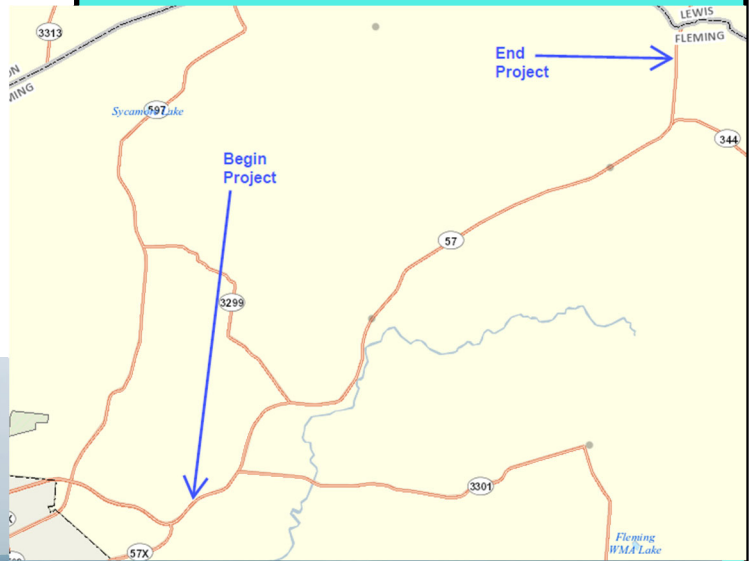
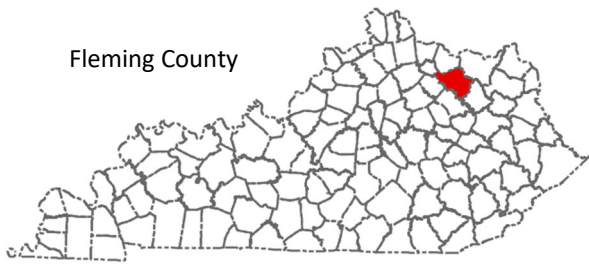


Fleming County



**Data**

**Needs**

**Analysis**



# Scoping Study

KY-57  
Fleming County

Reconstruct KY-57 to provide better horizontal and vertical alignment, wider shoulders, and extend clear zone.  
(MP 1.876 to MP 9.183)

Item No. 09-80103.00

Prepared by KYTC  
District 9

June, 2023



TRANSPORTATION  
CABINET

**I. PRELIMINARY PROJECT INFORMATION**

<b>County:</b>	Fleming	<b>Item No.:</b>	9-80103.00
<b>Route Number(s):*</b>	KY-57	<b>Road Name:</b>	Mt. Carmel Road
<b>Program No.:</b>		<b>UPN:</b>	FD52 035 0057
<b>Federal Project No.:</b>		<b>Type of Work:</b>	Reconstruction

2022 **Highway Plan Project Description:**

RECONSTRUCT KY 57 TO PROVIDE BETTER HORIZONTAL AND VERTICAL ALIGNMENT, WIDER SHOULDERS, AND EXTEND CLEAR ZONES.

<b>Beginning MP:</b>	1.876	<b>Ending MP:</b>	9.183	<b>Project Length:</b>	7.307
<b>In TIP:</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<a href="#">Reconcile Project Information in Clearview</a>			
<b>State Class.:</b>	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary	<b>Route is on:</b>	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt		
<b>Functional Class.:</b>	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Collector	<b>Truck Class.:</b>	AAA	<b>% Trucks:</b>	15.07%
<b>MPO Area:</b>	Not Applicable	<b>Terrain:</b>	Rolling		
<b>ADT (current):</b>	3398 2021				
<b>Access Control:</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	<b>Spacing:</b>			
<b>Median Type:</b>	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
<b>Existing Bike Accommodations:</b>	None	<b>Ped:</b>	<input type="checkbox"/> Sidewalk		
<b>Posted Speed:</b>	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
<b>KYTC Guidelines Preliminarily Based on :</b>		50 MPH Proposed Design Speed			

Roadway Data:	COMMON GEOMETRIC		
	EXISTING	PRACTICES**	
No. of Lanes	2	2	<a href="#">Existing Rdwy. Plans available?</a> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lane Width	10'-12'	12'*	
Shoulder Width	0'-3'	6'	Year of Plans: 1924/1934
Max. Superelevation***	7%	8%	<input type="checkbox"/> <a href="#">Traffic Forecast Requested</a>
Minimum Radius***	<758'	758'	Date Requested:
Maximum Grade	8.5+%	7%	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.	<425'	425'	Date Requested:
Sidewalk Width(urban)	N/A	N/A	Type:
Clear-zone <sup>†</sup>	Deficient	12'-26'	

Project Notes/Design Exceptions? \*15.07% ADTT, Amish Horse & Buggy, and Agricultural Equipment.

