments for each viable alternative	
			Comments and Coordination	
☐	☐	☐	Summary of correspondence	
☐	☐	☐	Public involvement activities	
			Section 4(f)/Programmatic 4(f) and/or 6(f) (if applicable)	
☐	☐	☐	If Section 4(f) impacts are unavoidable on all alternatives, the 4(f) discussion must be included as Section VI of the EA, and it must be demonstrated that there are no other feasible and prudent alternatives available.	
☐	☐	☐	Measures taken to minimize harm to the 4(f) resource and any required mitigation measures must also be discussed (attach MOA if required)	
☐	☐	☐	Identify and discuss any 6(f) impacts associated with the project (attach MOA if required)	

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SIGNATURE PAGE

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Prime Consultant _____ Date _____

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer _____ Date _____

Project Manager _____ Date _____

EXHIBIT
Environmental Assessment GAF, TC 58-38
EA-9010

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FINAL ENVIRONMENTAL IMPACT STATEMENT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description: _____

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
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Approval Date: Date baseline is approved by DEA (DEA use only).
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"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
"Commitments to be Implemented" page: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.
"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Required	Complete	DEA	CATEGORY	Item No:
		Insert checkmark as appropriate	**TITLE PAGE**	
☐			Identify level of environmental documentation (EA)	
☐			Adequate project description (route, termini, city or county, and state)	
☐			Include state and federal Project Item Number	
☐			Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) By The U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"	
☐			Identify cooperating agency(ies)	
☐			List KYTC as a joint lead agency	
☐			Date of submittal (month and year)	
			SIGNATURE PAGE	
☐			Identify level of environmental documentation (EA)	
☐			Adequate project description (route, termini, city or county, and state)	
☐			Include state and federal Project Item Number	
☐			Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) by the U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"	
☐			Identify cooperating agency(ies)	
☐			List KYTC as a joint lead agency	
☐			Signature line for FHWA and KYTC	
			PROJECT IMPACT PROFILE	
☐			Complete Project Impact Profile sheet and attach to document	
☐			Discuss unresolved issues or further work required to satisfy mitigation measures or other commitments	

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		Insert checkmark as appropriate	**EXECUTIVE SUMMARY**	
☐		☐	Brief description of proposed FHWA action indicating route, termini, type of improvement, number of lanes, length, county, city, state, etc.	
☐		☐	Description of any major actions proposed by other governmental agencies in the same geographic area as the proposed FHWA action	
☐		☐	Summarize all reasonable alternatives considered and identify the preferred alternative and the basis for its selection	
☐		☐	Summarize all major environmental impacts of the preferred alternative, both beneficial and adverse	
☐		☐	Summarize any areas of controversy, including those raised by agencies and the public	
☐		☐	Summarize any unresolved issues and commitments (permit approvals, and transfers, Section 106, etc.)	
			TABLE OF CONTENTS	
☐		☐	List areas of focus and appropriate page numbers where the information can be found	
☐		☐	Listing of exhibits, figures, and tables	
☐		☐	Appendices: must include a copy of the DEIS attached in electronic format	
			PURPOSE AND NEED	
☐		☐	Summarize the purpose and need of the project	
☐		☐	Reference the DEIS, as appropriate	
☐		☐	Provide an exhibit showing the project area	
			If the purpose and need outlined in the DEIS has not changed since its publication, there is no need to discuss further. Simply place a statement in the document that there are no changes in the purpose and need. If changes have occurred, identify and provide discussion on any changes to the purpose and need related to the following:	
☐		☐	Logical termini/independent utility	
☐		☐	System Linkage	
☐		☐	Safety/accident analysis data	
☐		☐	Roadway deficiencies	
☐		☐	Modal interrelationships – how will the proposed facility interface with and serve to complement airports, rail road facilities, mass transit services,	
☐		☐	Level of service/capacity/congestion mitigation	
☐		☐	Status of the project relative to the Six Year Plan and STIP	
☐		☐	Economic development enhancement	
☐		☐	Mandated by legislation, if applicable	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ALTERNATIVES**	
			Alternatives Considered but Eliminated	
☐			Identify alternatives that were considered but not carried forward as reasonable alternatives for detailed analysis by cross reference to the DEIS	
			The No Build Discussion	
☐			Discuss whether the No Build alternative will satisfy the purpose and need, and reference the DEIS	
			Build Alternatives	
☐			Cross reference DEIS for detailed discussion	
☐			Include comparative table to identify the environmental impacts and estimated project cost (design, right of way, utilities, and construction) of each alternative. Cost estimates are to be provided for the year of expenditure.	
☐			Sufficient (legible, understandable) exhibits showing alternatives, clearly identifying the preferred alternative	
☐			Discuss 4(f) avoidance alternative(s), if applicable	
☐			Discuss the preferred alternative and provide basis for recommendation	
			AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	
			Air Quality	
			If the preferred alternative does not have air quality impacts, this section does not need to be discussed. Simply place an Air Quality Conformity statement in document and reference the TIP and the DEIS. If air quality impacts are associated with the preferred alternative:	
☐			Discuss baseline conditions, attainment status of the project area	
☐			Discuss studies that have been conducted and identify the air quality model used	
☐			Place Air Quality Conformity statement in document. Project must be in conforming TIP (give page number)	
☐			Discuss regional compliance with National Ambient Air Quality Standards (NAAQS)	
☐			Discuss current and anticipated carbon monoxide levels	
☐			Discuss cumulative and indirect impacts	
☐			Discuss mitigation, minimization, or avoidance options that would minimize environmental impacts to air quality	

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Noise	
			If the preferred alternative in the FEIS does not have noise impacts, this section does not need to be discussed. Simply place a statement in the document that there are no noise impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have noise impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions including existing ambient noise levels	
☐			Discuss studies conducted to analyze noise impacts.	
☐			Discuss sensitive noise receptors (schools, churches, hospitals, etc.)	
☐			Compare existing and predicted noise levels with noise abatement criteria (NAC).	
☐			Discuss noise impacts	
☐			Discuss reasonable and feasible noise abatement measures that would likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical separations, speed limits), if necessary	
☐			Statement that final decision on implementation of abatement measures will be made after completion of the project design and the public involvement process	
☐			Statement regarding contractor requirements to restrict or reduce transmission of noise during construction activity	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit that shows sensitive noise receptors and location where noise receptor monitoring took place	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Water Quality and Stream Impacts	
			If the preferred alternative in the FEIS does not have water quality and stream impacts, this section does not need to be discussed. Simply place a statement in the document that there are no water quality and stream impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have water quality and stream impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐	☐	☐	Establish baseline conditions including water quality analysis, existing streams, and aquatic and riparian habitat	
☐	☐	☐	Discuss studies that have been conducted	
☐	☐	☐	Discuss water quality analysis and aquatic and riparian habitat	
☐	☐	☐	Discuss potential impacts (channel changes, culverts, bridges)	
☐	☐	☐	Include comparative table which shows water quality impacts	
☐	☐	☐	Discuss consultation with DOW, USACE, and any other appropriate agencies	
☐	☐	☐	Identify and discuss public water sources, sole source aquifers, wells, wellhead protection areas and roadway runoff	
☐	☐	☐	Discuss efforts to avoid and minimize impacts, and appropriate mitigation	
☐	☐	☐	Discuss permits that may be required	
☐	☐	☐	Discuss cumulative and indirect impacts	
☐	☐	☐	Provide an exhibit that identifies water resources within the corridor	
			Floodplains	
			If the preferred alternative in the FEIS does not have floodplain impacts, this section does not need to be discussed. Simply place a statement in the document that there are no floodplain impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have floodplain impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐	☐	☐	Discuss 100 year floodplains using National Flood Insurance Program maps	
☐	☐	☐	Discuss encroachments of project alternatives onto floodplains	
☐	☐	☐	Discuss efforts to avoid and minimize encroachment	
☐	☐	☐	Discuss coordination required (FEMA, DOW, other agencies)	
☐	☐	☐	Discuss permits that are required if applicable	
☐	☐	☐	Discuss cumulative and indirect impacts	

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Wetlands	
			If the preferred alternative in the FEIS does not have wetland impacts, this section does not need to be discussed. Simply place a statement in the document that there are no wetland impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have wetland impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions including identification of jurisdictional wetlands and other waters of the U.S.	
☐			Discuss field studies that were conducted	
☐			Discuss results of National Wetland Inventory (NWI) maps	
☐			Discuss potential wetland impacts	
☐			Discuss agency coordination and permits that may be required	
☐			Discuss efforts to avoid and minimize impacts and appropriate mitigation	
☐			Include statement that exact determination of impacts to jurisdictional wetlands will be made by DEA after final design	
☐			Discuss cumulative and indirect impacts	
☐			Table identifying wetland type, number of acres, and approximate area of impact	
☐			Include exhibit showing location of wetlands	
			Wild and Scenic Rivers	
			If the preferred alternative in the FEIS does not have wild and scenic river impacts, this section does not need to be discussed. Simply place a statement in the document that there are no wild and scenic river impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have wild and scenic river impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (identify designated wild and scenic rivers)	
☐			Discuss studies that have been conducted	
☐			Discuss involvement with any stream designated as “wild and scenic river”	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit showing location and impact of wild and scenic river, if applicable	

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Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Federally Threatened and Endangered Species	
			If the preferred alternative in the FEIS does not have T&E Species impacts, this section does not need to be discussed. Simply place a statement in the document that there are no T&E Species impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have T&E Species impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (terrestrial ecosystems; habitat types, quality and distribution etc.)	
☐			Discuss studies that have been conducted	
☐			Discuss and State Protected/Special Concern species	
☐			Discuss coordination with USFWS, KDFWR, and KNPC	
☐			Discuss any federally threatened or endangered species and/or designated or proposed critical habitat that may be impacted	
☐			Discuss how the project would affect wildlife migration patterns, if applicable	
☐			Include exhibit showing location of critical habitat, if present, and avoidance alternatives	
☐			Discuss Biological Assessment (BA) requirements and, if applicable, Section 7 Consultation requirements	
☐			Discuss minimization/mitigation of impacts to T&E species or critical habitat, if applicable	
☐			Discuss cumulative and indirect impacts	
			Section 106	
			If the preferred alternative in the FEIS does not have Section 106s impacts, this section does not need to be discussed. Simply place a statement in the document that there are no Section 106 impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have Section 106 impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Discuss efforts to consult with Native American tribes, local governmental agencies, Consulting Parties and other interested parties	
☐			Identify consulting parties, including federally recognized Native American tribes	
☐			Discuss any involvement that other agencies/organizations (public groups, citizens advisory groups, resource agencies, etc.) may have had throughout the project process	

