

# Environmental Overview

## KY 53 Improvements Oldham County, Kentucky KYTC Item No. 5-388.00

*Prepared for*  
Burgess & Niple, Inc.  
400 Blankenbaker Parkway, Suite 300  
Louisville, KY 40243

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*Prepared by*  
Third Rock Consultants, LLC  
2526 Regency Road, Suite 180  
Lexington, KY 40503  
859.977.2000

Prepared by:



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Virginia Goodman

Reviewed by:



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Gina Morris

## Executive Summary

Third Rock Consultants, LLC (Third Rock) has been retained by Burgess & Niple, Inc. to prepare the Environmental Overview for Phase I Design of the proposed KY 53 improvements from KY 22 at Ballardsville to I-71 at LaGrange in Oldham County, Kentucky (Kentucky Transportation Cabinet [KYTC] Item No. 5-388.00). The project corridor is approximately 3.2 miles in length.

The purpose of the project is to improve traffic operations and safety, minimize congestion, and correct geometric deficiencies. The project is needed because rapid residential and commercial development in the area, together with geometric deficiencies present in certain segments of the roadway, have created reduced levels of service and areas of unsafe driving conditions.

Four alternatives (1, 2 and 3 and Preferred) have been proposed. Impacts to the social and natural environments are minimal. They are summarized as follows:

### *Stream crossing impact:*

- Alternative 1: 3,485 linear feet (LF)
- Alternative 2: 556 LF
- Alternative 3: 460 LF
- Preferred Alternative: 1,025 LF stream relocation; 720 LF culvert impact

### *Indiana bat habitat acquisition:*

- Alternative 1: 3.8 acres
- Alternative 2: 3.1 acres
- Alternative 3: 1.2 acres
- Preferred Alternative: 4.2 acres

### *Residential relocations:*

- Alternative 1: 15
- Alternative 2: 2
- Alternative 3: 2
- Preferred Alternative: 7

### *Commercial relocation:*

- Preferred Alternative: 2

### *UST/Hazardous Materials:*

- Alternatives 2 and 3: Phase II site investigation recommended for auto repair facility at Ballardsville Road intersection
- Alternatives 1, 3 and Preferred: Phase II site investigation recommended for CDD landfill site at southern terminus

In the Preliminary Line and Grade meeting held in June 2010, the project team selected Alternative 1, with changes to the connection at KY 22 and other minor modifications, as the Preferred Alternative. The Preferred Alternative eliminates the continuous movement of KY 22 because it would have significant impacts to Ballardsville. In addition, lane widths of KY 53 were reduced from 12 feet to 11 feet in the urban section to reduce both construction and right-of-way costs.

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## I. PROJECT DESCRIPTION

Third Rock Consultants, LLC (Third Rock) was retained by Burgess & Niple, Inc. to prepare the Environmental Overview for Phase I Design of the proposed KY 53 improvements from KY 22 at Ballardsville to I-71 at LaGrange in Oldham County, Kentucky (Kentucky Transportation Cabinet [KYTC] Item No. 5-388.00). The project corridor is approximately 3.2 miles in length. A figure of the project area, in relation to the county and region, is shown on page 2 below. Exhibits 1 and 2 (pages 3 and 4) show the project corridor and proposed centerlines on topographic and aerial mapping. Photographs of the project corridor are contained in Appendix A.

The purpose of the project is to improve traffic operations and safety, minimize congestion, and correct geometric deficiencies. The project is needed because rapid residential and commercial development in the area, together with geometric deficiencies present in certain segments of the roadway, have created reduced levels of service and areas of unsafe driving conditions. Project goals include:

- Increase safety and reduce accidents;
- Improve capacity and reduce congestion;
- Accommodate the forecasted increase in automotive and commercial truck traffic on KY 53, which is expected to double in the next 20 years; and
- To provide a roadway facility that meets current design standards.

Third Rock performed overview-level surveys for aquatic and terrestrial ecosystems, underground storage tank and hazardous materials concerns, and socioeconomic issues. No air quality or traffic noise modeling was performed. However, the feasibility of constructing noise barriers was considered for noise-sensitive areas based upon preliminary noise modeling. Cultural Resource

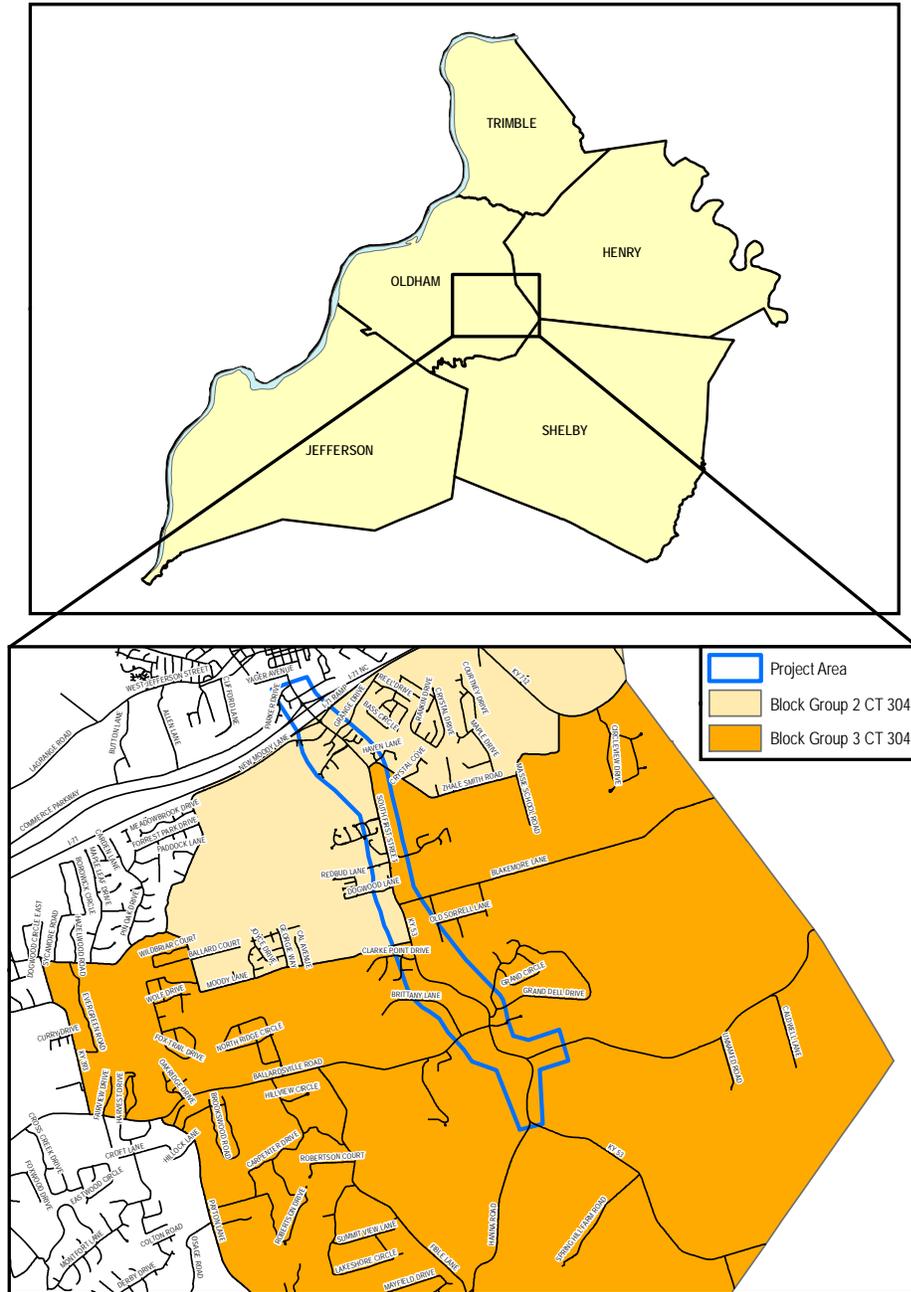
Analysts, Inc. (CRAI) performed overview-level cultural historic and archaeological surveys.