Bridge No.:#	035B00090N		035B00006N		
Sufficiency Rating	99.3		86.8		<a href="#">Existing Geotech Data Available?</a> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length	69.31''		27.9'		
Width, curb to curb	40'		17.7'		Yes 035B90N, No 035B06N
Span Lengths	64'		9.8', 9.8' 45deg skew		
Year Built	1997		1929		Detour Length(s): 3.1 miles
Posted Weight Limit	None		None		
Structurally Deficient?	No		None		11.2 miles
Functionally Obsolete?	No		None		
Existing Bridge Type	Prestressed I-Beam		Reinforced Concrete Culvert		
	Abut. On Spread-footing				

<b>Bridge No.:</b> <sup>‡</sup>	<u>035B00076N</u>	
Sufficiency Rating	<u>87.1</u>	<a href="#">Existing Geotech Data Available?</a>
Total Length	<u>58.1'</u>	
Width, curb to curb	<u>25</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Span Lengths	<u>57.1</u>	
Year Built	<u>1982 or 1983</u>	
Posted Weight Limit	<u>None</u>	Detour Length(s): <u>1.2 miles</u>
Structurally Deficient?	<u>No</u>	
Functionally Obsolete?	<u>No</u>	
Existing Bridge Type	Prestressed I-Beam	

\*If more than one road is included in the project, include additional sheets.  
 \*\*Based on proposed Design Speed  
 \*\*\*AASHTO's A Policy on Geometric Design of Highways and Streets  
 +AASHTO's Roadside Design Guide  
 ‡If more than two bridges are located on the project, include additional sheets.

## II. PROJECT PURPOSE AND NEED

### A. Legislation

As shown in the 2022 enacted Highway Plan; Senate District 27, House District 72.	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	D	2023	\$2,500,000
	SPP	R	2025	\$6,500,000
	SPP	U	2026	\$5,000,000
	SPP	C	2027	\$55,000,000

### B. Project Status

This project appears in the 2022 Enacted Six Year Highway Plan with only State Funding; for all project phases. Due to the scale of this project Federal Funding is being requested. Thus, the Environmental Document will be prepared to the minimum Federal Standards. This project will continue from the completed/constructed "Flemingsburg Bypass to KY-57" (09-179.00) Project (awarded to construction in 2013) and extend to the recently completed KY-57 North Fork of Licking River Bridge Replacement (09-8507) Project.

### C. System Linkage

KY-57 provides direct linkage between the AA-Highway (KY-9) and I-64 for the northeastern most counties in Kentucky as well as the neighboring/boarding portions of Southern Ohio. The corridor of KY-57 extending from junction of KY-9 to the junction of KY-11/KY-11X is a Class AAA Truck Route. The Average Daily Truck Traffic (ADTT) is documented just under 14% for the majority of the segment contained within the proposed project limits, but peaks at just over 15%. Ultimately, the KY-57 corridor provides connectivity between the AA-Highway and I-64, creating system linkage for Northeast Kentucky and beyond.

**D. Modal Interrelationships**

This project will continue from the completed/constructed "Flemingsburg Bypass to KY-57" (09-179.00) Project (awarded to construction in 2013) and extend to the recently completed KY-57 North Fork of Licking River Bridge Replacement (09-8507) Project. The segment extending from the recently completed KY-57 North Fork of Licking River Bridge Replacement (09-8507) Project to the junction with the AA-Highway (KY-9) has recently advanced to Phase II Design. The segment identified within the proposed project limits is the last remaining segment within the corridor (ultimately connecting KY-9 to I-64) to be designed and/or constructed to modern roadway standards.

**E. Social Demands & Economic Development**

The areas directly served by the section of KY-57 identified within the proposed project limits consist of primarily agricultural farm land. The continual demand of transporting agriculture equipment along this section of roadway illustrates the need to construct wider driving lanes, wider shoulders, and to improve the existing geometric deficiencies to provide adequate passing zones. In addition, this area of Fleming County is home to an Amish Community. The Amish's primary mode of transportation in this area consist of horse-drawn buggies. The lack of shoulders combined with adequate sight distance along the existing roadway creates challenges that pose potential transportation limitations for these local Amish. This section of roadway identified within this project limits is part of a much larger network of roads that provide a north/south corridor connecting the AA-Highway (KY-9) and I-64. Thus, upgrading this section of roadway promotes current and future economic development opportunities to the state's northeastern most counties.