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Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Archaeological Sites	
			If the preferred alternative in the FEIS does not have Archaeology impacts, this section does not need to be discussed. Simply place a statement in the document that there are no Archaeology impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have Archaeology impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Discuss studies that were conducted in determining historic characteristics of the area	
☐			Describe Area of Potential Effect [APE]	
☐			Discuss properties listed or determined to be eligible for National Register	
☐			Discuss potential effects on each historic property	
☐			Reference coordination with SHPO and FHWA regarding eligibility and effects (include letters in appendix)	
☐			Discuss any adverse effects and avoidance alternatives or minimization and mitigation, if required	
☐			Reference MOA in appendix, if applicable	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit which identifies APE, and all historic structures and/or districts within the project corridor	
			Land Use	
			If the preferred alternative in the FEIS does not have Land Use impacts, this section does not need to be discussed. Simply place a statement in the document that there are no Land Use impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have Land Use impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Discuss existing land use	
☐			Discuss project compatibility with existing land use plans/comprehensive land use plans for area, if applicable	
☐			Discuss growth inducement (current development trends; indirect effects of the project on land use patterns, population density and growth rate)	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit, which shows current land use as well as anticipated changes in land use, if applicable	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Community/Social Impacts	
			If the preferred alternative in the FEIS does not have community/social impacts, this section does not need to be discussed. Simply place a statement in the document that there are no community/social impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have community/social impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (existing neighborhoods and communities)	
☐			Discuss studies that have been conducted	
☐			Discuss population (past, present and future trends)	
☐			Discuss age distribution	
☐			Discuss community cohesion	
☐			Identify family or socially interdependent clusters (two or more residents share phone, car, etc.)	
☐			Discuss employment and labor force	
☐			Identify community resources (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐			Provide exhibit identifying (parks, churches, shopping, schools, emergency services, libraries, etc.)	
☐			Discuss impacts to elderly, disabled, non-drivers, transit-dependent, etc.	
☐			Discuss impacts on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety	
☐			Discuss social and cultural loss to the community by those displaced, if applicable	
☐			Discuss impacts on economic vitality in project area and on established business districts	
☐			Reference any consultation with community, city or county officials	
☐			Discuss cumulative and indirect impacts	
☐			Discuss minimization, mitigation or avoidance options that would minimize impacts	

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Relocations and Displacements	
			If the preferred alternative in the FEIS does not have relocation impacts, this section does not need to be discussed. Simply place a statement in the document that there are no relocation impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have relocation impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (available housing and commercial/industrial facilities based on current market data)	
☐			Discuss studies that have been conducted	
☐			Discuss number & type of relocations (residential, commercial, industrial, non-profit, etc.)	
☐			Discuss housing price ranges and owner/tenant status for those properties to be displaced	
☐			Discuss coordination with the MPO or other governmental agencies to identify any other proposed projects or activities that would compete for available comparable housing	
☐			Discuss Relocation Assistance Program (Last Resort Housing, if applicable), Title VI of the Civil Rights Act of 1966	
☐			Discuss available decent, safe and sanitary housing and commercial/industrial facilities based on current market data	
☐			Include statement, if applicable, that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	
☐			Include a table to summarize relocations	
☐			Discuss cumulative and indirect impacts	
			Farmland	
			If the preferred alternative in the FEIS does not have farmland impacts, this section does not need to be discussed. Simply place a statement in the document that there are no farmland impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have farmland impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (identify farmland in project corridor)	
☐			Discuss impacts to farmland	
☐			Include NRCS LESA Form AD 1006	
☐			Discuss consultation with USCS and feasible alternative(s) to avoid farmland impacts if LESA score exceeds 160 points	
☐			Discuss cumulative and indirect impacts	
☐			Provide exhibit that identifies prime farmland in the project corridor	

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Environmental Justice	
			If the preferred alternative in the FEIS does not have relocation impacts, this section does not need to be discussed. Simply place a statement in the document that there are no relocation impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have relocation impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Establish baseline conditions (available housing and commercial/industrial facilities based on current market data)	
☐			Discuss studies that have been conducted	
☐			Discuss number & type of relocations (residential, commercial, industrial, non-profit, etc.)	
☐			Discuss housing price ranges and owner/tenant status for those properties to be displaced	
☐			Discuss coordination with the MPO or other governmental agencies to identify any other proposed projects or activities that would compete for	
☐			Discuss Relocation Assistance Program (Last Resort Housing, if applicable), Title VI of the Civil Rights Act of 1966	
☐			Discuss available decent, safe and sanitary housing and commercial/industrial facilities based on current market data	
☐			Include statement, if applicable, that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	
			Pedestrian and Bicycle Facilities	
☐			Establish baseline conditions (discuss existing facilities and their use for recreation or transportation)	
☐			Discuss the pedestrian and bicycle facilities that were considered in conjunction with the preferred alternative and provide explanation and justification for decisions made	

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Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			UST/Hazardous Materials	
			If the preferred alternative in the FEIS does not have UST/Hazardous impacts, this section does not need to be discussed. Simply place a statement in the document that there are no UST/Hazardous impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have UST/Hazardous impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐	☐	☐	Establish baseline conditions (discuss known and potential sites)	
☐	☐	☐	Discuss studies that have been conducted	
☐	☐	☐	Discuss sites recommended for Phase II site assessments and/or remediation	
☐	☐	☐	Discuss KYTC process for remediation (if remediation is necessary)	
☐	☐	☐	Include summary table of sites and identify associated alternative	
☐	☐	☐	Include exhibit showing location of all sites	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Visual Impacts	
			If the preferred alternative in the FEIS does not have visual impacts, this section does not need to be discussed. Simply place a statement in the document that there are no visual impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have visual impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐	☐	☐	Establish baseline conditions (existing view shed)	
☐	☐	☐	Discuss impacts the selected alternative will have on the existing viewshed	
☐	☐	☐	Discuss cumulative and indirect impacts	
			Energy	
☐	☐	☐	Discuss cost/benefit analysis of reasonable alternatives (see FHWA T6640.8 guidance)	

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			Impacts of Construction Activities (refer to KYTC *Standard Specifications for Road and Bridge Construction*)	
			If the preferred alternative in the FEIS does not have construction impacts, this section does not need to be discussed. Simply place a statement in the document that there are no construction impacts associated with this project and reference the DEIS. If the preferred alternative is anticipated to have construction impacts, reference and summarize the information in the DEIS which has not changed and focus attention on the items below relative to the preferred alternative.	
☐			Discuss potential adverse impacts (noise, traffic congestion, detours, etc.)	
☐			Discuss sedimentation and erosion control plan as it relates to construction activities	
☐			Discuss excess excavation and borrow sites	
			Mitigation Measures	
☐			Discuss mitigation commitments for the preferred alternative	
			Relationship between Local Short-term Uses of Man's Environment and Maintenance and Enhancement of Long-term Productivity	
☐			Explain that transportation improvements are based on state and/or local comprehensive planning, which consider(s) the need for present and future traffic requirements within the context of present and future land use development. (See G24 of the Technical Advisory T6640.8a)	
			Irreversible and Irretrievable Commitments of Resources which would be Involved in the Proposed Action	
☐			Discuss the proposed action's irreversible and irretrievable commitment of resources. (See G25 of the Technical Advisory T6640.8a)	
			List of Preparers	
☐			Include a list of state (and local agency) personnel, including consultants, who were primarily responsible for preparing the FEIS or performing environmental studies, and a brief summary of their qualifications, including educational background and experience	
☐			Include the FHWA personnel primarily responsible for preparation or review of the FEIS and their qualifications	
			Distribution	
☐			List of agencies, organizations, and persons to whom copies of the statement are sent	
☐			Identify those entities that submitted comments on the document	

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Insert checkmark as appropriate			**AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES (continued)**	
			Comments and Coordination	
			Summarize the public involvement that was undertaken prior to publication of the DEIS and reference the DEIS for details related to these activities. For al lpublic involvement activities that have occurred since publication of the DEIS, including the public hearing, focus attention on the items below relative to the preferred alternative.	
☐			Discuss public involvement activities	
☐			Discuss the key issues and pertinent information received from the public and government agencies	
☐			Include all comment letters received from the public and government agencies	
☐			Include a summary of all comments received from the above mentioned parties	
☐			Include responses to comments received	
			Appendices	
☐			Summarizes methodologies and results of technical analyses and research	
☐			Document coordination with outside agencies	
☐			Include coordination and concurrence letters	
			Section 4(f)/Programmatic 4(f) and/or 6(f) Discussion (if applicable)	
☐			Discuss publicly owned parks, recreation areas, or wildlife and waterfowl refuges, if applicable	
☐			Discuss both actual use and proximity impacts on each cultural and/or historic resource	
☐			Discuss avoidance alternatives which avoid each and all sites	
☐			Measures taken to minimize harm to the historic resource(s) and any required mitigation measures must also be discussed	
☐			Discuss results of coordination efforts with jurisdictional parties over the 4(f) properties and with the National Parks Service for 6(f) properties	
☐			Include MOU in appendices, if applicable	
☐			Identify and discuss any 6(f) impacts associated with the project	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:
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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.	

FINAL ENVIRONMENTAL IMPACT STATEMENT - GUIDANCE AND ACCOUNTABILITY

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

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FINDING OF NO SIGNIFICANT IMPACT (FONSI) - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft # _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2no, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" for yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
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Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**TITLE PAGE**
☐	☐	☐	Identify level of Environmental Documentation (EA)
☐	☐	☐	Adequate project description
☐	☐	☐	Project Item Number
☐	☐	☐	Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) By The U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"
☐	☐	☐	Identify Cooperating Agency(ies)
☐	☐	☐	Date of Submittal (month and year)
☐	☐	☐	Date of EA approval.
			SIGNATURE
☐	☐	☐	Identify level of Environmental Documentation (FONSI)
☐	☐	☐	Include adequate project description
☐	☐	☐	Project Item Number
☐	☐	☐	Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) By The U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis"
☐	☐	☐	Identify Cooperating Agency(ies)
☐	☐	☐	Signature line for FHWA and KYTC
			PROJECT IMPACT PROFILE
☐	☐	☐	Fill out Project Impact Profile sheet and attach to document
☐	☐	☐	Identify further work required for unresolved issues
			TABLE OF CONTENTS
☐	☐	☐	List areas of focus and appropriate page numbers where the information can be found
☐	☐	☐	Listing of exhibits, figures, and tables

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**PURPOSE AND NEED**	
☐			Discuss project description and setting	
☐			Description of existing facility	
☐			Reference any planning and scoping documents	
☐			Discuss the purpose and need for the project. What is the transportation problem and why does it need to be solved?	
☐			Provide an exhibit showing the project area	
			SELECTED ALTERNATIVE	
☐			Briefly summarize basis for eliminating other alternative previously considered but rejected during the project development process	
☐			Discuss the attributes of the selected alternative. Include logical termini points	
☐			Discuss typical sections/design features for selected alternative. Include interchanges, additional collector roads, shoulder and pavement widths, access, grade, turn lanes, etc.	
☐			Discuss design speeds, anticipated LOS, and traffic data	
☐			Include table to identify the environmental impacts of the selected alternative	
☐			Identify selected alternative and provide justification	
☐			Sufficient (legible, understandable) exhibits showing selected alternative	
☐			Include comparative table of estimated project cost (design, right-of-way, utilities, construction) for the selected alternative	
			ENVIRONMENTAL IMPACTS	
			Air Quality	
☐			If the selected alternative will have no impact on air quality, do not discuss this section	
☐			Discuss air quality impacts associated with the selected alternative, if applicable	
☐			Discuss mitigation, minimization, or avoidance options that would minimize environmental impacts to air quality, if applicable	