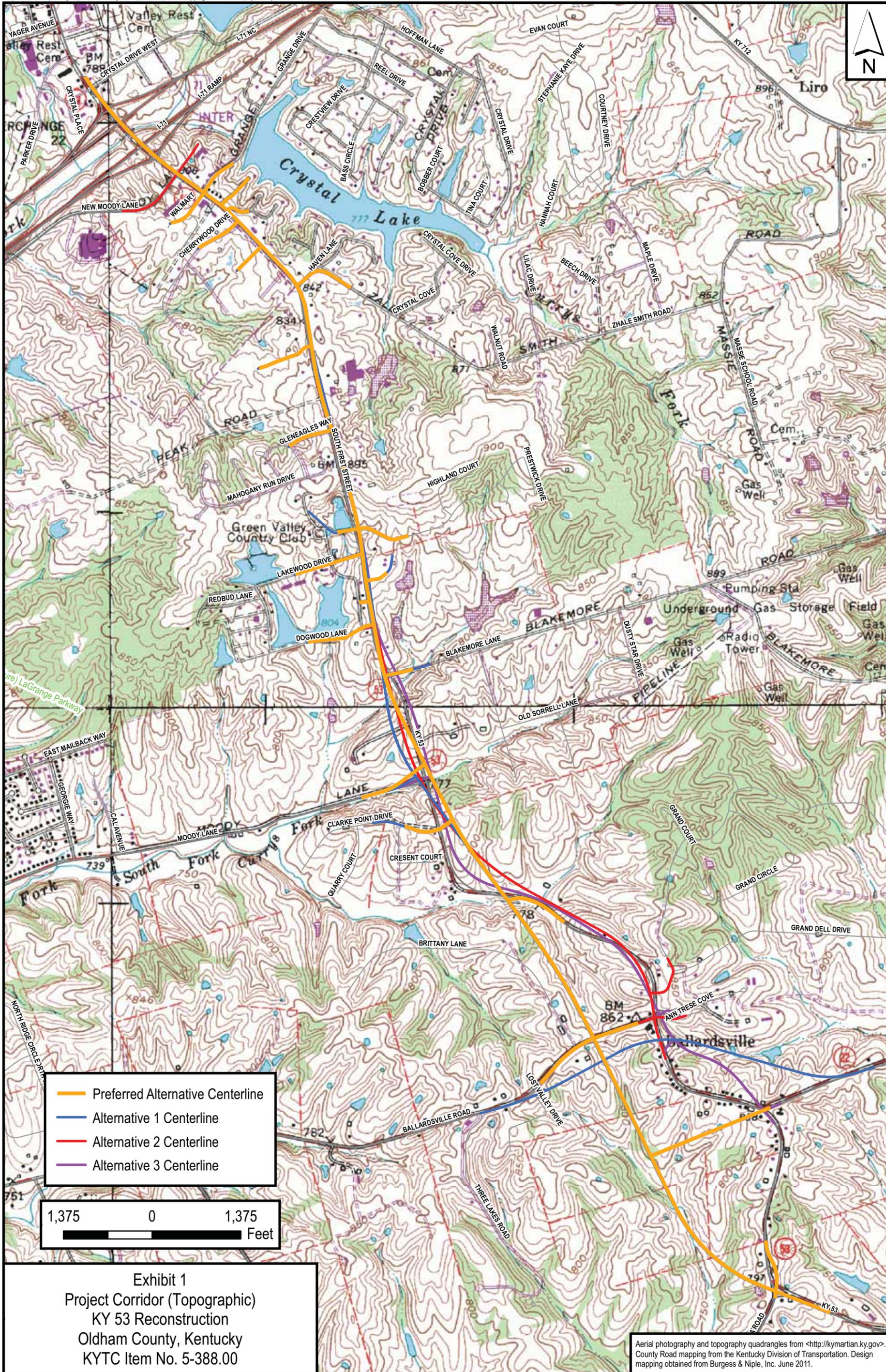
### A. Existing Conditions

KY 53 has connected the small community of Ballardsville to LaGrange since 1838. It was originally a narrow country lane, which has been modified over the centuries to accommodate increased traffic as KY 53. Oldham County remained primarily rural and agrarian until the early 1970s, when completion of Interstate 71 (I-71) opened the area to development for residents working in Louisville and Jefferson County. The county thus became a commuting suburb to the Louisville Metropolitan area. The project corridor now contains, in addition to older homes, subdivisions, shopping centers, churches, and a golf course. A hospital is located just outside the corridor at the northern end. As KY 53 approaches I-71, commercial density increases.

The existing KY 53 roadway varies within the project limits. From the southern terminus in Ballardsville to just south of Zhale Smith Road, the existing roadway consists of two 10-foot lanes with grass shoulders. Through the intersection of Zhale Smith Road, the travel lanes are 12 feet wide with 8-foot grassed shoulders. From north of Zhale Smith Road to I-71, KY 53 widens to four, 12-foot lanes with a 16-foot paved median.

FIGURE 1 – PROJECT LOCATION AND CENSUS TRACTS





-  Preferred Alternative Centerline
-  Alternative 1 Centerline
-  Alternative 2 Centerline
-  Alternative 3 Centerline



Exhibit 1  
Project Corridor (Topographic)  
KY 53 Reconstruction  
Oldham County, Kentucky  
KYTC Item No. 5-388.00

Aerial photography and topography quadrangles from <<http://kymartian.ky.gov>>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.



**B. Proposed Alternatives**

Three Build alternatives were studied, as shown on Exhibits 1 and 2 above.

**1. Alternative 1**

Alternative 1 begins at the intersection of KY 53 and KY 1315. It is a new cross-country alignment that bypasses Ballardsville to the west. North of the intersection with KY 22 West, it runs between the Ballardsville Baptist Church's Community Center and the residences on Brittany Lane before crossing the existing roadway twice near the Clarke Pointe Subdivision. From KY 2856, Alternative 1 remains on the west side of KY 53 until it reaches Sunset Drive, where it crosses KY 53 again. It remains adjacent to the existing roadway on the east side of KY 53 until Zhale Smith Road. From Zhale Smith Road to Moody Lane, the centerline for Alternative 1 follows the existing roadway centerline. KY 22 is also realigned as part of this alternative option.

**2. Alternative 2**

Alternative 2 begins just south of the intersection with KY 22 West near the Ballardsville Fire Department. Alternative 2 runs on the west side of KY 53 before crossing the existing roadway near the Crystal Bridge Fish Farm. Alternative 2 then remains on the east side of KY 53 and is more of a cross-country alignment from this point before crossing KY 53 near its intersection with KY 2856. From this intersection, Alternative 2 remains on the west side of KY 53 before crossing again near Sunset Road. From Sunset Road to New Moody Lane, Alternative 2 coincides with Alternative 1.

**3. Alternative 3**

Alternative 3 begins at the intersection of KY 22 East at the New Dawn Baptist Church (former location of the Ballardsville Baptist Church). This section of KY 53 is a new cross-country alignment that bypasses a section of Ballardsville from the church to the Ballardsville Fire Station.

From its intersection with KY 22 West, Alternative 3 follows the same general path as Alternative 2. However, Alternative 3 always remains on the east side of KY 53 after crossing the existing roadway near the Crystal Bridge Fish Farm. From just north of Sunset Drive, Alternative 3 coincides with Alternatives 1 and 2.

**4. Preferred Alternative**

In the Preliminary Line and Grade meeting held in June 2010, the project team determined that Alternative 1 should be revised to eliminate the Ballardsville "bypass." In addition to property impacts, the bypass added significantly to the cost. It also did not have any operational effect on traffic. In addition, urban section lane widths of KY 53 were reduced from 12 feet to 11 feet and bike lanes were removed to reduce both construction and right-of-way costs. With these changes, the project team selected revised Alternative 1 as the Preferred Alternative. For purposes of estimating costs, the Preferred Alternative was divided into three construction sections:

- Section 1: KY 1315 to KY 22 West; two-lane rural section with a truck climbing lane as needed and left turn lanes at KY 22 East and KY 22 West;
- Section 2: KY 22 West to Zhale Smith Road; five-lane rural section from KY 22 West to Clarke Pointe Drive and five-lane urban section from Clarke Pointe Drive to Zhale Smith Road that addresses the existing geometric deficiencies along KY 53 and the increased traffic anticipated by 2030.
- Section 3: Zhale Smith Road to I-71; five-lane urban section that addresses the current capacity problems.

While compiling data to estimate cost, the alignment at KY 2856, Old Moody Lane, was adjusted to avoid impacting a gas substation. The alignment was also adjusted between Sunset Drive and Lakewood Drive to avoid

located on the east side of KY 53. These changes were incorporated into the Preferred Alternative.

**C. Typical Section**

KY 53 is classified as a Rural Arterial. For this class of highway, the posted speed limit will be 45 miles per hour (mph) in the urban section (north of Clarke Point Drive). For the rural section on the Preferred Alternative, the design speed is 55 mph from KY 1315 to Clarke Point Drive. The rural typical section would include two or four 11- to 12-foot lanes, a 13- to 14-foot paved median, and 10-foot wide shoulders. The urban typical section would include four 11- to 12-foot lanes, a 13- to 14-foot paved median, an optional 4-foot bike lane, and a 2-foot curb and gutter section. The urban typical section would also include a 3-foot utility strip, a 5-foot sidewalk, and a 6-foot berm area behind the sidewalk. Figures 2 and 3 of the proposed urban and rural typical sections for the new roadway are shown on the following page.

**D. Roadway Deficiencies**

Merely widening the existing roadway is not feasible for this project for the following reasons:

- Existing horizontal curves are substandard.