**II. PROJECT PURPOSE AND NEED (cont.)**

**F. Transportation Demand**

Since the early 2000's, traffic volumes within the proposed project limits have remained relatively consistent. There does appear to be an increase (spike) between the 2017/2018 and the 2020/2021 traffic count data at every count station within the project limits; increases ranging from 173 up to 542 vehicles per day. There are three traffic count stations located within the project limits: Station 035104, Station 002, and Station 068811. Station 104 is a relatively new volume count station that is located near the beginning of the project (between the junction of KY-57X and KY-3301), in 2021 the published ADT was 3,398 with 15.07% Truck Traffic. Station 002 is a class count station that is located near the middle of the project (between KY-3301 and KY-344), in 2020 the published ADT was 2,263 with 13.87% Truck Traffic. Station 068811 is a volume count station located near/at the north end of the project (between the junction of KY-344 and the Fleming/Lewis County Line), in 2020 the published ADT was 2,186.

**G. Capacity**

KY-57 at this location operates below critical capacity and with ADT's staying fairly consistent for nearly 20 years, additional through lanes are not necessary. Improving this segment of KY-57 by widening lanes/extending shoulders, possibly adding appropriate turn lanes, and correcting geometric deficiencies will increase the efficiency and safety of the route.

**H. Safety**

In the 5 years from 2017 to 2021, there were 29 reported crashes within the project limits according to the CDAT. Overall, the whole section has a CO (C-Possible Injury, O-No Apparent Injuries) EEC (Excess Expected Crashes) of -14.2 and a KAB (K-Fatality, A-Incapacitating Injury/Injuries, B-Non-Incapacitating Injuries) EEC of -0.2 which indicates an LOSS (Level of Service of Safety) rating of 2. This indicates that as a whole, this section of KY-57 is generally considered as a safe section of roadway when compared to roads of the same class and character within the state. With a considerable amount of Amish horse and buggy traffic present within the corridor, it is imperative to supply adequate stopping sight distance, passing zones, and paved shoulders that safely accommodate vehicular traffic combined with slower traveling horse-drawn buggy traffic.

**I. Roadway Deficiencies**

There are multiple horizontal and vertically deficient curves within the project limits as well as issues with sight distance and clear zone. The road currently has 10' to 12' wide lanes with minimal shoulders throughout the majority of the proposed project limits.

**III. PRELIMINARY ENVIRONMENTAL OVERVIEW**

**A. Air Quality**

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

**STIP Pg.#:** FY 21-24, Sect. A-5, Pg 12

**TIP Pg.#:**

Project is state funded so it is not listed in the current STIP. If federal funds are utilized, a STIP Modification will be required.

**B. Archeology/Historic Resources**

Known Archeological or Historic Resources are present

There is one site within the project vicinity that is listed on the National Register of Historic Places (NRHP). The Abraham Magowan House is located along the north side of Maddox Pike approximately 2000 feet from the KY 57 intersection. The historic boundary was established to include two barns and the entrance and encompasses an approximately 1400' X 600' area. Two properties (KHC Survey # FL-228 and # FL-43) near the beginning of the project and possibly outside of the APE were determined eligible for the NRHP in a previous study conducted for Item No. 9-179.00. It is expected that Mt. Carmel will be considered a historic district. Additionally, several other properties exist along the route that appear to meet the age criteria to be potentially eligible. Further investigations of the Magowan House and 2 previously surveyed properties (if they end up being within the APE), the potential Mt. Carmel historic district, and other potential properties within the KY 57 corridor will be done early in design as part of the Section 106 process. A previous archaeology survey that was conducted for the 9-179.00 project identified an historic site (15FL82) near the beginning of the project, which was determined not eligible for the NRHP and no further work was recommended. Potential exists for additional historic and prehistoric archaeology sites along the KY 57 corridor. An overview is typically conducted early in the design process to identify known sites and/or areas of high potential to contain sites. A Phase I survey will be conducted on the preferred alternate. The Fleming County Cemetery is located on Poplar Grove Road which is on the southern boundary of Mt. Carmel. No other cemeteries were identified on mapping from within the expected limits of the project. Field verification will be done as part of the archaeology survey.