FINDING OF NO SIGNIFICANT IMPACT (FONSI) - GUIDANCE AND ACCOUNTABILITY

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			Noise	
☐			If the selected alternative will have no impact on noise, do not discuss this section	
☐			Discuss noise impacts associated with the selected alternative, if applicable	
☐			Discuss reasonable and feasible noise abatement measures that would likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical separations, speed limits), if necessary	
☐			If there are noise impacts associated with the selected alternative, provide an exhibit that shows the noise	
			Water Quality and Stream Impacts	
☐			If the selected alternative will have no impact on water quality, do not discuss this section	
☐			Discuss water quality and stream impacts associated with the selected alternative, if applicable	
☐			Discuss efforts to avoid and minimize impacts, and appropriate mitigation, if applicable	
☐			If there are water quality and stream impacts associated with the selected alternative, provide an exhibit which identifies where these impacts occur	
			Floodplains	
☐			If the selected alternative will have no impact on floodplains, do not discuss this section	
☐			Discuss floodplain impacts that are associated with the selected alternative, if applicable	
☐			Discuss efforts to avoid and minimize encroachment, if applicable	
☐			If there are floodplain impacts associated with the selected alternative, provide an exhibit which identifies where these impacts occur	
			Wetlands	
☐			If the selected alternative will have no impact on wetlands, do not discuss this section	
☐			Discuss potential wetland impacts associated with the selected alternative, if applicable	
☐			Discuss efforts to avoid and minimize impacts and appropriate mitigation, if applicable	
☐			If there are potential wetland impacts associated with the selected alternative, Include exhibit showing location of wetlands	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			Wild and Scenic Rivers	
☐			If the selected alternative will have no impact on wild and scenic rivers, do not discuss this section	
☐			Discuss involvement with any stream designated as "wild and scenic river", if applicable	
☐			Discuss avoidance, minimization and mitigation, if applicable	
☐			If there are impacts to wild and scenic rivers associated with the selected alternative, provide exhibit showing location and impact of wild and scenic river(s)	
			Federally Threatened and Endangered Species	
☐			If the selected alternative will have no impact on federally threatened and endangered species and/or critical habitat, do not discuss this section	
☐			Identify any federally threatened or endangered species and/or designated or proposed critical habitat that may be impacted, if applicable	
☐			Discuss mitigation of impacts to T&E species or critical habitat, if applicable	
☐			Include exhibit showing location and impact of T&ES critical habitat, if applicable	
			Section 106	
☐			Identify consulting parties, including federally recognized Native American tribes	
☐			Discuss efforts to consult with Native American tribes, local governmental agencies, and other interested parties	
☐			Discuss an involvement that other agencies/organizations (public groups, citizens advisory groups, resource agencies, etc.) may have had throughout the project process	
			Historic Structures or Districts	
☐			If the selected alternative will have no impact on Historic structures or districts, do not discuss this section	
☐			Discuss any impacts the selected alternative will have on each historic property (ies), if applicable	
☐			Discuss any minimization and mitigation, if required	
☐			Reference MOA in the appendix, if applicable	
☐			If there are impacts to historic properties associated with the selected alternative, provide exhibit which identifies all historic structures and/or districts	

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**
			Archaeological Sites
☐	☐		If the selected alternative will have no impact on archaeological sites, do not discuss this section
☐	☐		Discuss any impacts the selected alternative will have on each archaeological site(s), if applicable
☐	☐		Discuss any minimization and/or mitigation, if applicable
☐	☐		Include MOA in the appendix for any sites that require additional work
			Land Use
☐	☐		Discuss changes that the selected alternative will have on current land use
☐	☐		Provide exhibit, which shows current land use as well as anticipated changes in land use, if applicable.
			Community Impacts
☐	☐		Discuss impacts the selected alternative will have on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety
☐	☐		Discuss social and cultural loss to the community by those displaced, if applicable
☐	☐		Discuss impacts on economic vitality in project area and on established business districts
			Relocation Impacts
☐	☐		If the selected alternative will have no relocation impacts, do not discuss this section
☐	☐		Identify number & type of relocations (residential, commercial, industrial, non-profit, etc.) for selected alternative, if applicable
☐	☐		Identify available housing in the area, if relocations are to occur
☐	☐		Discuss Relocation Assistance Program (Last Resort Housing, if applicable), Title VI of the Civil Rights Act of 1966, if relocations are to occur
☐	☐		Include statement, if applicable, that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, if relocations are to occur
			Farmland
☐	☐		If the selected alternative will have no impact on farmland, do not discuss this section
☐	☐		Discuss impacts the selected alternative will have on farmland, if applicable
☐	☐		Include NRCS LESA Form AD 1006
☐	☐		If there are impacts to farmland associated with the selected alternative, provide an exhibit that identifies prime farmland.

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**
			Environmental Justice
☐	☐		If the selected alternative will have no impact on minority and/or low-income populations, do not discuss this section
☐	☐		Identify impacts to minority and/or low income population, if applicable
☐	☐		Include statement that project complies with Executive Order 12898, Environmental Justice guidance
☐	☐		Discuss avoidance, minimization and mitigation, if applicable
			Pedestrian and Bicycle Facilities
☐	☐		Discuss opportunities for providing pedestrian and bicycle facilities
			UST/Hazardous Materials
☐	☐		If the selected alternative will have no impact on UST/hazardous materials, do not discuss this section
☐	☐		Discuss impact the selected alternative will have on UST/hazardous materials, if applicable
☐	☐		Identify sites recommended for Phase II site assessments and/or remediation, if applicable
☐	☐		If there are impacts to UST/hazardous materials associated with the selected alternative, provide an exhibit that identifies these sites
			Visual Impacts
☐	☐		Discuss current viewshed
☐	☐		Discuss impacts the selected alternative will have on the current viewshed
			Impacts of Construction Activities
☐	☐		Discuss potential adverse impacts (noise, traffic congestion, detours, etc.)
☐	☐		Discuss waste and borrow sites
☐	☐		Refer to KYTC Standard Specs for Road and Bridge Construction
			Public Involvement
☐	☐		Attach a copy of the Public Hearing Transcript.
☐	☐		Discuss public issues, concerns, and KYTC responses
☐	☐		Identify any changes that occurred as a result of the public hearing process
			Project Events
☐	☐		Discuss any events and/or project influences that have occurred since the approval of the Environmental
☐	☐		Include a statement discussing public availability of the FONSI after approval

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ENVIRONMENTAL IMPACTS (continued)**	
			Final Section 4(f) Evaluation (pages 46-47 of TA)	
☐			Discuss impacts to all Section 4(f) properties, if applicable	
☐			Include a discussion that the project included all possible planning to minimize harm to the Section 4(f)property. The selected alternative must be alternative with the least harm on the 4(f) properties after considering mitigation.	
☐			If a Section 4(f) property (ies) is impacted by the selected alternative, discuss any minimization and/or mitigation associated with the property.	
☐			Include discussion of any MOA(s) associated with the project, if applicable	
☐			Use of Section 4(f) property cannot proceed until FHWA gives a Section 4(f) approval (49 U.S.C. 303(c))	
			Appendices	
☐			Summarize methodologies and results of technical analyses and research	
☐			Include additional correspondence and/or concurrence letters that were not included in the EA	
			Environmental Assessment	
☐			Attach a signed copy of the approved Environmental Assessment	
☐			Include additional correspondence and/or concurrence letters that were not included in the EA	
			Communicating All Promises (CAP) for the Project	
☐			Identify all mitigation and minimization actions that must be committed to for the project to proceed	
☐			Include identification of who is responsible for achieving these commitments	
☐			Include any MOA's	
☐			Include any actions that will be necessary for the permitting process.	
☐			Include any Section 106/4(f) commitments	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:
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Item No:

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Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

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HISTORICAL RESOURCES - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
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Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
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Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2no, 3ra) in appropriate sections.
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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**GENERAL**	
☐	☐	☐	Acid free paper, 8 ½ x 11 paper	
☐	☐	☐	Report bound along left margin	
☐	☐	☐	Permanent, official site numbers issued by OSA or KHC	
☐	☐	☐	One set of historic site survey forms to the KHC	
☐	☐	☐	Figures match both the associated caption and the relevant text description	
☐	☐	☐	The report follows the most current and applicable SHPO specifications for report writing and the guidelines for fieldwork	
☐	☐	☐	Cultural Historic investigations conducted in adjacent states with KYTC as the lead state DOT agency follow the guidelines and procedures of each affected state	
☐	☐	☐	Photographs and illustrations are clear, free of pixilation or digital artifacts, and show accurately the subject of the photo or illustration	
☐	☐	☐	Topographic maps that show the overall project area	
☐	☐	☐	All sections of the report have been checked to ensure that they contain information relevant to the area discussed	
☐	☐	☐	The report is examined to make sure that it is free of typographic and grammatical errors	
☐	☐	☐	The spelling or designation of names or site numbers is correct and consistent throughout the report. In addition, the name of the county or counties where the project occurs remains the same throughout the report.	
☐	☐	☐	Three copies of the historic report sent to Division of Environmental Analysis. (One copy sent to SHPO, one copy sent to district after concurrence letter from SHPO received.)	
			TITLE PAGE	
☐	☐	☐	Project name, report author, report date.	
☐	☐	☐	Name, address, and contact information of institution, agency, or firm conducting the investigations, including applicable contract numbers.	
☐	☐	☐	Client information	
☐	☐	☐	Principal Investigator's name, affiliation, contact information, and dated signature	
☐	☐	☐	Lead Federal Agency and other involved Federal or State agencies, including permit or other project identification numbers	
☐	☐	☐	The project item number is included in the report title and on the title page and the item number or numbers are correct and used consistently throughout the report	

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Item No:

Required	Complete	DEA	CATEGORY
			INTRODUCTORY PAGE
☐	☐		Table of Contents
☐	☐		List of figures, plates, or tables
☐	☐		Report abstract summarizing conclusions and cultural management recommendations
			REPORT INTRODUCTION
☐	☐		Purpose of the report and scope of the work including a detailed project description
☐	☐		Dates of field investigations, and amount of time spent in the field
☐	☐		Names of field directors, supervisors, and crewmembers
☐	☐		Restrictions or limitations on survey efforts
☐	☐		Project sponsors, contract/permit numbers
☐	☐		Regulatory or statutory authority under which the assessment is being conducted
☐	☐		Explanation of project boundaries (APE), documented on 7.5 minute USGS topographic quadrangle maps, including previously recorded sites and districts within the APE
☐	☐		Other project planning or construction maps, as necessary
☐	☐		Oversized maps to be appended in a map pocket bound within report
☐	☐		Color photographs showing overall views of project area and general survey conditions
☐	☐		General overview of survey results, including potential impacts to historic resources
☐	☐		Project item number is included in the report introduction with the description of the project area
			ENVIRONMENTAL BACKGROUND
☐	☐		Discussion of present and past environmental conditions
☐	☐		Potential environmental influences on historic and archaeological resources

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Required	Complete	DEA	CATEGORY	Item No:
			PREVIOUS INVESTIGATIONS	
☐			Statement concerning site check at OSA or KHC, and outcome of literature review	
☐			Overview of the history and/or prehistory of the general project area	
☐			Discussion of the results of archival investigations	
☐			Discussion of previous survey work and its results	
☐			National Register status of previously recorded sites and districts	
☐			Maps showing locations of previously recorded sites and historic districts within the APE (but not outside the APE)	
☐			Previous cultural resource management recommendations	
☐			The background sections include all relevant information to provide the necessary context (generally for temporal and regional, specific for county and project area) for an accurate depiction, placement, and assessment of historic sites	
			CONTEXT DEVELOPMENT	
☐			Description of historic context development	
☐			Identification of sources used to develop contexts	
☐			Define and summarize existing historic contexts associated with the project area	
☐			Define and summarize new contexts developed for the project area	
			SITE DESCRIPTION AND SURVEY RESULTS	
☐			For all survey reports, maps showing all newly recorded sites, structures or districts. Site numbers shall be labeled directly on the map	
☐			Individual site plan maps showing site boundaries	
☐			Historic maps from archival investigations, as warranted	
☐			Color Xerox photos showing general overview of each archaeological site	
☐			Archival and oral history of a site-specific nature	
☐			For all reports, National Register evaluation of eligibility or ineligibility for each site over fifty years of age in project impact area	
☐			For all reports, description of project effects on each site	

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Required	Complete	DEA	CATEGORY	Item No:
			SITE DESCRIPTION AND SURVEY RESULTS (continued)	
☐			For all reports, management recommendation for each site in area of project's impact	
☐			For all reports, if further investigations are recommended, a brief suggested scope of work	
☐			Site maps include site boundaries, r/w limits (if applicable), the locations of associated features, structures, with appropriate keys for each feature of the map not otherwise identified	
☐			All site maps have been checked to ensure that scales, north arrows, probe and unit locations, etc., are accurate and error-free	
☐			Structures within, potentially associated with, or that comprise all or a portion of an archaeological site are shown in photographs.	
☐			Maps of sites are as accurate and detailed as possible, and include information on contour or other topographic or landform constraints that limit or direct the level of investigation possible or required at a site.	
☐			Maps include standard USGS symbols and mapping techniques	
☐			Historic structure descriptions include a listing of all relevant historic maps where the structures are and are not depicted	
			REFERENCES CITED	
☐			All references in the body of the report are to be cited in the bibliography in American Antiquity format	
☐			All citations in the bibliography to appear in the text of the report	
			APPENDICES AND ATTACHMENTS	
☐			Curriculum vitae for principal investigator and field supervisors if not already on file with Kentucky SHPO	
☐			Optional cemetery forms as an appendix, as warranted	
☐			Pocket included in back of report to attach final clearance letter from SHPO (no other correspondence associated with the project is required or needed).	