- Sight distance is limited at the existing roadway sags and crests.
- The existing roadway profile is steep at many locations and has greater than recommended grades.
- Acquisition of multiple homes adjacent to the existing roadway would be necessary to improve existing horizontal and vertical deficiencies and to provide the required clear zone widths for safety and vehicle recovery.
- Utility relocation costs along the existing roadway would be costly.

**E. Traffic Data and Level of Service**

Level of service (LOS) is a qualitative, subjective measure used to describe traffic conditions factoring speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. The six levels of service (A to F), represent free-flow conditions (A) to severe congestion (F). Levels E and F generally represent unacceptable operating conditions. Capacity analysis for the No-Build 2030 scenario shows LOS to be F throughout much of the project corridor. Appendix B contains the Capacity Analysis Report. Table 1 below summarizes overall intersection performance for those intersections having LOS D or below for the three scenarios.

**TABLE 1 – LOS AND AVERAGE VEHICLE DELAY (SEC), OVERALL INTERSECTION PERFORMANCE**

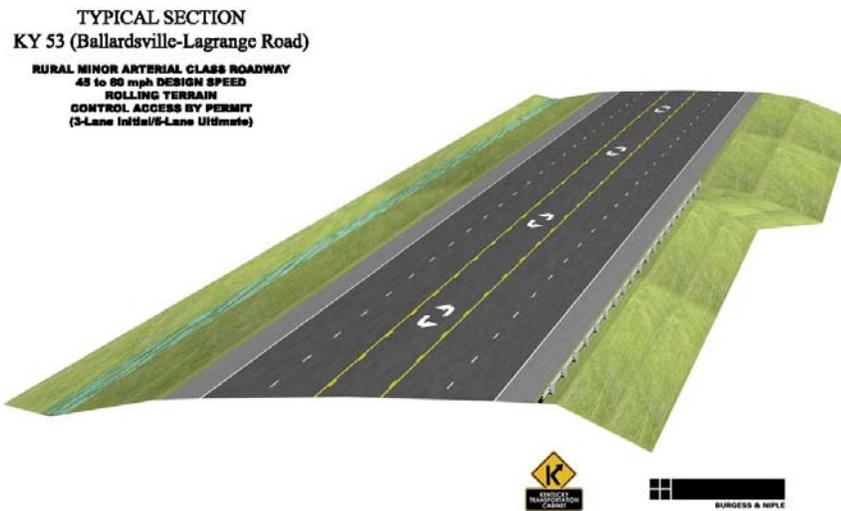
2008 Existing				2030 No-Build				2030 Full Build			
AM		PM		AM		PM		AM		PM	
LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<i>KY 53 at Crystal Drive</i>											
B	11.3	B	17.9	C	24.5	E*	57.3	C	22.7	E*	64.9
<i>KY 53 at I-71 Southbound Ramps</i>											
C	20.0	C	23.4	F*	109.3	F*	118.8	F*	113.1	F*	120.0
<i>KY 53 at I-71 EB Ramps</i>											
C	23.2	F*	141.9	D*	48.8	F*	233.1	D*	52.7	F*	245.1
<i>KY 53 at Peak Road</i>											
N/A				B	16.4	F*	90.4	B	11.4	B	13.4

\* volume/capacity ration > 1.0

FIGURE 2 – TYPICAL SECTION, URBAN



FIGURE 3 – TYPICAL SECTION, RURAL



Average daily traffic (ADT) and truck percentages vary widely in the project corridor. Table 2 below shows ADT for the construction year (2010) and design year (2030), as well as truck percentages, for the No-Build scenario at key intersections in the project area. The traffic data was obtained from the Forecast of Equivalent Single Axle Load Accumulations (20-year) (ESALs) report prepared by Burgess & Niple, Inc.

An examination of Table 2 reveals the significant traffic growth anticipated in the project area. As development pushes further southeast from LaGrange along KY 53, the increase in traffic will be greater than for the northern section of the project corridor, which already has significant commercial development and does not have the same opportunity for growth as do the middle and southern portions of the corridor. This is consistent with expanding housing development. An anomaly is KY 53 immediately north of KY 22 East. It is thought that this portion of Oldham County is anticipated to remain more rural, as growth is projected to be less than for adjacent segments.

Because of these increases, traffic during normal commuting hours will be bumper to bumper (LOS F) with travel speeds well below the posted speed limit. Long queues will occur at key intersections, which will require motorists to wait through multiple traffic signal cycles. Such delays represent inefficient use of people's time as well as fuel.

Accident data is available from 2005 to 2007. The project corridor has several locations, which have consistently experienced the highest frequency of accidents. While critical rate factor data is not currently available, the highest number of accidents over the 3-year period occurred along the project corridor within the city limits of LaGrange. Most of these were at the on- and off-ramps to I-71 and at the entrances to the shopping centers near the highway. Appendix C contains figures of collision sites for 2005, 2006 and 2007.

**TABLE 2 – ADT, NO-BUILD SCENARIO (2010 AND 2030)**

Intersection	ADT 2010	% trucks	ADT 2030	% Trucks	% Growth
KY 53 North of New Moody Lane	32,000	4.9	39,888	8.0	24.7
KY 53 South of New Moody Lane	22,000	4.4	27,336	7.2	24.3
KY 53 South of Grange Drive	20,000	5.3	25,936	8.7	29.7
KY 53 South of Cherrywood Drive	18,000	5.3	23,814	8.7	32.3
KY 53 North of Zhale Smith Road	15,000	5.3	21,151	8.7	41.0
KY 53 South of Zhale Smith Road	13,000	5.3	23,626	8.7	81.7
KY 53 North of Blakemore Lane	9,000	5.3	16,448	7.8	82.8
KY 53 South of Blakemore Lane	8,700	5.3	17,069	7.8	96.2
KY 53 South of East Moody Lane	7,900	11.9	18,991	17.7	140.4
KY 53 North of KY 22 East	6,500	10.1	11,095	15.0	70.7
KY 53 South of KY 22 East	3,200	10.2	7,085	15.2	121.4

**F. Project Schedule**

The proposed project was state-funded for Phase I Design. It is not listed in Kentucky's 2010 Recommended Highway Plan, and no funds are

ear-marked for construction in the current Six-Year Plan. Estimated Right-of-Way, Utility Relocation and Construction costs were prepared for the Preferred Alternative and are as follows:

**TABLE 3 – 2011 COSTS, PREFERRED ALTERNATIVE**

Phase	2008 Six-Year Plan Budget*	Preferred Alternative, Section 1	Preferred Alternative, Section 2	Preferred Alternative, Section 3	Preferred Alternative Total
Right-of-Way Acquisition	\$6,080,000	\$2,200,000	\$4,950,000	\$1,150,000	\$8,300,000
Utilities Relocation	\$3,510,000	\$110,000	\$2,615,000	\$970,000	\$3,695,000
Construction	\$25,310,000	\$4,619,808	\$12,332,121	\$1,853,459	\$13,805,388
<b>TOTAL</b>	<b>\$34,900,000</b>	<b>\$6,929,808</b>	<b>\$19,897,121</b>	<b>\$3,973,459</b>	<b>\$30,800,388</b>

\* 2010 Six Year Plan budget data not available.

**II. ENVIRONMENTAL SETTING**

The project area is located in the Outer Bluegrass physiographic region (USDA 1977). Soils of the area are of the Beasley-Nicholson Association or Lowell-Faywood-Beasley Association, which are underlain with Silurian age Osgood and Brassfield Formations. These soils are well drained to moderately well drained, with clayey or loamy subsoil (USDA 1977) and are well suited for hay, pasture and cultivated crops. While a significant acreage of this soil type is in subdivision and urban developments, the fragipans and clayey subsoils limit use of the soils for septic tank absorption fields. This association has high to medium potential for woodland. Although no sinkholes were observed during the field survey, geology in the area, especially with regard to the abundant Saluda Dolomite member of the Drakes formation, is prone to forming small sinkholes. These sinkholes can be an indicator of other karst features.

Oldham County's elevation ranges from 420 feet along the Ohio River to 920 feet above sea level. The county has a land area of 189.2 square

miles, with an average density of 244.1 persons per square mile (2000 US Census data).

Oldham County has cold winters and hot, humid summers. January is typically the coldest month, with average daily minimum of 27°F. July is typically the hottest month, with average daily maximum temperature of 86°F. Average annual precipitation is about 44.5 inches. The average length of the growing season is 219 days.

**III. ENVIRONMENTAL ASSESSMENT**

Field investigations were conducted during Spring 2008 by KYTC-prequalified subject matter experts. Their findings are documented below.

**A. Land Use**

The portion of the corridor north of Lakewood Drive is more densely developed, with businesses including a Wal-Mart, a Kroger grocery store, Baptist Hospital Northeast, and several residential subdivisions. Development, particularly commercial, predominates near the I-71 interchange and occurs within the urban boundary of LaGrange. Figure 4 below shows the urban areas (highlighted) in the project area.