**C. Threatened and Endangered Species**

The USFWS IPaC website lists Gray Bat, Indiana Bat, Northern Long-eared Bat, Monarch Butterfly, and Short's Goldenrod as federally threatened or endangered species for the project area. A habitat assessment will be done during the NEPA investigations to determine if habitat exists for the listed species. It is expected that impacts to potential Gray Bat and Indiana Bat habitat will be addressed following the the 2020 Programmatic Biological Opinion and may include tree clearing restrictions and a payment to the Imperiled Bat Fund. Policies for addressing the Monarch Butterfly and Northern Long-eared Bat are in transition. It is expected that impacts to potential habitat for these species can be addressed without causing issues for the project. A Biological Assessment may be needed for Short's Goldenrod if it is determined that suitable habitat requirements are present within the project limits. If needed, the BA will be done after a preferred alternative is identified.

**D. Hazardous Materials**

- Potentially Contaminated Sites are present       Potential Bridge or Structure Demolition

The potential for encountering contaminated soils exists within the project limits, particularly in Mt. Carmel, where there is an active auto repair garage and other buildings that appear to have formerly operated as general stores/gas stations. Active remediation is occurring at a site near MP 7.4 where monitoring wells are located. A closer look at the potential for presence of contamination throughout the corridor will be done during the NEPA process. Additionally, one bridge will be demolished as part of the project and there may be other standing structures (homes, sheds, barns, etc.) that are acquired to allow for construction of the project. These will be inspected for Asbestos Containing Materials (ACMs) prior to demolition. Abatement will be performed if necessary.

**E. Permitting**

- Check all that may apply:    Waters of the US    MS4 area    Floodplain Impacts    Navigable Waters of the US Impacts  
Are 401/404 Permits likely to be required?    Yes    No      Impacts to:    Wetlands    Stream/Lake/Pond  
 ACE LON    ACE NW    ACE IP    DOW IWQC       Special Use Waters

Four perennial streams (Sleepy Run, UT to Fleming Creek, Logan Run, and UT to North Fork Licking) and eleven intermittent streams are crossed by existing KY 57. Numerous ephemeral streams also exist within the corridor. Two watersheds, Fleming Creek and North Fork of the Licking River, are present within the corridor. The Fleming Creek watershed, including Sleepy Run and Logan Run, has an approved TMDL, and is located in the southern portion of the route. Sleepy Run is identified on the Energy and Environment's online Water Health Portal as "Not Supporting" Primary Contact Recreation use. Logan Run is shown as "Not Supporting" Primary Contact Recreation and Warm Water Aquatic Habitat uses. Affected streams in the northern portion of the project corridor, including the UT to North Fork Licking, have not been assessed by KY Division of Water to determine if they are meeting uses. Project impacts will dictate the level of required Section 404 US Army Corps of Engineers (USACE) and Section 401 KY Division of Water (KDOW) permits. It is usual for a project of this size to require a Letter of Permission or Individual USACE Section 404 permit and an Individual Water Quality Certification from KDOW. Permitting within the Fleming Creek watershed, which are considered impaired streams not supporting uses, may also require additional consultation with KDOW. National Wetland Inventory (NWI) mapping indicates the presence of farm pond and riverine wetland types scattered throughout the corridor. The potential for wetlands is likely in some of the lower lying areas of the corridor. Delineation and the presence of wetlands will be determined during the NEPA process.

**F. Noise**

- Are existing or planned noise sensitive receptors adjacent to the proposed project?    Yes    No  
Is this considered a "Type I Project" according to   [KYTC Noise Analysis and Abatement Policy?](#)    Yes    No

Existing receptors, including churches, cemeteries, and residences, are located throughout the project limits, with clusters located in the communities of Dalesburg and Mt. Carmel. If federal funds are used for the project, it is likely to be a Type I project and that a noise study and analysis will be required.

**G. Socioeconomic**

Check all that may apply:  Low Income/Minority Populations  Relocations  Local Land Use Plan available

The potential for residential relocations exists with the project. A Screening Tool for Equity Analysis of Projects (STEAP) report indicates that approximately 97% of the residents within a 0.5 mile buffer along KY 57 are white, 2% are black. This is about the same percentage as Kentucky, which is 96% white and 2% black. The STEAP report also showed that about 17% of the population within the 0.5 mile buffer are living in poverty. This number compares to 18% of Kentuckians living in poverty. It should be noted that there is a large presence of members of the Amish community that live and/or travel within the KY 57 corridor. Fleming County does not have countywide zoning, but has a comprehensive plan that includes land use.