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HISTORICAL RESOURCES - GUIDANCE AND ACCOUNTABILITY

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:
Commitments to be implemented: Identify any commitments that are documented within the study. Specify the nature of the commitment, to whom it was or should be made, when the commitment should be acted upon, etc.	

HISTORICAL RESOURCES - GUIDANCE AND ACCOUNTABILITY

Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

EXHIBIT
Historical Resources GAF, TC 58-41
EA-9013

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF ENVIRONMENTAL ANALYSIS

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NOT LIKELY TO ADVERSELY AFFECT FINDING
CHECKLIST FOR INDIANA BATS WHERE SUMMER HABITAT WOULD BE IMPACTED

KYTC Item No: -	Route:
Quadrangle(s):	County(ies):
Project Description (type of improvement, areas to be impacted, crossroad improvements, easements, etc.):	
Methodologies (methods of assessment, who, what, when, resources, etc.):	

Section A. Projects that are Categorically Excluded from a "Not Likely to Adversely Affect" Determination without Coordination with DEA SME and USFWS

	Yes	No
1. Is the proposed project within one of the following counties where at least one known Indiana bat maternity colony record exists? If "yes", please contact the USFWS transportation liaison via e-mail for technical assistance to determine if the proposed project is within the average range of a maternity colony. Information provided shall include: project item number, project type (e.g., bridge replacement, widening, turning lane, etc.) County(ies) the project is within, USGS topographic map(s) with the entire project boundaries clearly identified, and name(s) of the USGS topographic maps. Allen, Ballard, Bath, Breckinridge, Bullitt, Carlisle, Daviess, Edmonson, Harlan, Henderson, Hickman, Jefferson, Letcher, Logan, McCracken, Perry, Pulaski, Rowan, Spencer, Union.	☐	☐
2. Did survey of the project area identify any caves, open-throated sinkholes, mine adits, and other karst features that exhibit suitable wintering habitat?	☐	☐
3. Does the USGS Quad identify any known caves or mine adits within 0.5 miles of the project area?	☐	☐
4. Does any other resource(s) identify any caves, mine adits, or other karst features that exhibit suitable wintering habitat?	☐	☐

If you answer "NO" to all questions in section A, please proceed to sections B, C, and D respectively. The EC shall evaluate the project and complete the checklist in sections B and C to determine if the project meets the criteria to "Not Likely to Adversely Affect" the species. Only the SME can complete section D to determine if the project will have an effect on the species.

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NOT LIKELY TO ADVERSELY AFFECT FINDING
CHECKLIST FOR INDIANA BATS WHERE SUMMER HABITAT WOULD BE IMPACTED

Section B. On-Site Habitat Specific Factors

If you answer "no" to all of the following three questions in Section B, the project meets the criteria of a "not likely to adversely affect" determination, as discussed in Section IV of the HAM, and no further analysis is needed. If you answer "yes" to any of the following three questions in Section B, then additional evaluation of the project should be conducted in Section C.

	Yes	No
1. Does the project require the removal of any dead or dying trees and/or snags with bark?	☐	☐
2. Does the project require the removal of any live trees equal to or greater than 9 inches in diameter that have exfoliating bark?	☐	☐
3. Does the project require the removal of any live trees equal to or greater than 9 inches in diameter that exhibit other characteristics of optimal habitat as described in Section I of the HAM (i.e., cavities and/or other damage)?	☐	☐

Section C. Habitat Landscape Characteristic Context

	Yes	No
Is all the habitat being impacted isolated? (For purposes of a DEC determination, ISOLATED is defined as the removal of a tree or trees, not to exceed one acre in size, that are not located within 0.1 miles (528 feet) of ANY other habitat)	☐	☐

If "yes", the project meets the criteria of a "not likely to adversely affect" determination, as discussed in Section IV of the HAM, and no further analysis is needed.

If "no" please contact a DEA SME to evaluate the project for other characteristics in Section D in order to determine if the project would result in adverse effects to the species.

Section D. Other Habitat Specific Factors or Landscape Characteristics

Within this Section, a DEA SME shall evaluate the project to consider if there are other relevant characteristics of the habitat or landscape (e.g., urban vs. rural setting, removal of forested blocks, forested fencerows, and/or forested riparian corridors, density of habitat, overall suitability, etc.) being impacted that would justify a "not likely to adversely affect" determination. For the purpose of this analysis, the definition of ISOLATED found in Section C shall not strictly apply. A discussion of any other characteristic(s) should be provided and attached to Section D. If it cannot be determined that the project is "not likely to adversely affect" the species, a species survey and/or other minimization factors are needed to account for potential adverse effects to the species (see Section V of the HAM) and shall be coordinated with the USFWS through informal consultation.

Comments:

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NOT LIKELY TO ADVERSELY AFFECT FINDING
CHECKLIST FOR INDIANA BATS WHERE SUMMER HABITAT WOULD BE IMPACTED

Recommendations:	KYTC Item No:

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 the project "Not Likely to Adversely Affect" the Indiana bat or designated critical habitat and further Section 7(a)(2) consultation with the Service is not required.

KYTC Signature _____ Date _____

Print Name _____

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NO EFFECT FINDING – STATE FUNDED

KYTC Item No:	-	Route:	
Quadrangle(s):		County(ies):	

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

Listed Species: (attach copy of USFWS county list, KSNPC website and KDFWR website)

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

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

Determinations:

The project has been assessed in accordance with the provisions of Section 7 of the Endangered Species Act, and KYTC concludes that the project will have No Effect on any listed species or their critical habitat and that further consultation with the Service is not required.

_____ _____
KYTC Signature Date

_____
Print Name

EATS updated _____ _____
Name Date

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NO EFFECT FINDING

KYTC Item No:	-	Route:	
Quadrangle(s):		County(ies):	

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

Listed Species: (attach copy of USFWS county list, KSNPC website and KDFWR website)

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

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

Determinations:

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(s)(2) consultation with Service is not required.

_____ _____
KYTC Signature Date

_____
Print Name

EATS updated _____ _____
Name Date

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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance, or instructions, if any, that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted in the comments section. submitted in the comments section.
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"Mitigation and Special Issues" page: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.
"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**GENERAL**
☐	☐		Base study written in clear, concise manner. Reviewer able to duplicate results and conclusion from data presented
☐	☐		Correct grammar and spelling present
☐	☐		Correct use of metric and English systems present
☐	☐		Tables and exhibits correctly labeled
			TITLE PAGE
☐	☐		Identify Base Study as Traffic Noise Impact Analysis
☐	☐		Author prequalified for Noise Traffic Noise Impact Analysis
☐	☐		Project title present
☐	☐		Project county/counties included in description
☐	☐		Item number included
			TABLE OF CONTENTS
☐	☐		Topics listed by headings in order of appearance in document
☐	☐		Tables listed in numerical order
☐	☐		Exhibits & figures listed in numerical order
☐	☐		Appendices listed in alphabetical order
			EXECUTIVE SUMMARY/ABSTRACT
☐	☐		Brief description of the proposed project
☐	☐		Summary of work conducted, including number of receptors and results of analysis
☐	☐		Statement regarding the recommendation of abatement measures

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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

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Item No:

Required	Complete	DEA	CATEGORY
Insert checkmark as appropriate			**INTRODUCTION**
☐			Statement that analysis prepared in accordance with governing document 23 code of Federal Regulations (CFR) Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise" and the Kentucky Transportation Cabinet Noise Analysis and Abatement Policy
			PROJECT DESCRIPTION
☐			Purpose and Need of project summarized
☐			Project termini and length identified
☐			Roadway geometrics of existing facilities described
☐			Roadway geometrics of proposed project described
☐			Exhibits identified in project description agree with location exhibits presented
☐			Identification of all alternates analyzed
☐			Areas controlled under local planning and zoning are identified
			EXISTING NOISE LEVELS AND VALIDATION OF NOISE MODEL
☐			Date, time (peak hour) and weather conditions for included measurements
☐			Description, of traffic noise data collection and calibration methods, including brand name and type of equipment used to monitor traffic noise
☐			Measurements utilized to calibrate the most current FHWA approved highway traffic noise prediction model
☐			Model results confirmed within +/- 3dBA of existing field measurements
			DEVELOPMENT OF DESIGN YEAR NOISE LEVELS
☐			Noise level predictions calculated for Design Year utilizing the most current FHWA approved highway traffic noise model (TNM)
☐			Description of the most current FHWA approved TNM model, including vehicle-types represented in model

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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**COMPARATIVE RECEPTOR SITE ANALYSIS**	
☐			Description of each receptor site including total number of representative receptors	
☐			Correct land use category identified with respective design Noise Abatement Criteria (NAC) presented and listed in Identification of Receptors" table	
☐			Identification and discussion of receptors with no external use that require internal monitoring	
☐			Distance from existing roadway and proposed alternates presented and listed in "Identification of Receptors" table	
☐			Quantitative discussion summarizing future impacts on all receptors and listed in "Existing and Predicted Noise Levels" table. Site number, existing, no-build, and build noise levels in Leq and Design NAC Leq	
☐			Existing, no-build and design (build) noise levels in text and tables in agreement with those listed in TNM runs for existing, no-build and build alternates	
			NOISE ABATEMENT RECOMMENDATIONS AND CONCLUSION	
☐			Assessment of noise impact of project according to FHWA (23 CFR 772) and KYTC Noise Analysis and Abatement Policy guidelines	
☐			Summary statement of quantitative impacts on all receptor sites for no-build and build alternates compared to existing noise levels and noise abatement criteria	
☐			Discuss the noise reduction design goal and acoustic feasibility for the abatement measure	
☐			Discuss cost effectiveness showing calculation of Cost per Benefitted Receptor (CBR) and consideration of equivalent residences for non-residential land uses	
☐			Discuss other reasonableness considerations and document adjustments to CBR calculation	
☐			Discuss noise impacts for which no reasonable and feasible mitigation has been identified	
☐			Discuss reasonable and feasible noise abatement measures that would likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical separations, speed limits.) State that the final decision on implementation of abatement measures will be made after completion of the project design and the public involvement process	
☐			Statement regarding need for coordination with local officials per KYTC Noise Analysis and Abatement Policy.	
☐			Where local planning and zoning requirements exist, include a commitment for providing predicted noise information on selected alternative to local officials	

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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**INDIRECT AND CUMULATIVE IMPACTS**	
☐			Definition of indirect and cumulative impacts	
☐			Discussion of what types of impacts are anticipated and where they would occur	
			CONSTRUCTION NOISE	
☐			Discussion consistent with KYTC Noise and Abatement Policy regarding contractor requirements to restrict or reduce transmission of noise during construction activity	
			APPENDIX	
☐			Existing field monitoring sheets included	
☐			Existing calibration runs, no-build and build TNM computer printouts for all analyzed alternatives included	

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Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:
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NOISE ANALYSIS AND ABATEMENT - GUIDANCE AND ACCOUNTABILITY

Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF ENVIRONMENTAL ANALYSIS

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PROJECT IMPACT PROFILE

County: _____ Route: _____ Item No. _____

Type Project (describe): _____ Date: _____

Document (EA, FONSI, EIS, etc.): _____ Date Approved: _____

Identify Preferred/Selected Alternate (indicate changes to alignment or design):

Provide an overview of the project impacts that will result (must be completed prior to each federal action).