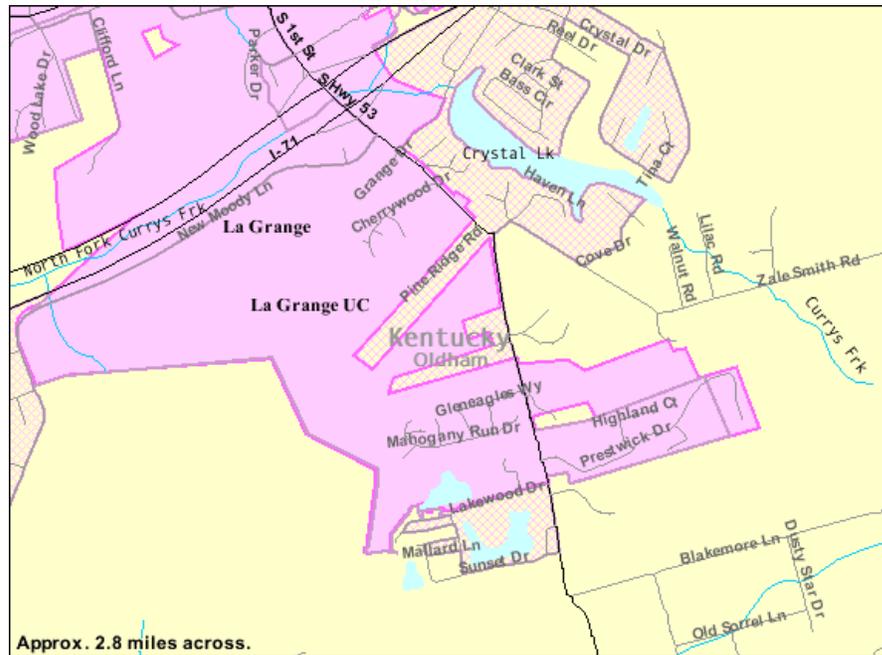


FIGURE 4 – URBAN BOUNDARY

The southern end of the corridor is more rural, but still contains homes, a few small businesses in Ballardsville, and a fire station. Most homes in the project area are single-family residences. Three churches are present in the area: HolyTrinity Lutheran Church, LaGrange Presbyterian Church, and Ballardsville Baptist Church.

#### **B. Air Quality**

Oldham County is located in the North Central Kentucky Intrastate Air Quality Control Region and is currently in attainment for all transportation-related pollutants. No traffic control measures are in place for the region. This state-funded project is not listed in the Kentucky Statewide Improvement Program (STIP), Fiscal Years 2011-2014.

With respect to PM<sub>2.5</sub>, a qualitative analysis is not required for this project, because Oldham

County has been designated in attainment for all transportation-related pollutants, nor is it in an area requiring PM 2.5 consideration (Boone, Boyd, Bullitt, Campbell, Jefferson, Kenton or part of Lawrence counties).

The US Environmental Protection Agency (EPA) conducted the Motor Vehicle Air Toxics Study (MVATS) in 1993 to determine the emissions from vehicles, which led to the Mobile Source Air Toxics (MSATs) Rule in March 2001. The Rule designated 21 compounds emitted by vehicles. Six MSATs were identified as priorities for regulation including acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and diesel particulate matter/diesel exhaust organic gases. FHWA developed an interim guidance dated February 3, 2006 to address MSATs with a three-tiered approach. The proposed KY 53 modification project would likely fall into the qualitative analysis category (projects with low

potential for MSAT effects). Also, regardless of roadway modifications within this study area, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020.

Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today. In the event of receipt of federal funding, a qualitative MSAT analysis should be performed.

### ***C. Traffic Noise***

Noise sensitive sites (such as residential neighborhoods, commercial areas, churches, school, etc.) were identified through an examination of topographic and aerial mapping as well as during the site visit on April 30, 2008. The study area contains churches, a golf course, commercial areas, scattered homes, and several large residential subdivisions throughout the corridor. Due to planned and continuing development in the area, traffic volumes and noise are expected to increase but not as a direct result of the proposed action. A detailed noise analysis including modeling of the current and future traffic noise was not conducted for this study. However, ambient noise levels were measured on April 30, 2008 at seven locations along the project corridor identified in Exhibit 3, page 11. In addition, Third Rock was requested to address the feasibility of noise barriers at certain sites along the corridor.

Traffic noise is a general term referring to the sound generated by vehicle tires, engines, and exhaust at levels dependent upon variables such as traffic volume, speed, size of vehicle, size of

engine, and the slope of the roadway. Noise sensitive receptors such as the rural farms, suburban neighborhoods, shopping centers, recreational areas, and churches in the project corridor may be impacted by noise levels associated with the implementation of the proposed KY 53 Build Alternatives.

According to the Federal Highway Administration Policy, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, traffic noise impacts occur when the predicted traffic noise levels approach (are within 1 dBA) or exceed the noise abatement criteria (NAC) or when the predicted design year (2030) traffic noise levels substantially exceed (increase by 10 dBA or more) the existing noise level. The NAC is defined as 67 dBA for residential areas and 72 dBA for commercial areas.

Noise monitoring was performed for approximately 5 minutes at each location between 10:30AM and 12:30PM on April 30, 2008. To perform the monitoring, a Larson Davis Model 812 Type 1 Precision Sound Level Meter was utilized. Weather conditions were dry and suitable for all measurements. These measurements were conducted for scoping purposes to establish ambient traffic noise levels in the area, and therefore the measurements were not made during peak traffic periods, and traffic counts were not recorded.



All noise levels were measured in decibels (dB) on the A-weighted scale or dBA, using the  $L_{eq}$  descriptor. The A-weighted scale is used because it most nearly matches the response of the human ear to sound.  $LA_{eq}1\text{-hr}$  (shortened in this report to  $L_{eq}$ ) is the A-weighted equivalent steady state sound level, which in one hour contains the same acoustic energy as the time

varying sound level during one hour. Each measured receptor is representative of similar noise sensitive locations along the corridor. The distance from each receptor (see Exhibit 3 above) to the edge of pavement on KY 53 is described in Table 4 below.

**TABLE 4 – AMBIENT NOISE MEASUREMENTS**

Receptor Location	Ambient Noise Level ( $L_{eq}$ dBA)	Approximate Distance from KY 53 (ft)*	Location
Noise 1	61.7	25	Residence in Ballardsville, south of Fire Dept
Noise 2	50.4	300	Ballardsville Baptist Church
Noise 3	58.5	50	Residence on Clark Pointe Dr.
Noise 4	71.6	0	Set Distance along Marion Dr.
Noise 5	53.1	100	Set Distance along Marion Dr.
Noise 6	48.0**	200	Set Distance along Marion Dr.
Noise 7	66.7	25	Gleneagles residence

Highlighted receptors approach or exceed residential NAC.

\* Approximate perpendicular distance from edge of existing pavement.

\*\*Result shortened to exclude interference.

Receptor locations Noise 1, 3, and 7 represent residences, Noise 2 is a church, and Noise 4-6 represent set distances from the existing KY 53 to evaluate the relationship between traffic noise and distance. In order to exclude the non-traffic related noise of a nearby dog barking, the measurement at Noise 6 was shortened to 2 minutes.

Existing noise level measurements along the proposed corridor show that the residential NAC is approached or exceeded at receptors Noise 4 and Noise 7. Noise 7 was measured at the top of a berm along the existing roadway and therefore noise levels at lower elevations below the berm are expected to be lower due to noise shielding. Noise 4 shows an exceedance of the NAC but is not representative of sound levels in the residential area due to its immediate proximity to the roadway.

Plotting the field measured noise levels against the distance from the edge of pavement, Figure 5 below demonstrates that traffic noise levels have an inverse relationship with the distance from the roadway. About 5 dBA decrease in noise levels occurs when the distance from the roadway is doubled until the background noise level of approximately 40-45 dBA is approached. Variability in this general relationship may be caused by differing traffic volumes and speeds, topography, the type of land surface, and other factors. For example, the increase in the noise level at 300 ft, shown in Figure 5, is most likely due to topographical variation between measurement sites. Due to the logarithmic nature of noise measurements, a doubling of traffic levels will typically result in a 3 dBA increase in the noise levels, an increase which is barely detectible by the human ear. A 10 dBA increase is perceived as a doubling of the noise level.