**H. Section 4(f) or 6(f) Resources**

The following are present on the project:  Section 4(f) Resources  Section 6(f) Resources

There are no public parks, wildlife refuges, or publicly-owned recreational areas located within the project limits. However, several properties appear to be eligible for the National Register of Historic Places, meaning that if federal funds are used for the project then they could be considered Section 4(f) resources. No areas were identified on a listing of LWCF grants/projects within the corridor so Section 6(f) resources are not expected.

**Anticipated Environmental Document:**

CE Level 3



**IV. PROJECT NEED, PURPOSE & SCOPE**

**A. Need:**

This section of KY-57 is part of a combination of state highways that provides direct linkage between the AA-Highway and I-64. There is the need to provide a more consistent and reliable roadway for vehicular and truck traffic traveling along this combination of state highways that make up this north/south corridor. This section of KY-57 is the last remaining segment within this corridor that has not been reconstructed or in Phase II Design.

**B. Purpose:**

The purpose of this project is to address the current roadway deficiencies to improve mobility and connectivity between the AA Highway and I-64.

**C. Scope:**

The project will likely follow the existing alignment when possible. However, off-alignment sections and/or segments shall be considered to avoid major impacts. The roadway will remain two lanes with the addition of turn lanes if needed. The project team will likely only consider matching the typical section of the completed project to the south, the completed bridge replacement project at the north end, and the proposed typical section of the project in Phase II Design located to the north. Reducing the proposed typical section would be considered only if it is determined feasible and environmentally permissible to reconstruct the roadway through Mt. Carmel.

**V. PROJECT ESTIMATE & METHODOLOGY**

**Estimate Methodology:**

Current highway plan estimates were based upon using consultant services for design. Right of way and utility estimates were based upon probable expected impacts. Construction estimates were based on the following projects located within the corridor completed within the last 10 years: "Flemingsburg Bypass to KY-57" (09-179.00) Project (awarded to construction in 2013) and extend to the recently completed KY-57 North Fork of Licking River Bridge Replacement (09-8507) Project. In addition, the construction cost assumes KY-57 will be relocated from its current alignment using current geometric standards with a 50 to 55 mph design speed.

**Current Estimate**

<u>Phase</u>	<u>Estimate</u>
Planning	\$ -
Design	\$ 2,500,000.00
R/W	\$ 6,500,000.00
Utilities	\$ 5,000,000.00
Const	\$ 55,000,000.00
<b>Total</b>	<b>\$ 69,000,000.00</b>



**VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION**

Company Name - FLEMING COUNTY WATER ASSOCIATION  
Contact - Kevin Cornett – Primary Supervisor  
Address - PO Box 327, 2772 Morehead Road, Flemingsburg, KY 41041  
Phone No. - (606) 845 3981

Company Name - FLEMING MASON ENERGY  
Contact - Brandon Hunt – CEO  
Address - PO Box 328, 1449 Elizaville Road, Flemingsburg, KY 41041  
Phone No. - (606) 845 2661

Company Name - SPECTRUM CABLE  
Contact - Gregory Russell – Construction Coordinator  
Address - (859) 626 4809, 1617 Foxhaven Drive, Richmond, KY 40475  
Phone No. - (859) 626 4809

Company Name - WINDSTREAM KENTUCKY INC  
Contact - Steve Johnson – Primary Engineering Manager  
Address - PO Box 9001116, Louisville, KY 40290  
Phone No. - (859) 357 6209

Company Name -  
Contact -  
Address -  
Phone No. -

Company Name -  
Contact -  
Address -  
Phone No. -

Company Name -  
Contact -  
Address -  
Phone No. -

Company Name -  
Contact -  
Address -  
Phone No. -

**VII. TABLES AND EXHIBITS**

Looking south from an elevation approximately 390 feet above ground level (AGL)  
at the northern end of the completed "bypass" (09-179.00) project.



Looking north from an elevation approximately 390 feet above ground level (AGL)  
at/near the beginning of project 09-80103.00.



**VII. TABLES AND EXHIBITS (cont.)**

Aerial view of KY-57 between KY-3299 and KY-3301; looking north of KY-3301.



Aerial view looking down at the junction between KY-57 and Maddox Pike.