IMPACTS	COMMENTS/EXPLANATION	IS THIS ISSUE RESOLVED? Y, N, OR NI *	FOLLOW THROUGH REQUIRED BY DEA & _____ **				
			D	R	U	C	O
1. Air Quality • Attainment status of project area • List TIP/STIP page & date			☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
2. Noise • Is noise exceedance predicted? • Is noise mitigation required?			☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
3. Aquatic Ecosystems • Channel changes/culverts (total linear feet) • Is stream mitigation required? • Floodplain; FEMA no-rise certification • Wetlands (total acres impacted) • Is wetland mitigation required? • Permits required (404, 401, Coast Guard). List dates of application/approval			☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
4. Threatened & Endangered Species • USFWA coordination date(s) • Is a BA required? List species • Seasonal restriction on BA fieldwork?			☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
5. Section 106							
• Consultation/coordination required (Native American, local, interested parties)			☐	☐	☐	☐	☐

* **Indicate Y, N, or NI for Yes, No, or No Impacts.**
** **Follow through required by: Check D (Design), R (Right of Way), U (Utilities), C (Construction), or O (Operations)**

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DIVISION OF ENVIRONMENTAL ANALYSIS

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PROJECT IMPACT PROFILE

Item No.: _____

IMPACTS	COMMENTS/EXPLANATION	IS THIS ISSUE RESOLVED? Y, N, OR NI *	FOLLOW THROUGH REQUIRED BY DEA & _____ **				
			D	R	U	C	O
• Archaeology; SHPO concurrence date. Identify sites that require additional work.			☐	☐	☐	☐	☐
• Historic structures/districts. SHPO concurrence date.			☐	☐	☐	☐	☐
• If there is an adverse effect, is an MOA required?			☐	☐	☐	☐	☐
6. Section 4(f)							
• List 4(f) resources impacted			☐	☐	☐	☐	☐
• Is mitigation required?			☐	☐	☐	☐	☐
• Is Land & Water Conservation Act funding involved – 6(f)?			☐	☐	☐	☐	☐
7. Socioeconomic							
• Number of relocations (single-family households, apartment complex households, businesses, non-profit)			☐	☐	☐	☐	☐
• Are there neighborhood or community impacts?			☐	☐	☐	☐	☐
• Are there impacts to farmland (AD1006 form)?			☐	☐	☐	☐	☐
8. Environmental Justice							
• Is there a disproportionate impact to minority or low-income groups?			☐	☐	☐	☐	☐
9. UST/Hazardous Materials							
• Identify sites that require Phase II or III. (List parcel numbers & locations)			☐	☐	☐	☐	☐
10. Other Impacts not previously discussed							
• Is any additional mitigation required?			☐	☐	☐	☐	☐
• Are Special Notes required for this project? **If yes, attach a copy.**			☐	☐	☐	☐	☐

Have there been any changes in regulations or laws since the last federal action for this project? If yes, describe:

Comments and coordination: Date(s) of Public Information Meeting(s): _____

Prepared by: _____ Date: _____

* **Indicate Y, N, or NI for Yes, No, or No Impacts.**

** **Follow through required by: Check D (Design), R (Right of Way), U (Utilities), C (Construction), or O (Operations)**

KENTUCKY TRANSPORTATION CABINET
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RECORD OF DECISION - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
Prime Consultant: Name of the Phase I Design and Environmental Consultant (prime contract holder) for the project.
Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
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Completed form is to be delivered to KYTC with the document. Previous checklists for the document, or copies thereof, shall be attached to the current checklist.

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RECORD OF DECISION - GUIDANCE AND ACCOUNTABILITY

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**TITLE PAGE**	
☐			Identify level of environmental documentation (ROD)	
☐			Adequate project description (route, termini, city or county, state, KYTC Item No.)	
☐			Identify lead federal agency	
☐			Identify joint lead agency and any cooperating agency(ies)	
☐			Include statement "In consultation with KYTC" and all other state DOTs as applicable	
☐			Date of submittal (month and year)	
			TABLE OF CONTENTS	
☐			List areas of focus and appropriate page numbers where the information can be found	
☐			Appendices: maps/figures of selected alternative; EPA Comment Letter on FEIS; Section 106 MOA; responses to FEIS comments/Section 4(f) analysis; list of participating agencies	
			DECISION	
☐			Clear and concise statement describing the decision made by the FHWA (reference FEIS)	
☐			Summary description of the selected alternative	
☐			Description of why the selected alternative is the environmentally preferred alternative --or, in cases where the selected alternative is other than the environmentally preferred alternative, the ROD shall clearly state why the environmentally preferred alternative was not selected	
			PURPOSE AND NEED	
☐			Summarize the purpose and need for the project	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ALTERNATIVES CONSIDERED**	
☐			Brief discussion identifying the alternatives analyzed in the EIS and the process by which they were developed	
☐			No Build/Action discussion	
☐			Mass transit	
☐			Transportation System Management alternative	
☐			Description of all Build alternatives	
☐			Identify the environmentally preferred alternative	
☐			Identify the selected alternative (if different from the environmentally preferred, must adequately explain why)	
☐			Cost analysis	
			SECTION 4(f) ANALYSIS	
☐			Summarize all Section 4(f) impacts and avoidance alternative(s) as applicable	
☐			Discuss coordination process	
☐			Conclusion	
			MEASURES TO MINIMIZE HARM Only include areas of environmental consideration where impacts are anticipated to occur	
☐			Air quality	
☐			Noise	
☐			Water quality and stream impacts, including identification of required permits	
☐			Floodplains	
☐			Wetlands	
☐			Wild and scenic rivers	
☐			Federally threatened and endangered species	
☐			Section 106	
☐			Historic structures or districts	
☐			Archaeological sites	

KENTUCKY TRANSPORTATION CABINET
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RECORD OF DECISION - GUIDANCE AND ACCOUNTABILITY

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**ALTERNATIVES CONSIDERED (continued)**	
☐			Land use	
☐			Community/social impacts (include 6f/4f as applicable)	
☐			Relocations and displacements	
☐			Environmental justice	
☐			Farmland	
☐			Pedestrian and bicycle facilities	
☐			UST/Hazardous materials	
☐			Visual impacts	
☐			Energy	
☐			Construction	
☐			Avoidance commitments	
☐			Enhancement commitments	
☐			Other	
☐			Include statement that project includes all practicable measures to minimize harm and, if not, why	
			MONITORING AND ENFORCEMENT PROGRAM	
☐			Description of monitoring or enforcement programs adopted for specific mitigation measures, as outlined in the final EIS	
			COMMENTS ON FEIS	
☐			Reference to appendix containing all comment letters received on the FEIS	
☐			Identification of all substantive comments received on FEIS and corresponding responses	
☐			Summary of other comments received and responses, as appropriate	
			RECORD OF DECISION SIGNATURE PAGE	
☐			Date and signature line for FHWA Division Administrator	

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RECORD OF DECISION - GUIDANCE AND ACCOUNTABILITY

Comments: Discuss supplemental information, guidance, or instructions that required deviation from the checklist. Discuss all categories which contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.	Item No:

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.	Item No:

SIGNATURE PAGE

I have reviewed the project documentation and attest that those responsible for its preparation are familiar with the requirements set forth in the checklist above and that proper management controls were in effect throughout the course of document development to ensure that the document is complete, thorough, and addresses all applicable checklist components.

Prime Consultant	Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer	Date
Project Manager	Date

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SOCIOECONOMIC IMPACT - GUIDANCE AND ACCOUNTABILITY

Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft # _____ Approval Date: _____

Instructions:

Baseline Prepared by: Name of author/firm that prepared the study.
County: Name of county(ies) within which the project is located.
Route: Name of highway for which the project is intended. Include route designation and number as applicable (i.e., US 60, Winchester Rd)
Item No.: Item number as it appears in the contract and Six Year Plan which corresponds with the project.
Description: Official description of the project as it appears in the Six Year Plan.
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Due Date: Date that the project is due as agreed upon in contract negotiation.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date baseline is approved by DEA (DEA use only).
For "Required" column: ✓ indicates all applicable areas of focus (DEA's responsibility).
For "Complete" column: use "Y" and yes and "NA" for not applicable as necessary (Consultant's responsibility).
For "DEA" column: DEA will use "C" for all areas that adequately address concerns, and "I" for those that are insufficient in coverage.
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"Signature" page: Signatures of Prime Consultant and KYTC/DEA Environmental project Manager/Reviewer will attest that the base study meets the requirements set forth in this checklist. Signatures of KYTC Project Manager and District Environmental Coordinator ensure that the findings of the report, including impacts to the project and mitigation measures, have been presented to the project development team and are acceptable.

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Item No:

Required	Complete	DEA	CATEGORY	DATA SOURCES
Insert checkmark as appropriate			**LAND USE**	US Census Bureau website: www.bea.com/bea/regional/bearfacts (Research and Statistics - Deskbook of Economic Statistics): http://ksdc.louisville.edu/
☐			Establish baseline conditions (existing land use, include exhibit)	KY State Data Center http://cpba.louisville.edu/ksdc
☐			Discuss project compatibility with existing land use plans	Interviews with local, regional officials, review of land use maps,
☐			Discuss growth inducement (current development trends, indirect effects of	municipal and ADD reports, field visits, KYTC Division of Planning reports
☐			Discuss cumulative and indirect impacts	
			COMMUNITY RESOURCES	Field visits, interviews with local officials (including elected officials, police and fire departments, health agencies, and non-profit organizations), local realtors, PVA offices, reviews of local maps and plans, US Census reviews of commuting patterns, interviews with neighborhood associations, church leaders, etc.
☐			Establish baseline conditions for existing neighborhoods and communities	
☐			Identify community resources including parks, churches, schools, shopping,	
☐			Discuss impacts on travel patterns, accessibility, community facilities, and economic vitality in project area and on established business districts	
☐			Discuss mobility	
☐			Reference any consultation with community, city, or county officials	
☐			Discuss cumulative and indirect impacts	
			REPLACEMENT HOUSING/AVAILABLE COMMERCIAL FACILITIES	Local officials, real estate agents and listings, PVA figures Cross reference data to determine listing value, sale value, and assessed PVA value to determine actual value and its proximity to the listed value Reference past 5 years of sales activities to determine the stability of the market and to make best estimate for the future year (continued in next segment)
☐			Establish baseline conditions for available housing and commercial / industrial facilities based on current market data	
☐			Discuss coordination with MPO or other governmental agencies to identify other proposed projects or activities that would compete for favorable housing	
☐			Discuss cumulative and indirect impacts	

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SOCIOECONOMIC IMPACT - GUIDANCE AND ACCOUNTABILITY

Item No:

Required	Complete	DEA	CATEGORY	DATA SOURCES
Insert checkmark as appropriate			**RELOCATIONS AND DISPLACEMENTS**	www.apartment.com
☐			Establish baseline conditions (identify number and type of relocations - residential, commercial, industrial, etc.)	Determine if construction projects are anticipated within the same timeframe of this project. If there are projects, will they provide competition in the housing market for residents associated with this project? Seek roadway, airport, commercial development projects, etc. This information can be found through the Six Year Plan, local interviews, newspaper articles, chambers of commerce, and interviews with local and regional officials.
☐			Reference the Conceptual Stage Relocation Report	
☐			Discuss Relocation Assistance Program (Last Resort Housing), Title VI of the Civil Rights Act, 1966	
☐			Include statement if applicable that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	
☐			Discuss mobility for physically challenged residents	When assessing options for commercial and non-profit relocations, determine the function of affected site(s) and the level of necessity for it to remain open within the project area--are its customers dependent upon it remaining nearby?
☐			Include table to summarize relocations for each alternate	
☐			Discuss cumulative and indirect impacts	
☐			Discuss number of right-of-way sections and 6-year plan time frames for	
☐			Cite competing projects/economic development initiatives that could compete for each right-of-way section identified.	
☐			All proposed alternates identified and discussed	http://maps.kytc.ky.gov/SYP/
☐			Anticipated problems and solutions for all proposed alternates thoroughly discussed	
☐			Secondary sources of information (such as census records, contact with local and community leaders, economic reports) cited	
☐			Relocation information presented in sufficient detail to adequately explain relocation impacts for each alternate	
☐			Displaced community(s) affected by the project discussed including divisive or disruptive effects, special relocation considerations, and measures proposed to resolve relocation concerns	
☐			Anticipated impacts to communities and potential adverse environmental factors present in areas adequately discussed	

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Item No:

Required	Complete	DEA	CATEGORY	DATA SOURCES
Insert checkmark as appropriate			**RELOCATIONS AND DISPLACEMENTS (continued)**	
☐			Last Resort Housing funds discussed and, if necessary, recommendations on how to remedy these types of displacements	Field visits should include after-hours visits to the area when most residents are at home. This will maximize efforts at determining ages, physical limitations (handicap license plates), number of children, some signs of interdependency between households, etc.
			Report for each proposed alternate provides discussion of the types of homes to be acquired, including estimates of:	
☐			Number of residential displacements	
☐			Number of owners/tenants being displaced	Socioeconomic data collected, such as percentages of residents living at or below the poverty level within affected census tract(s), will be utilized along with field observations and official interviews to determine conditions within and adjacent to the project corridors.
☐			Income ranges in dollars of displaced residents	
☐			Percentages of minority residences being displaced	
☐			Percentage of displaced elderly residences	
☐			Percentage of residences with five or more family members	
			Nonresidential displacements estimates include:	
☐			Number of employees	
☐			Owner/Tenant	
☐			Potential impacts on displaced establishments	
☐			Unique attributes of the nonresidential establishments	
☐			Estimated availability of replacement sites	
☐			Likelihood of relocation by those displaced	
☐			Social, economic, cultural loss to community by those displaced	
			FARMLAND	
☐			Establish baseline conditions and identify farmland in project corridor	Field visits, coordination with county USDA/NRCS offices, LESA form, Kentucky Agricultural Statistics publication -- call 800-928-5277 for latest edition (no charge). www.nass.usda.gov/ky/
☐			Discuss acres impacted	
☐			Discuss farmland and prime farmland impacts	
☐			Include NRCS/LESA form AD 1006	
☐			Discuss feasible alternative to avoid farmland impacts	
☐			Discuss cumulative and indirect impacts	

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Item No:

Required	Complete	DEA	CATEGORY	DATA SOURCES
Insert checkmark as appropriate			**ENVIRONMENTAL JUSTICE**	
☐			Establish baseline conditions (i.e.; racial diversity, income levels, family clusters, etc.)	These conditions are accessible through the various local contacts, websites, and field trips as described in previous sections.
☐			Include statement of project compliance with E.O. 12898, Environmental Justice guidance	
☐			Discuss avoidance, minimization, and mitigation, if applicable	
☐			Discuss cumulative and indirect impacts	
			PEDESTRIAN AND BICYCLE FACILITIES	
☐			Establish baseline conditions by identifying existing facilities and their uses for transportation and/or recreation	State highway maps, interviews withy local officials, and reviews of local planning maps (when available) http://transportation.ky.gov/bike-walk/Pages/Maps.aspx
☐			Discuss opportunities for providing pedestrian and/or bicycle facilities, thereby increasing mobility of this mode of transportation	
☐			Discuss cumulative and indirect impacts	
			VISUAL IMPACTS	
☐			Establish vaseline conditions (existing viewshed)	Field visits and interviews with local officials and residents, reviews of design plans
☐			Discuss view of proposed road from surrounding area and view of the proposed road. Include impacts and/or anticipated enhancements tc viewshed after construction	
☐			Discuss cumulative and indirect impacts	
			CONSTRUCTION ACTIVITIES	Refer to Kentucy Department of Highways *Standard Specifications for Road and Bridge Construction*
☐			Discuss waste and borrow sites	
☐			Discuss dust, noise, erosion controls	

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Item No:

Required	Complete	DEA	CATEGORY	DATA SOURCES
			4(f) RESOURCES	
☐			Identify 4(f) resources	
☐			Separate 4(f) documented to be prepared	Reviews of local maps, interviews with local officials, field trips
			6(f) RESOURCES	
☐			Identify 6(f) resources	
			SAFETY	
☐			List road deficiencies (lack of shoulders, curve deficiencies, etc.)	KYTC traffic studies
☐			Crash analysis of existing roadway(s) including existing conditions and	Interviews with local emergency officials
☐			Discuss crime rates, existing and projected	Interviews with local elected officials
☐			Discuss crime rates, existing and projected	Field trip observations
			OTHER ISSUES	N/A
☐			Discuss unresolved issues or situations which are anticipated and not included in the previous areas. Include impacts, suggested mitigation and commitments. Establish baseline and discuss cumulative and indirect impacts if applicable.	
			SUMMARY	N/A
☐			Brief discussion summarizing the impacts and mitigation commitments for the project. Include results and commendations.	
☐			Include matrix which scores and compares impacts for each alternate	
☐			Explain methodology(ies) incorporated in making determinations of impacts	
☐			Guidance and Accountability form included in submitted base study report	

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Mitigation and Special Issues: Identify mitigation measures, if any, that are specified within the report. Also identify any special issues that are addressed within the document that should be considered by the Project Team as it makes decisions regarding the project.

Item No:

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Prime Consultant — Date

Recommended for approval by:

KYTC/DEA Environmental Project Manager/Reviewer — Date

Project Manager — Date

Kentucky Transportation Cabinet
Division of Environmental Analysis
200 Mero Street
Frankfort, KY 40622

Supplier Corrective Action Request

David M. Waldner, Director
Phone: (502) 564-7250

Supplier	Item Designation	Date
Address	Contract Number N/A	Quantity N/A
Item Description –		Date Received

Problems have been discovered with the item described above. The frequency or type of problem is such that Kentucky Transportation Cabinet requests that your organization (1) determine the root cause and (2) take corrective action to prevent a recurrence of the problem(s). A written response to this request is expected within 10 working days. Please notify the point of contact identified above if your response will take longer. You may reply on this form, your own corrective action form, or in letter format. In all cases, please define the root cause, corrective action taken, and the date that it was taken.

Description of Problem (This section to be completed by KYTC) **Percent Defective**: N/A

According to the Division of Environmental Analysis, the Report you submitted has been rejected based on not meeting requirements identified in the Guidance and Accountability Forms (Required Column on the GAF). The GAF you provided shows us that your supplier completed the action and verified the completion by their completing the middle column on the GAF. KYTC DEA's check of the report indicates that some of the items were in fact not completed as prescribed. The primary problem for you to address is to discover why your supplier's final inspection process is not meeting requirements.

Please discuss this key issue with your sub-consultant. Try asking "Why?" five times in response to the initial question of "Why the final inspection did not catch the discrepancies identified by DEA?" For example, you would not want to stop the discovery process with an answer of "We didn't know the requirement". Continue with "Why didn't you know the requirement or why didn't you ask if you did not know". Dig deep to identify the root causes.

Root Cause of Problem (This section to be completed by Supplier) (If more than one problem, please address each problem identified above)

List the responses to why?

2.0 (eff. 9/28/07)

Corrective Action (This section to be completed by Supplier) (If more than one problem, please address each problem identified above)

List corrective action to eliminate the root cause(s).

Ensure corrective action has taken place and annotate below.

Date Corrective Action Taken: Supplier Information Submitted By:

Evaluation for Effectiveness (This section to be completed by KYTC)

Approved and Closed by Director: Date:

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CATEGORICAL EXCLUSION IMPACT SUMMARY SHEET (SURPLUS PROPERTY)

I. PROJECT IDENTIFICATION

A. Route: _____ Date: _____
B. County: _____ C. Item No: _____
D. Description _____
1 Existing Conditions: _____
2 Proposed Use: _____

II. IMPACT EVALUATION

	Direct			Indirect/Cumul			
	SIG	MIN	NONE	SIG	MIN	NONE	COMMENTS
A. Land Use Changes	☐	☐	☐	☐	☐	☐	
B. 4(f) Lands *	☐	☐	☐	☐	☐	☐	
1 Historic Site/District effects	☐	☐	☐	☐	☐	☐	
2 Archaeological site effects **	☐	☐	☐	☐	☐	☐	
3 Public recreation effects	☐	☐	☐	☐	☐	☐	
4 Wildlife/Waterfowl refuge effects	☐	☐	☐	☐	☐	☐	
C. Wetlands effects	☐	☐	☐	☐	☐	☐	
D. Floodplain effects	☐	☐	☐	☐	☐	☐	
E. Endangered Species/Habit effects	☐	☐	☐	☐	☐	☐	
F. Water Quality impacts	☐	☐	☐	☐	☐	☐	
G. 401/404 permits	☐	☐	☐	☐	☐	☐	
H. Hazmat/UST issues	☐	☐	☐	☐	☐	☐	
I. Other issues (discuss):							

III. RECOMMENDATIONS/CONDITIONS/COMMENTS:

APPROVED:

_____ _____
District Environmental Coordinator Date

APPROVED:

_____ _____
District Right of Way Agent Date

* If the surplus property transaction may affect Section 4(f) properties, DEA and FHWA must be consulted prior to completing this form.

** If an archaeological site eligible for listing on the National Register of Historic Places is known to exist on the parcel, the property shall not be surplused without a deed restriction or preservation easement that will protect the site from future disturbance. If the applicant/purchaser's intended use for the parcel conflicts with the easement, they will be responsible for satisfying terms for release of the easement.

cc: Division of Environmental Analysis
FHWA

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF ENVIRONMENTAL ANALYSIS

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SURPLUS PROPERTY – NOTIFICATION OF ENVIRONMENTAL CONDITIONS

COUNTY	**PARCEL**
LOCATION	

☐	The proposed land use may not be compatible with local zoning ordinances.
☐	The parcel to be sold includes, or may include, an archaeological site eligible for the National Register of Historic Places. The applicant/proposed owner should contact the Kentucky Heritage Council before conducting any earthmoving activities on this parcel.
☐	The parcel includes streams, tributaries or wetland areas that my require permitting from the U.S. Army Corps of Engineers and/or the Kentucky Division of Water prior to disturbance. The applicant/proposed owner should contact these agencies prior to conducting any earthmoving activities on this parcel.
☐	The parcel to be sold includes habitat suitable for species on the Threatened or Endangered Species list maintained by the United States Fish and Wildlife Service. The applicant/proposed owner should contact the U.S. Fish and Wildlife Service before conducting any earthmoving, clearing or other activities on this parcel that might potentially cause the intentional or inadvertent "taking" of an endangered species. Such actions are contrary to law and subject to penalty including fines and/or imprisonment.
☐	The parcel to be sold includes locations where activities were or may have been conducted, that could have resulted in the contamination of the property. The applicant may need to consult with a professional, and appropriate state and federal agencies, regarding proper safety measures, clean-up standards, etc. if ground disturbing activities are planned.