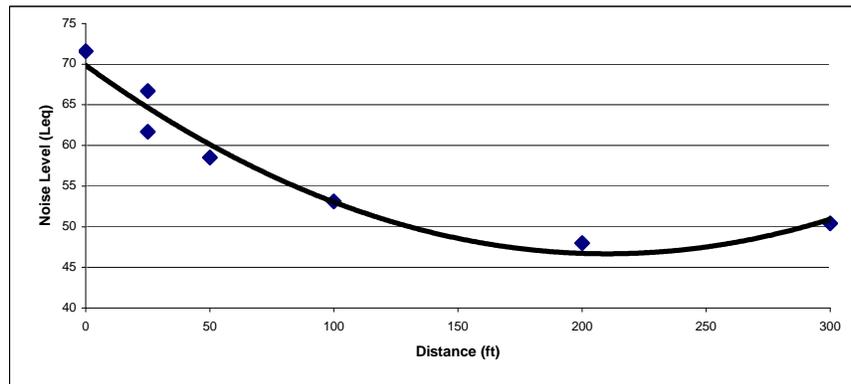


FIGURE 5 – CHANGES IN FIELD MEASURED NOISE LEVELS WITH DISTANCE

Existing posted speed limits vary between 35 mph and 55 mph along KY 53, which is currently a two-lane roadway. The design speed for all alternatives is 45 mph. Alternatives 1, 2, and 3 expand the width of the roadway to 5 lanes north of KY 22, with Alternative 3 also expanding the width to 3 lanes between KY 22 East and KY 22 West. Traffic forecasts conducted by Burgess & Niple predict Build design year (2030) traffic levels to increase by 10% to 100% over the existing levels, depending on the roadway segment. Because traffic noise levels increase due to increased traffic volume, speed, and proximity of the roadway to the receptors, future noise levels are expected to increase, potentially causing noise impacts. However, no modeling of the traffic noise was conducted under the scope of this study in order to predict the Build design year noise levels.

KYTC considers noise abatement measures when either the NAC is approached or exceeded or a substantial exceedance (>10 dBA increase over existing) is predicted for the Build design year (2030). If traffic noise impacts were predicted to occur, available noise mitigation methods would include purchasing noise buffer zones, traffic management, selection of vertical and horizontal alignments, and noise barriers.

For much of the project area, a noise buffer zone is an unfeasible option due to existing and planned development. In the more rural areas of the project corridor, however, local ordinances could be implemented to require future development to be set back a minimum distance from the highway such that the NAC is not exceeded for the land use. Appropriate setback distances could be established based on noise contour modeling.

Selection of a Build Alternative with the horizontal and vertical alignments providing the greatest distance from roadway to the receptors and the slowest speeds would minimize noise impacts and could be used as an abatement option.

If these measures are either not appropriate, not effective, or not feasible, the installation of structural noise barriers can be evaluated with respect to the severity of the impact, cost, structural feasibility and opinions of the affected residents. The scope of this project considers only the feasibility of noise barrier construction along the corridor. Because structural breaks in the barrier decrease the effectiveness, barriers are not considered feasible in areas with direct residential access.

Noise barriers are also not reasonable unless multiple impacted receptors are present in a small geographic area. Only two areas, the Gleneagles and Clarke Pointe subdivisions, shown in Exhibit 3 above, have multiple residences in neighborhoods with a single access point, and therefore noise barrier construction would probably only be feasible in these areas. Noise modeling would be required, however, to evaluate whether impacts actually occur and whether a noise barrier would be an appropriate or effective abatement option in these areas.

Oldham County is a designated MS4 community under Phase II for small, urbanized areas. Therefore, stormwater impacts will require coordination and compliance with local permitting requirements prior to construction.

#### ***D. Aquatic Resources***

A field reconnaissance was conducted in April 2008 by a qualified biologist. Aquatic resources are shown on Exhibits 4 through 8, pages 16 through 20. These exhibits depict the northern, north-middle, middle, middle-southern, and southern sections of the project corridor to show in greater detail the aquatic and terrestrial impacts.

Two intermittent streams, the South Fork and North Fork of Currys Fork, together with smaller unnamed tributaries, cross the project study area. All streams observed were small with varying degrees of sedimentation and embeddedness. There are no State Listed Special Use Waters or tributaries to Special Use Waters in the project area. Floodplain impacts cannot be determined until Phase II design.

Wetlands are relatively abundant in the study area (as shown on National Wetland Inventory [NWI] mapping) and are primarily represented by impounded farm ponds. An unmapped potential wetland is located just west of the intersection of Blakemore Lane with KY 53. Determination of wetland boundaries and jurisdictional status, together with permitting requirements for aquatic resource impacts, was outside the scope of this project. All three alternatives appear to impact this unmapped wetland.

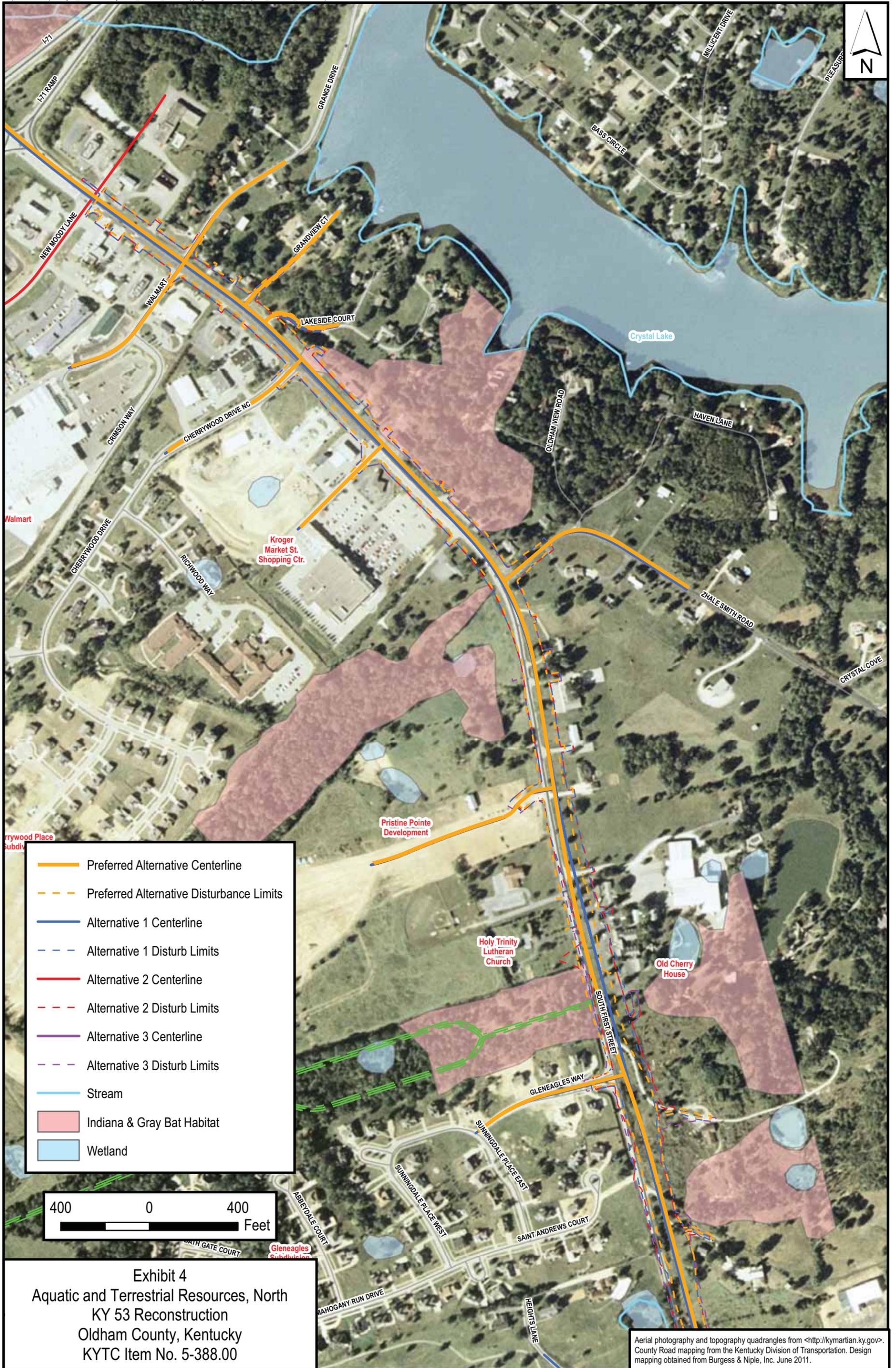


Exhibit 4  
 Aquatic and Terrestrial Resources, North  
 KY 53 Reconstruction  
 Oldham County, Kentucky  
 KYTC Item No. 5-388.00

Aerial photography and topography quadrangles from <http://kymartian.ky.gov>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.