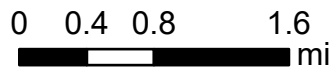
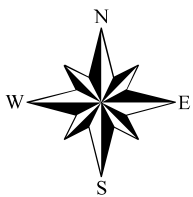
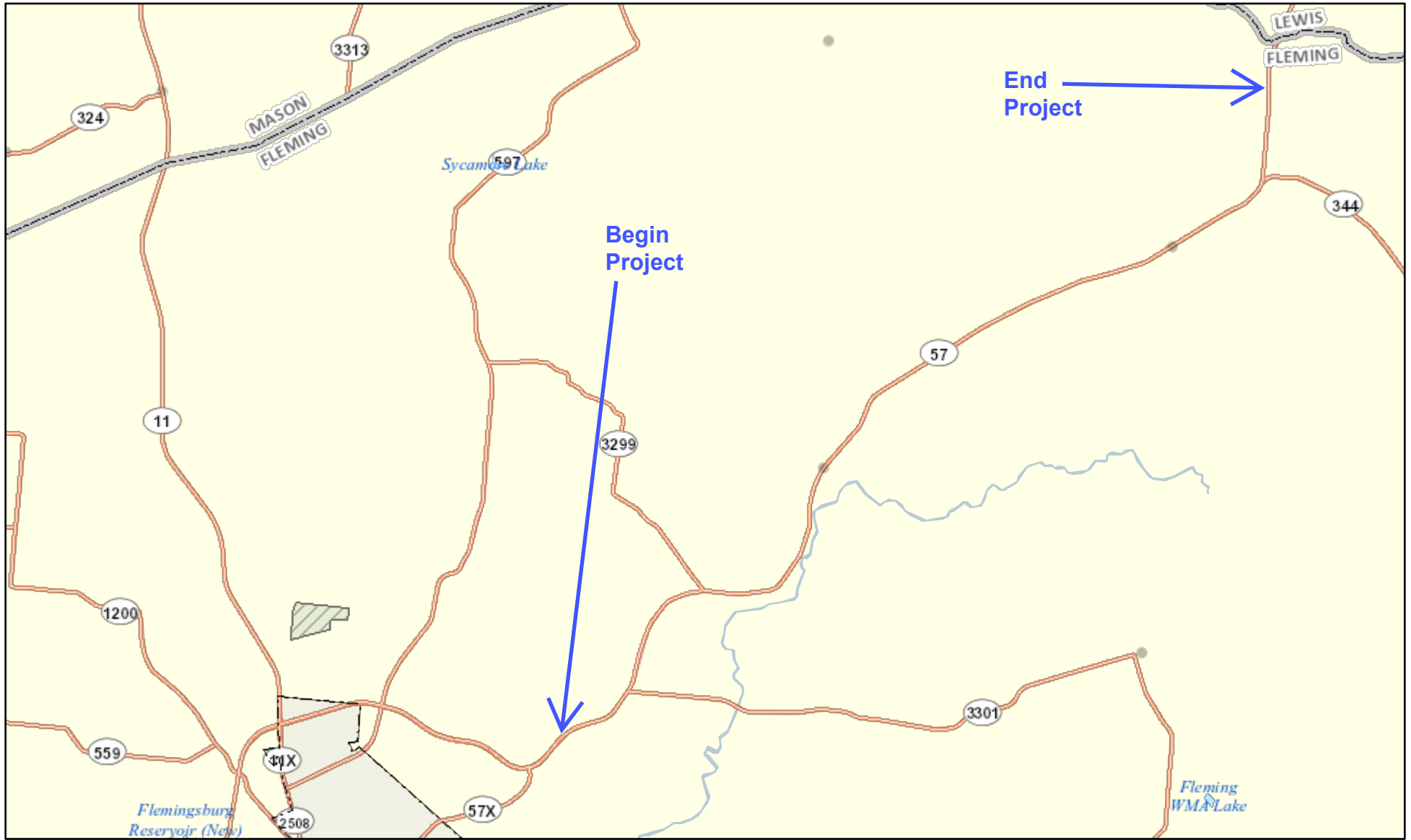


**VII. TABLES AND EXHIBITS (cont.)**

Aerial view of Mt. Carmel



# 09-80103.00 Location Map



Legend			
	DBNF_Proclamation_		Active Rail
	Corporate Boundary		Populated Place
	State Parks		City
	Local Parks		Kentucky
	Ohio River Shoreline		State Road
	Lake		US Highway
	County		Parkway