COMMENTS	
SIGNATURE	**DATE**

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Baseline Prepared by: _____ Author: _____ Firm: _____

County: _____ Route: _____ Item No.: _____

Project Description:

Prime Consultant: _____

Due Date: _____ Submittal Date: _____ Submittal Draft #: _____ Approval Date: _____

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UST/HAZMAT - GUIDANCE AND ACCOUNTABILITY

Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**PHASE I SITE ASSESSMENT**	
☐			Introduction section	
☐			Describe the area geology and hydrogeology at and around the site(s)	
☐			Perform and describe an historical review of past site(s) and surrounding land uses	
☐			Perform site reconnaissance and describe the current use of the site(s)	
☐			Inventory and describe any chemical and/or hazardous materials used on the subject site(s)	
☐			Discuss any past or present waste disposal practices at the site(s)	
☐			Discuss any past or present PCB electrical equipment usage at the site(s)	
☐			Discuss any staining and stressed vegetation at the site(s)	
☐			Discuss what the water supply is and if there are any wells at the site(s)	
☐			Interview local fire and health department representatives to see if there are any environmental concerns at the site(s)	
☐			Review and describe any regulatory listed facilities in the area around the site(s)	
☐			Provide conclusions and recommendations for Phase II site assessment	
			PHASE II SITE ASSESSMENT	
☐			Discuss the background information of the site(s)	
☐			Review and discuss technical approaches for assessing the site(s)	
☐			Conduct interviews and review site records to gain a better understanding of past and current operational practices	
☐			Prepare phase II site assessment work plan that outlines selected approach	
☐			Execute the phase II site assessment work plan	
☐			Review phase II site assessment data	
☐			Prepare a final phase II site assessment with conclusions and recommendations for correction action (Phase III)	

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Required	Complete	DEA	CATEGORY	Item No:
Insert checkmark as appropriate			**PHASE III CORRECTIVE ACTION**	
☐			Discuss the background information and purpose of the site(s)	
☐			Review all available site records	
☐			Review and discuss technical approaches for remediating the contamination at the site(s)	
☐			Prepare a phase III corrective action work plan that outlines selected approach	
☐			Execute the phase III corrective action work plan	
☐			Review and/or monitor the corrective action until completion	
☐			Submit quarterly and/or annual reports summarizing the effectiveness of selected corrective action. Make modifications as needed	

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Recommended for approval by:

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Project Manager — Date

EXHIBIT
UST/HazMat GAF, TC 58-44
EA-9024

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF ENVIRONMENTAL ANALYSIS

TC 58-57
Rev. 01/2014
Page 1 of 2

PROGRAMMATIC 4(f) FOR HISTORIC BRIDGES

County _____ State _____ Item No. _____

Description/Location of Historic Bridge:

Consult the Nationwide Section 4(f) Evaluation (attached) as it relates to the following items. Any response in a box requires additional information prior to approval. This determination will be attached to the applicable CE

	YES	NO
Will the bridge be replaced with federal funds?	☐	☐
Will the project require the "use" of a historic structure which is on or is eligible for listing of the National Register of Historic Places?	☐	☐
Will the project impair the historic integrity of the bridge either by demolition or rehabilitation?	☐	☐
Has the bridge been determined to be a National Historic Landmark?	☐	☐

Alternatives Considered

Consult the Nationwide Programmatic Section 4 (f) Evaluation for the generic reasons that might be addressed.

	YES	NO
All reasonable alternatives to avoid any use of the Historic bridge have been evaluated.	☐	☐
The "Do Nothing" alternative has been studied and it has been determined for reasons of maintenance and safety not to be feasible and prudent?	☐	☐
The build on new location without using the old bridge alternate has been studied and it has been determined for reasons of terrain, and/or adverse social, economic or environmental effects, and/or engineering and economy preservation of the old bridge, not to be feasible and prudent?	☐	☐
Rehabilitation of the existing bridge without affecting the historic integrity of the bridge has been studied and it has been determined for reasons of structural deficiency, and/or geometric that rehabilitation is not feasible and prudent?	☐	☐

KENTUCKY TRANSPORTATION CABINET
Department of Highways
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PROGRAMMATIC 4(f) FOR HISTORIC BRIDGES

County _____ State _____ Item No. _____

Measures to Minimize Harm

	YES	NO
The project includes all possible planning to minimize harm as the following apply?	☐	☐
The existing bridge was made available for an alternative use through a marketing process in accordance with an executed MOA for the project. Advertisements and marketing documents are attached. No responsible party agreeing to maintain and preserve the bridge at a new site was found?	☐	☐
The FHWA, SHPO and ACHP have reached agreement through the Section 106 process on the measures to minimize harm in the absence of a bridge relocation agreement. These are outlined in Sections II and IV of the executed MOA (copy attached)	☐	☐

Determination and Approval

Based on the Categorical Exclusion Determination approved by FHWA on and as evidenced by the Programmatic Section 4(f) Evaluation and Kentucky Transportation Cabinet's July 18, 1997 letter attached, the FHWA has determined that:

The project meets the applicability criteria set forth in the Nationwide Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that necessitate the Use of Historic Bridges dated July 5, 1983.

That all of the alternatives set forth in the Findings section of the above National Section 4(f) Evaluation have been fully evaluated. Based on those Findings, it is determined that there is no feasible and prudent alternative to the use of the historic **NAME OF PROJECT, LOCATION, COUNTY, ITEM NUMBER**.

That the project complies with the Measures to Minimize Harm Section of the above Nationwide Section 4(f) Evaluation has been completed and agreement reached between the FHWA and SHPO and ACHP has been reached.

Accordingly, the FHWA approves the proposed use of the historic **NAME OF PROJECT, LOCATION, COUNTY, ITEM NUMBER** or the construction of a replacement bridge and approaches under the above Nationwide Section 4 (f) Evaluation issued July 5, 1983.

_____ Approved _____

Date Area Engineer

NEPA Document Distribution

Hard Copy / Electronic Copy	CEMP	CE L1	CE L2	CE L3	EA	FONSI	DEIS	FEIS	ROD
DEA/Administrative Record	1/1	1/1	1/1	3/2	3/2	3/2	3/2	3/2	3/2
District and DEC	2/2	2/2	2/2	3/2	3/2	3/2	3/2	3/2	3/2
Program Management	0/1	0/1	0/1	0/1	0/1	1/0	0/1	0/1	0/1
Office of Civil Rights	0	0	0	0	0/1	0/1	0/1	0/1	0/1
FHWA	FTP Site	FTP Site	FTP Site	1/1	1/1	1/1	1/1	1/1	1/1
State Highway Engineer	0	0	0	0	0	Letter	Letter	Letter	Letter
Director, Division of Design	0	0	0	Letter	Letter	Letter	1/1	1/1	1/1
Location Engineer	0	0	0	0	Letter	Letter	Letter	Letter	Letter
Division of ROW	0	0	0	0	Letter	Letter	Letter	Letter	Letter
Advertise Availability	No	No	No	No	Yes	Yes	Yes	Yes	Yes

NEPA Document Review

Hard Copy / Electronic Copy	CE L1	CE L2	CE L3	EA	FONSI	DEIS	FEIS	ROD
DEA	0/1	0/1	0/1	1/1	1/1	1/1	1/1	1/1
District	0/1	0/1	0/1	1/1	1/1	1/1	1/1	1/1
FHWA (final review)	0	0	1/1	1/1	1/1	2/1	2/1	2/1

Lexington-Fayette Urban County Government
Division of Parks and Recreation
Chuck Ellis, Director

469 Parkway Dr
Lexington, Kentucky 40504
(859) 288-2900
FAX (859) 288-2999

March 30, 2005

Randy Turner, P.E.
Transportation Cabinet
P.O. Box 11127
Lexington, KY 40512

RE: Fayette County
Leestown Road (US 421) Widening
Item No. 7-223

Dear Mr. Turner:

This revised letter is in response to your letter of November 5, 2001, to John McClelland. We have reviewed the most recent plans for the recommended Alternative No. 5. The responses to the individual questions are listed below:

Question 1: What is the total size of the park in acres.
Answer 1: The total size of the park is 659.75 acres.

Question 2: What type of funding was used to acquire the park property? If federal funding was used, what federal agency was the source of the funds?
Answer 2: The park was given to the City of Lexington in 1972. The land was formerly part of a federal narcotics corrections farm. According to the quitclaim deed (book 1059 page 360) stipulations were addressed by the Dept. of Interior but no federal money was used to purchase the land.

Question 3: What is the current use and future plans for the park, if any, in the area of the project where it would be necessary for right of way to be acquired?
Answer 3: Currently, there are several existing mature trees, a two-lane park entrance, and a park sign. There are currently no recreational activities that will be directly affected by the project as proposed. Although the Master Plan for the Park is under review, we anticipate no changes in activities in the immediate area of the proposed roadway project.

Question 4: Will the land acquired for the roadway project, impair the use of the remaining recreational area for its intended purposes?
Answer 4: No, it appears that the land acquired for the roadway project would not aversely impair the use of the remaining park area for its intended purposes.

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Question 5: Will the proximity of the proposed roadway impair the use of the park?
Answer 5: No, the proximity of the proposed roadway improvements will not impair the use of the park.

Question 6: Do you believe the impacts of the proposed roadway to be insignificant to the recreational area of the park and are there any mitigation measures that you would request to be included in the design of the project?
Answer 6: We feel that the impacts would not be significant to the recreational areas of the park. However, we feel some mitigation measures are in order. We would like the Dept. of Transportation, with input from Parks staff, to design and construct Ruffian Way entrance improvements and associated storm water management. In addition, we would like to receive compensation to be used to replace the existing mature Elm trees that must be removed and improved signage to replace the existing park sign that will be removed.

We are supportive of the Leestown Road widening project and the improvements it will provide for the Community. We know the improvements and mitigation measures proposed will ease the traffic congestion near the Masterson Station Park entrance (Ruffian Way) and therefore will be better for park visitors. After reviewing the recommended alternative, we realize that there are no other feasible and prudent alternatives that will lessen the impacts and the area of land acquisition from the park. We agree with the appraised value of the parkland to be acquired as presented in the recent appraisal conducted by KYTC. The entire funds paid to us for the land acquired under section 6(f) of the Land and Water Conservation Act will exclusively be used for the purchase of substitute parkland of equal value and usefulness.

Thank you for your attention in this matter and for including us in the decision making process. Masterson Station Park is very important to the community. Please contact me if you have any questions.

Sincerely,

Chuck Ellis
Director

Cc: Kathy DeBoer, Commissioner of General Services
Tracy Jones, Department of Law
Michelle Kosieniak, Supt. of Planning and Design

Example *De minimis* Letter

U.S.Department
of Transportation
Federal Highway Administration

Kentucky Division Office
(Name), Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

(DATE)

(Name), Executive Director
Kentucky Heritage Council and
State Historic Preservation Office
300 Washington Street
Frankfort, KY 40601

Subject: *De Minimis* Determination
(Route/Description)
(County)
(KYTC Item No.)