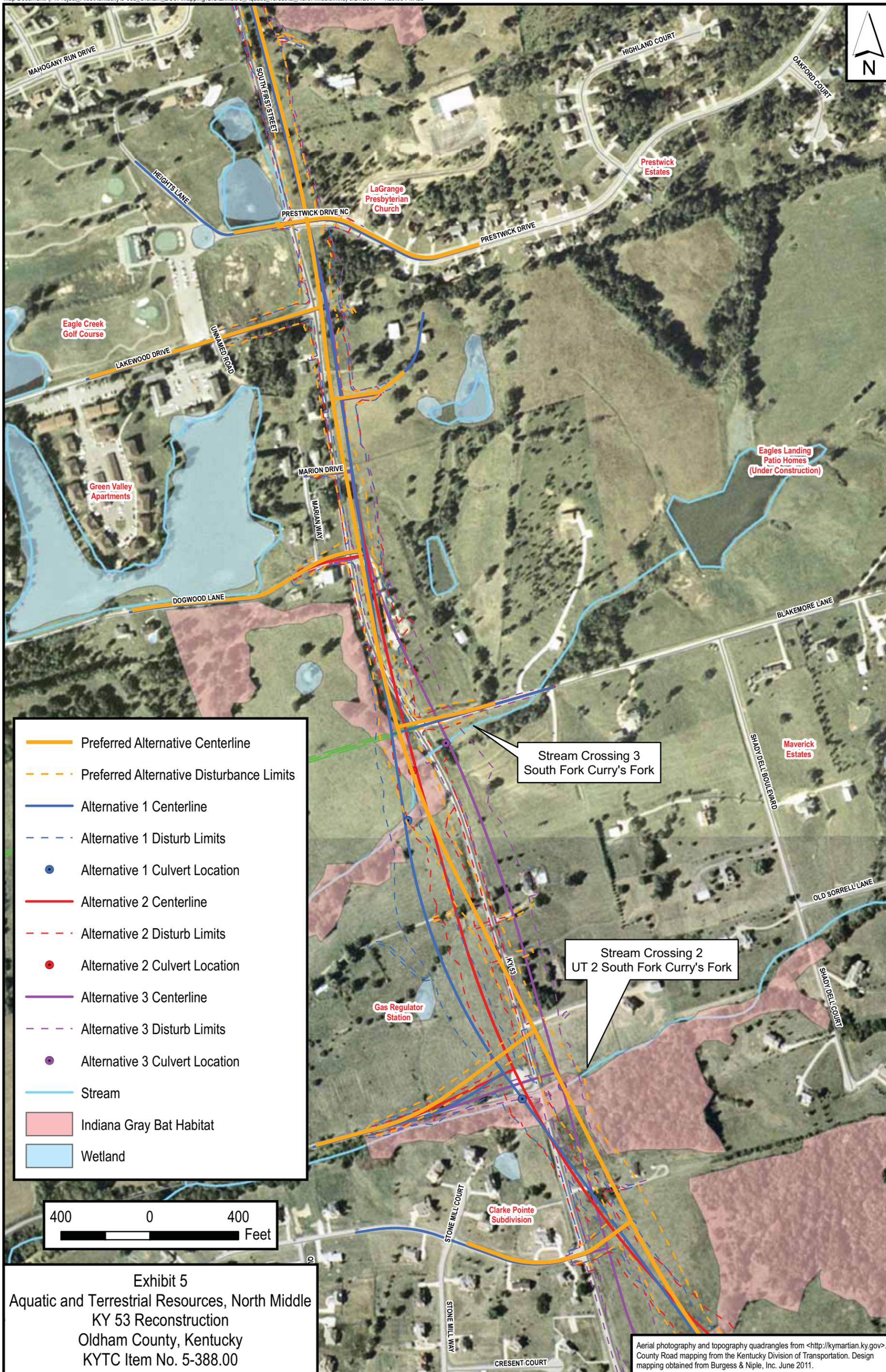
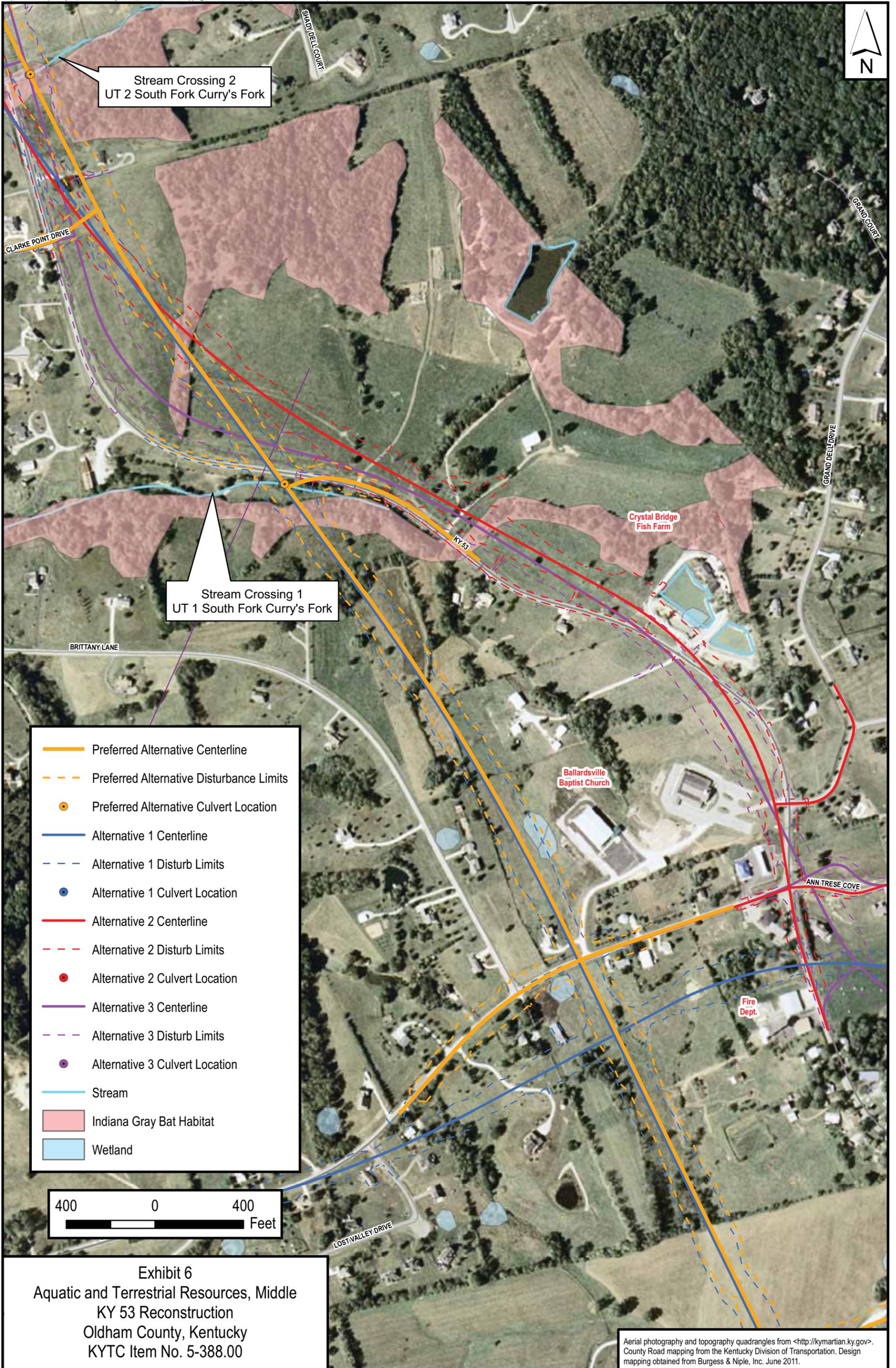
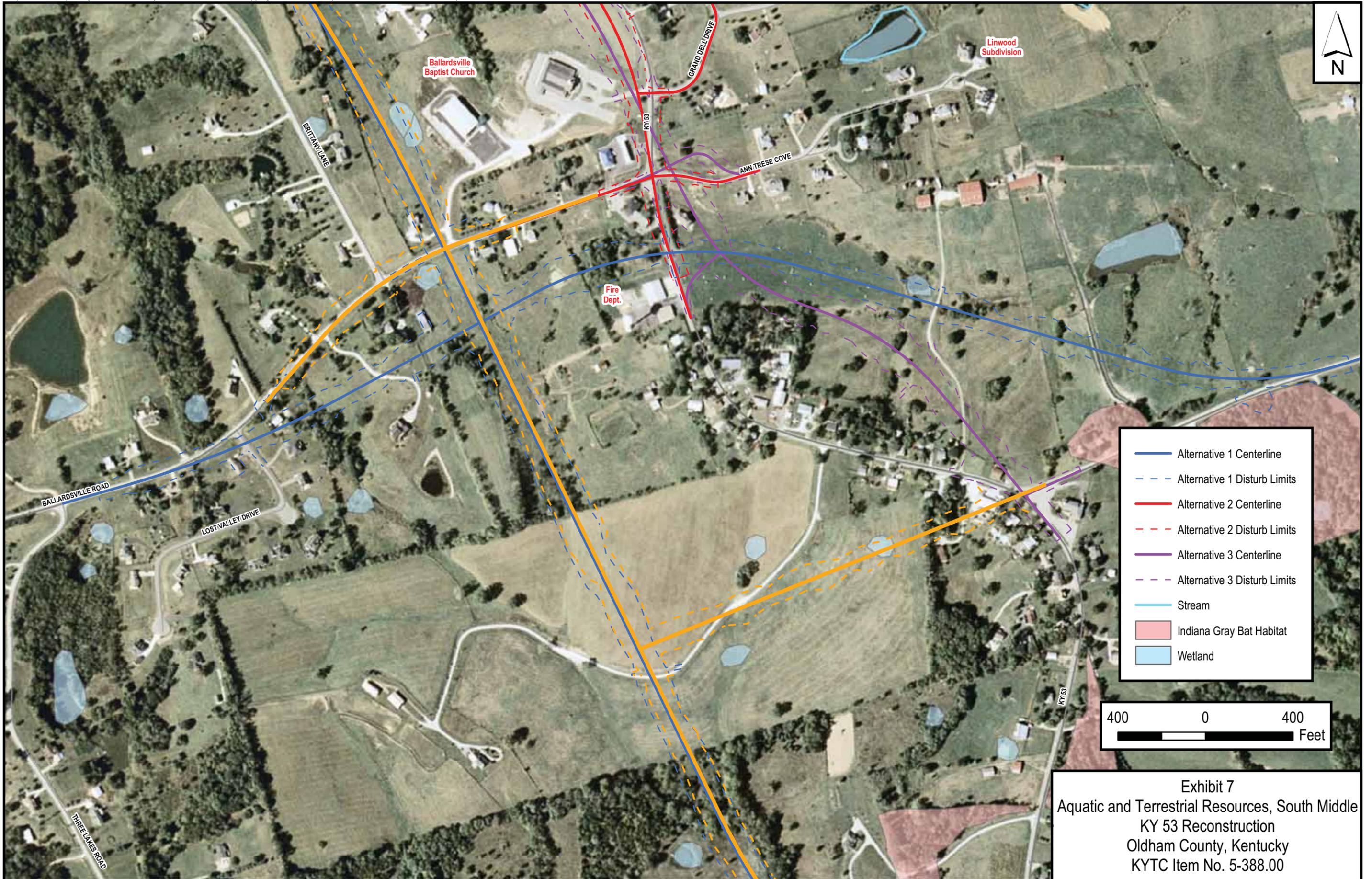
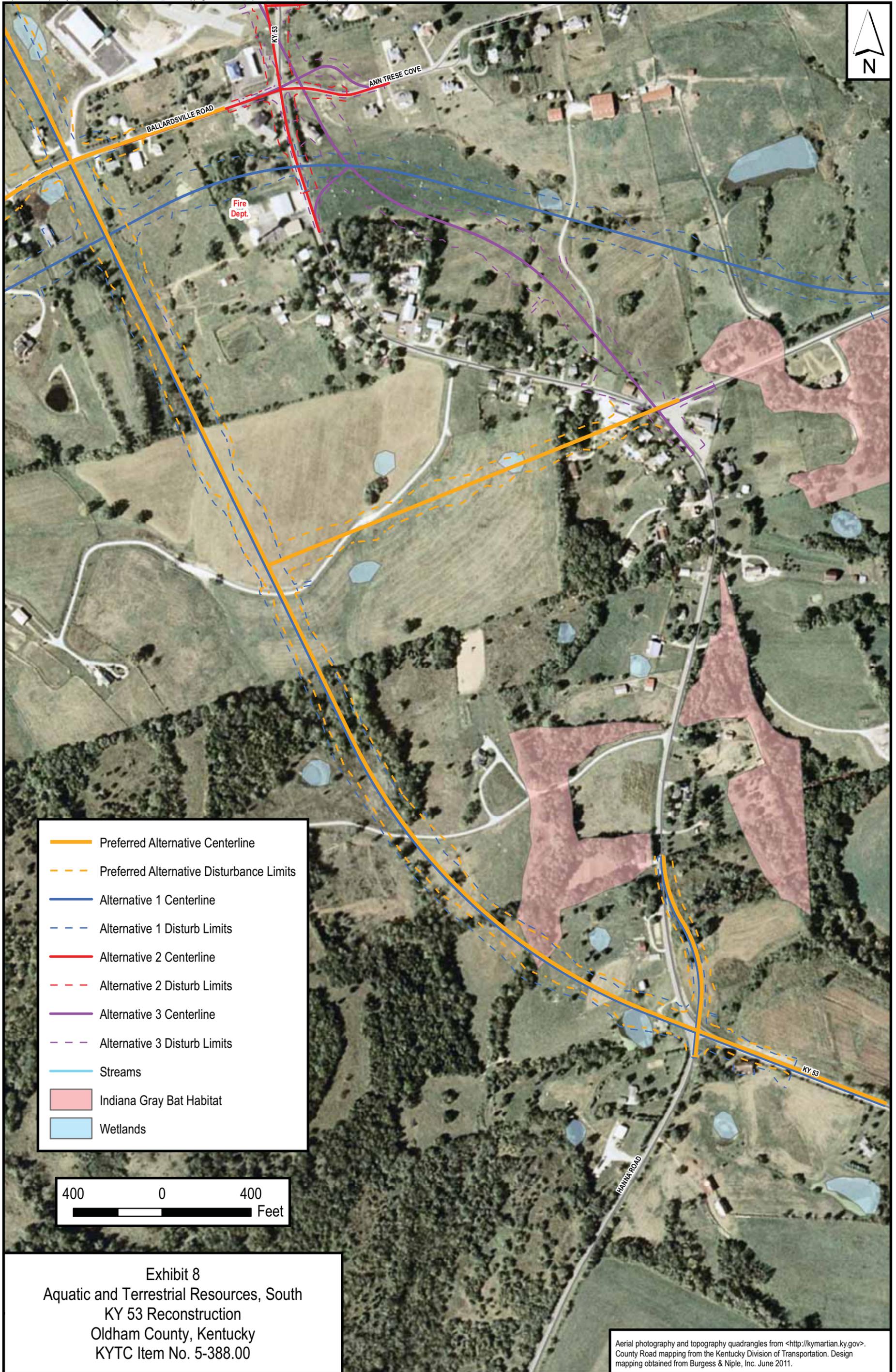


Exhibit 5  
 Aquatic and Terrestrial Resources, North Middle  
 KY 53 Reconstruction  
 Oldham County, Kentucky  
 KYTC Item No. 5-388.00

Aerial photography and topography quadrangles from <<http://kymartian.ky.gov>>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.







- Preferred Alternative Centerline
- - Preferred Alternative Disturbance Limits
- Alternative 1 Centerline
- - Alternative 1 Disturb Limits
- Alternative 2 Centerline
- - Alternative 2 Disturb Limits
- Alternative 3 Centerline
- - Alternative 3 Disturb Limits
- Streams
- Indiana Gray Bat Habitat
- Wetlands

400 0 400  
Feet

Exhibit 8  
Aquatic and Terrestrial Resources, South  
KY 53 Reconstruction  
Oldham County, Kentucky  
KYTC Item No. 5-388.00

Aerial photography and topography quadrangles from <http://kymartian.ky.gov>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.

**E. Threatened and Endangered Species**

In April 2008, a qualified biologist visited the KY 53 project corridor to identify potential environmental concerns as required for Phase 1 Design. Federal and state agency databases (contained in Appendix D) indicated the potential for occurrence of the following federally endangered species: Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), pink mucket (*Lampsilis abrupta*), ring pink (*Obovaria retusa*), orangefoot pimpleback (*Plethobasus*

*cooperianus*), clubshell (*Pleurobema clava*), rough pigtoe (*Pleurobema plenum*), fanshell (*Cyprogenia stegaria*), winged mapleleaf (*Quadrula fragosa*), and running buffalo clover (*Trifolium stoloniferum*). Additional potential for occurrence exists for several state listed species including eight plants, two freshwater mussels, one crustacean, two insects, one fish, one amphibian, and 14 breeding birds (Table 5, below and following page).