Dear (Name):

After review of the information provided to us by KYTC, it appears that the project will be taking approximately (xx) acres of a total acreage of (xx) from (Site # and brief Site Description) to be used in the (brief Project Description). Because the minimal impacts associated with the proposed roadway will not adversely affect the activities, features, and attributes that qualify the resource for protection under section 4(f) (optional if MOA is needed –"and because mitigation measures, as are to be outlined in a Memorandum of Agreement between your agency and the KYTC, have been incorporated into the project"), FHWA is making a No Adverse Effect Determination for this project. We are asking that you concur with our determination of No Adverse Effect and that the *de minimis* rule be applied.

If you have any questions, please contact me at your convenience.

_____
(Name)
Environmental Specialist
Federal Highway Administration

_____
(Name)
Executive Director
Kentucky Heritage Council
State Historic Preservation Office

Example De Minimis Determination Letter
for Non-Historic 4(f) Property

U.S. Department of Transportation
Federal Highway Administration

Kentucky Division Office
Jose Sepulveda, Division Administrator

330 West Broadway
Frankfort, KY 40601
PH. (502) 223-6720
FAX (502) 223-6735

January 9, 2007

Mr. Chuck Ellis, Director
Lexington Fayette Urban County Government
Parks and Recreation
200 Main Street
Lexington, Kentucky 40507

Dear Mr. Ellis:

Subject: De Minimis Determination
Masterson Station Park (US 421 Reconstruction)
Fayette County, Kentucky
Item No. 7-223.00

After review of the information provided to us by KYTC, it appears that the project will be taking approximately 1.4 acres of Park land to be used in the reconstruction of the US 421 Project. Because the minimal impacts associated with the proposed roadway will not adversely affect the activities, features, and attributes that qualify the resource for protection under section 4(f) and because mitigation measures, as outlined in a Memorandum of Agreement between your agency and the KYTC on November 22, 2006, have been incorporated into the project, FHWA is making a No Adverse Effect Determination for this project. We are asking that you concur with our determination of No Adverse Effect and that the De Minimis rule be applied.

If you have any questions, please contact me at your convenience.

Anthony Goodman 1/9/2007
Anthony Goodman
Environmental Specialist
Federal Highway Administration

_____
Chuck Ellis
Director
Parks and Recreation





Impact Limits and Notification Thresholds for Common U.S. Army Corps Permit

Nationwide Permit	Limits	Pre-Construction Notification (PCN) Requirement* and Comment Waiting Periods
NWP 3 Maintenance	200' from any direction of the structure	all activities
NWP 13 Bank Stabilization	500' along the bank and 1 cubic yard/running foot (unless waived by the Corps)	PCN required if: >500', >1 cubic yard per running foot along bank below; discharge into special aquatic site
NWP 14 Linear Transportation Projects	0.5 acre in waters of the U.S.	PCN required if: >300', >0.10 acre or discharge into special aquatic site
NWP 33 Temporary Construction, Access and Dewatering	None	all activities
LOP	Impacts may not exceed 7 cumulative acres; no impacts to water supply sources allowed; controversial projects shall not be permitted by the LOP	The LOP has a 21 day agency comment period and a timeline of 45 days to issue the permit after a complete application has been submitted
IP	No specified limitations	45 day Public Notice is mandatory

* If project falls below listed thresholds then it will qualify for the KYTC Below Notification Requirement (BNR) process. Sec. 7 and 106 must be at no adverse effect and general conditions must be met during construction in order to qualify as BNR

Table is based on the 2012 Issuance of the Nationwide Permit Series which are updated every 5 years

KYTC - Division of Environmental Analysis
Section 404 and 401 Permit Application Preparation Guidelines
Revision 10-31-2013
All 17 items will be required for an LOP
All items except #'s 11 & 12 are required for an IP and NWPs
All items except for #'s 10-15 are required for WQC application

1. Cover Letter

2. Permit Application Form
   a. Fill out the appropriate permit application for Section 401 Water Quality Certification and Section 404 Department of the Army Permit Application
   b. Applicant = KYTC, Agent = permit coordinator for that district

3. Project Vicinity Map
   a. Label map as (Item No.) Project Vicinity Map, including item number, brief description (e.g., US 150 reconstruction), county and lat/long in decimal degrees
   b. The base layer should be a Kentucky highway map
   c. The specific location of project area should be clearly identified
   d. The map should show at least one readily identifiable metropolitan area such as Louisville, Lexington, Paducah, Pikeville, Ashland, etc. as a geographic reference point
   e. Insert a smaller map of the state with the county of the project area highlighted.

4. Alignment Map
   a. Label map as the Project Alignment Map, including item number, brief description (e.g., US 150 reconstruction), county and lat/long in decimal degrees, and 14-digit HUC(s)
   b. The base layer should be a USGS 7.5-minute quadrangle topographic map
   c. Overlay the alignment in a contrasting color
   d. Overlay the HUC-14 boundaries in a contrasting color
   e. Indicate the line color used to identify the alignment and HUC boundaries in a key at the bottom of the page. (see example application)

5. Impact Stations Map
   a. Label map as the Project Impact Stations Map, including item number, brief description (e.g., US 150 reconstruction), county and lat/long in decimal degrees.
   b. The base layer should be a USGS 7.5-minute quadrangle topographic map
   c. Overlay the alignment with station numbers identifying where impacts occur.
   d. Indicate the line color used to identify the alignment in a key at the bottom of the page.

6. Summary of Section 404 Impacts For a Letter Permission
   a. All stream and wetland impact locations must be identified by station number.

b. In the case of a channel change or other impact extending across stations, use a range of station numbers as the identifier. (e.g., Station 120+00 – 124+30)
c. Include lat/long in decimal degrees, type of activity (e.g., fill, culvert placement, channel change) length of impact, area of impact, watershed size, flow regime, and stream name.
d. If the activity is spanning a stream with a bridge, with no impacts below the ordinary high water mark, describe as such.
e. If a bridge is included in the design, describe the potential for the construction of a temporary crossing. The temporary crossing will be built to accommodate a 2-year storm event, with excess flow designed to overtop the structure, with the structure remaining intact.
f. Do not include the permit type (e.g., WQC, NW 14, Individual) in the Narrative of Impacts.
g. If a feature such as a stream or wetland is outside the disturbance limits of the project, or if an impact is within a non-jurisdictional stream or wetland, do not describe it in the narrative.

7. Impact Summary Table
   a. The table column headings should be labeled from left to right: Station, Sheet, Name, HUC14, Stream Type, Impact Type, Length of Impact (ft), Acreage of Impact, Drainage Area (ac), RPB Score/Quality, Riffle/Pool, KDOW and USACE mitigation totals (AMUs, EIUs or wetland credits).
   b. If a stream is designated a special use water, signify with an asterisk after the stream name and describe the designation in a footnote to the table.
   c. "Sheet" means the page number of the Right-of-Way (ROW) plan sheets, which will be included in the permit application. Impacts should be listed by the station number order as they occur on the Right-of-Way Plan sheets.
   d. If a feature such as a stream or wetland is outside the disturbance limits of the project, or if an impact is within a non-jurisdictional stream or wetland, do not describe it in the narrative.
   e. Totals should be included for the following columns: Length of Impact, Acreage of Impact, KDOW mitigation totals, and USACE mitigation totals (AMUs, EIUs or wetland credits).

8. Photographs
   a. All impacted streams and wetlands should be photographed and held on file. Field personnel should clearly label each photo file using the Station Number (for ease of future use). Only impacts requiring mitigation will be included within the photographic documentation in the application package. Each photograph in the application package should be identified by Station Number, flow type, RPB score and qualitative score (excellent, average, or poor) along the top margin of the photo (see example).
   b. Photographs should be taken at or very near the area of impact and be representative of the quality and flow-type described in the permit application.

c. Photographs should be arranged in the document by station number just as they are arranged in the narrative of impacts and the impact summary table.

9. RPB Sheets and Wetland Delineation Forms
    a. These should be arranged in the same order as found in the Narrative of Impacts and Impact Summary Table
    b. Both pages of the scoring sheets and delineation form must be identified by Station Number.
    c. RPB sheets must be completed for all streams requiring mitigation (including ephemeral streams with area impacts exceeding 0.1 acres, all jurisdictional streams associated with excess fill sites, intermittent and perennial streams exceeding 300 linear feet of impact, and intermittent or perennial streams within a 14-digit HUC that have cumulative impacted lengths exceeding 500', if there is any single impact within the watershed that has a drainage area exceeding 250 acres).

10. Preliminary Jurisdictional Form
    a. The form should be completely filled out, where appropriate.
    b. The table in the back should include all impacted streams and wetlands.

11. LOP Assessment of Environmental, Social, and Other Factors

12. LOP Checklist

13. Alternatives analysis, project description, purpose and need, statement of mitigation plan

14. Evidence of completion of Section 7 consultation (USFWS)

15. Evidence of completion of Section 106 consultation (Kentucky Heritage Council)

16. Roadway Plans
    a. Plans (11" x 17") should be included with the permit application.
    b. Right-of-way plans (plan view only) are sufficient however; Grade, Drain and Surfacing Plans or Construction Plans are also acceptable. These plans can be obtained from DEA, the appropriate Highway District, or the design consultant (see example). Do not include cross sections, pipe sheets, aerial or topographic versions.
    c. Plans should be black and white. Impacted stream lengths within the disturbance limits should be highlighted in color (e.g., blue), and structures such as culverts and bridges should be highlighted using a different color (e.g., yellow). Highlighting by hand or computer is acceptable; highlighting by-hand may produce a clearer depiction of impacts. Highlighting in this manner eliminates the need to turn off layers or otherwise electronically manipulating the plan set

while at the same time providing the most readable and understandable product to the regulatory agencies. However, electronically highlighting and labeling the plans are acceptable as long as the effort produces a clear and readable map.

d. Each impact should be clearly labeled on the plan sheet using the Station Number and these Station Numbers must correspond to the Station Numbers used within the Summary of Impacts as well as the Impact Summary Table.

17. If the site requires a separate excess material site, the permit application should include a contour map showing the boundary of the site as well as the channels being filled.
    a. The naming system for impacts associated with excess material sites should follow this format: stream or wetland impact number followed by the flow type. Example: 1e = ephemeral stream; 2i = intermittent stream; 3p = perennial stream; 4w = wetland
    b. This naming system should be used on the maps, narrative of impacts and impact summary table
    c. KYTC projects that require excess material sites impacting jurisdictional streams require a Letter of Permission or Individual Permit.

Impact Limits and Notification Thresholds for Common KY Division of Water 401 Water Quality Certifications		
Permit	**Limits**	**Comment Waiting Period**
NWP 3 Maintenance	<0.5 acres of wetland; <300 linear feet of waters of the Commonwealth; will not occur in special use waters[1]	NA
NWP 13 Bank Stabilization	<0.5 acres of wetland; <500 linear feet of waters of the Commonwealth (opposite streambanks summed together); will not occur in special use waters[1]	NA
NWP 14 Linear Transportation Projects	<0.5 acres of wetland; <300 linear feet of waters of the Commonwealth; cumulative impacts within a HUC 14 cannot exceed 500'; Stream realignment may not exceed 100 linear feet; will not occur in special use waters[1]	NA
NWP 33 Temporary Construction, Access and Dewatering	<0.5 acres of wetland; <300 linear feet of waters of the Commonwealth; will not occur in special use waters[1]	NA
Individual WQC	Exceeds NW permit thresholds; channel relocations > 100 linear feet	30 days

[1] Special use water include surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Waters, Cold Water Aquatic Habitat, or Exceptional Waters.

Table is based on the 2012 Issuance of the Nationwide Permit Series which are updated every 5 years