**TABLE 5 – STATE AND FEDERALLY LISTED SPECIES POTENTIALLY PRESENT IN THE PROJECT AREA**

COMMON NAME	SPECIES NAME	STATE STATUS	FEDERAL STATUS
Gray bat	<i>Myotis grisescens</i>	Endangered	Endangered
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered
Fanshell	<i>Cyprogenia stegaria</i>	Endangered	Endangered
Pink mucket	<i>Lampsilis abrupta</i>	Endangered	Endangered
Ring pink	<i>Obovaria retusa</i>	Endangered	Endangered
Orangefoot pimpleback	<i>Plethobasus cooperianus</i>	Endangered	Endangered
Sheepnose	<i>Plethobasus cyphus</i>	Endangered	Candidate
Clubshell	<i>Pleurobema clava</i>	Endangered	Endangered
Rough pigtoe	<i>Pleurobema plenum</i>	Endangered	Endangered
Winged mapleleaf	<i>Quadrula fragosa</i>	Extirpated	Endangered
Little spectaclecase	<i>Villosa lienosa</i>	Special Concern	-
Allegheny chinkapin	<i>Castanea pumila</i>	Threatened	-
Northern switchgrass	<i>Dichanthelium boreale</i>	Special Concern	-
Spinulose wood fern	<i>Dryopteris carthusiana</i>	Special Concern	-
Grassleaf mud-plantain	<i>Heteranthera dubia</i>	Special Concern	-
Waterplantain spearwort	<i>Ranunculus amigens</i>	Special Concern	-
Running buffalo clover	<i>Trifolium stoloniferum</i>	Endangered	Endangered
Eelgrass	<i>Vallisneria americana</i>	Special Concern	-
Wood's bunchflower	<i>Veratum woodii</i>	Threatened	-
Northern fox grape	<i>Vitis labrusca</i>	Special Concern	-
Louisville crayfish	<i>Orconectes jeffersoni</i>	Endangered	Species of Management Concern

COMMON NAME	SPECIES NAME	STATE STATUS	FEDERAL STATUS
Sedge sprite	<i>Nehalennia irene</i>	Endangered	-
Northern hairstreak	<i>Satyrium favonius ontario</i>	Special Concern	-
Trout-perch	<i>Percopsis omiscomaycus</i>	Special Concern	Species of Management Concern
Eastern hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	Special Concern	-
Bachman's sparrow	<i>Aimophila aestivalis</i>	Endangered	Species of Management Concern
Henslow's sparrow	<i>Ammodramus henslowii</i>	Special Concern	Species of Management Concern
Great blue heron	<i>Ardea herodias</i>	Special Concern	-
Upland sandpiper	<i>Bartramia longicauda</i>	Historical	-
American bittern	<i>Botarus lentiginosus</i>	Historical	-
Lark sparrow	<i>Chondestes grammacus</i>	Threatened	-
Sedge wren	<i>Cistothorus platensis</i>	Special Concern	-
Bobolink	<i>Dolichonyx oryzivorus</i>	Special Concern	-
Peregrine falcon	<i>Falco peregrinus</i>	Endangered	Partial Status: Endangered
Dark-eyed Junco	<i>Junco hyemalis</i>	Special Concern	-
Yellow-crowned night-heron	<i>Nyctanassa violacea</i>	Threatened	-
Savannah sparrow	<i>Passerculus sandwichensis</i>	Special Concern	-
Bank swallow	<i>Riparia riparia</i>	Special Concern	-
Bewick's wren	<i>Thryomanes bewickii</i>	Special Concern	Species of Management Concern

Indiana and gray bat habitat in the project corridor is present but ranges from moderate to sub-optimal. Areas of habitat are shown on Exhibits 4-8 above. Isolated wood lots and tree lined fence rows/property boundaries could be used by Indiana and gray bats as migratory corridors. Additionally, Indiana bats could use these areas as foraging and roosting habitat. The forested riparian zones of the multiple small lakes, and to a lesser extent the small creeks in the project corridor, could be used by both Indiana and gray bats for foraging. Although no sinkholes were observed during the field survey, geology in the area, especially with regards to the abundant Saluda Dolomite member of the Drakes formation, is prone to forming small sinkholes. These sinkholes can be an indicator

of other karst features representing habitat for Indiana and gray bats.

The aquatic resources in the project corridor are unlikely to support the state-listed trout-perch. The man-made lakes likely lack sufficient depth and readily accessible stream connectivity typical of trout-perch habitat.

With the exception of the state-listed eelgrass, potential habitat was present for all listed plant species. Habitat for federal-listed running buffalo clover is relatively abundant in the southern half of project corridor. It is represented primarily by fencerows and, to a lesser extent, old home sites. The northern half of the project has witnessed rapid development in recent years and

is unlikely to contain suitable plant habitat. The scattered, sloping upland and lowland woodlots (and their associated borders) may contain habitat for the state-listed species Allegheny chinkapin, Northern witchgrass, and Wood's bunchflower. Ponds and wetlands in the project corridor, which are predominantly man-made farm ponds and reservoirs, could provide habitat for the state-listed species spinulose wood fern, grassleaf mud-plantain, waterplantain spearwort, and Northern fox grape.

Habitat also exists for the two state-listed insects. The ponds and wetlands in the project corridor could provide larval habitat and adult feeding and breeding areas for the sedge sprite. The Northern hairstreak could find refuge in the woodlots scattered throughout the project corridor where members of its host tree, *Quercus sp.*, are present.

The abundant scattered pastures and hay fields in the project corridor may provide habitat for the state-listed Bachman's, Henslow's, lark, and Savannah sparrows; as well as sedge wren, bobolink, and upland sandpiper. Habitat for Bewick's wren, also prevalent, is represented by scrubby forest edges and fence rows. Scattered wetlands and farm ponds may support great blue heron, American bittern, and yellow-crowned night-heron. No habitat is present for peregrine falcon, bank swallow, or dark-eyed junco.

No freshwater mussel or Eastern hellbender habitat was encountered. Stream crossings in the project corridor are limited to first and second order streams, which lack flow and size requirements necessary to support these species. No relic shells were observed during the survey. All streams observed during the survey were small with varying degrees of sedimentation and embeddedness and thus unsuitable habitat for the federal-listed mussel species.

The project corridor lies outside of the known range (*i.e.*, Beargrass Creek, Harrod's Creek, and Pond Creek watersheds) of the Louisville crayfish.

The aquatic resources in the project corridor are unlikely to support the trout-perch. The man-made lakes likely lack sufficient depth and readily accessible stream connectivity typical of trout-perch habitat.

#### ***F. Socioeconomic***

The 2000 US Census was consulted for population and economic data for the study area. Research was supplemented with a site visit on April 30, 2008 by a qualified subject matter expert. The socioeconomic survey reviewed the existing social and economic character of the study area as well as projected growth in the region. It should be noted that the Census data reflected in this report was compiled from the census taking of 1999 for the 2000 Census report. Therefore, the data is nearly 10 years old and will be updated in the near future. However, the data presented is valuable as it documents the significant growth of the area, which is anticipated to continue for the foreseeable future. Such growth directly affects traffic and levels of service, which were discussed above.

The study area is located primarily within block groups (BG) 2 and 3 of Census Tract (CT) 304 in Oldham County, Kentucky (see Figure 1, page 2). The boundaries for the block groups did not change from 1990 to 2000.

##### ***1. Population and Growth***

As a community that is home to Louisville and Jefferson County commuters (a so-called "bedroom suburb"), Oldham County's population has grown at a significantly higher rate than the state at large. In 1999, the county had a population of 46,178 individuals, which was a 38.8 percent increase from 1990. Block groups 2 and 3 grew even more than the county. For the

2000 Census, BG 2 and 3 contained 5,942 persons, up from 3,710 in 1990 (a 60.2 percent increase). By comparison, Kentucky's overall population grew only 9.6 percent during the same decade. The Oldham County population is expected to increase 64.5 percent from 2000 to 2030, to 75,973 individuals. Overall statewide growth, however, is expected to be 21.5 percent for the same period. The Kentucky State Data Center estimated the 2007 population for Oldham County to be 55,935 persons but reported the population to be 60,316 from the 2010 census.

Very few minority residents live within CT 304, BG 2 and BG 3. In CT 304, BG 2, 4.5 percent of the population is comprised of minority individuals and 2.3 percent of BG 3 residents are minorities (9.9 percent of Kentucky residents are minorities.) Black or African American individuals comprise the bulk of both block groups' minority populations. In 1999, 25 Hispanic or Latino individuals (1.1 percent of the population) lived within BG 2, and 13 Hispanic or Latino individuals (0.4 percent of the population) live within BG 3. However, growth of the Hispanic population in Oldham County increased 192.2 percent from the 1990 to the 2000 census. A sign along KY 53 for LaGrange Presbyterian Church was in both English and Spanish, and a Mexican grocery store was observed near the I-71 interchange. During the site visit in April and again in September 2008, Hispanic people were observed in the commercial portion of the study area. It is thus apparent that there is a resident Latino population in or near the study area.

## **2. Household Data**

The population growth discussed above is reflected in the considerable residential development apparent in and near LaGrange. Exhibits 4-8, pages 15-19, document the several residential subdivisions along the corridor. Ninety-one (91) percent of homes in BG 2 and BG 3 are single family dwellings, and most homes in the project area are single-family

residences. However, the Green Valley Apartment complex, located between Lakeshore Boulevard and Lakewood Drive, is the only multiple-unit housing development in the project area. Most homes are also owner-occupied: 82 percent of residents in BG 2, and 96 percent – nearly all – in BG 3 own their homes.

Median years of construction are 1980 and 1991 for the respective block groups. Median value for homes is \$108,100 for BG 2 and \$186,900 for BG 3. This compares to \$163,100 for Oldham County and \$86,700 for Kentucky.

Family households predominate and correlate closely with owner-occupied housing units: 83 percent in BG 2 and 94 percent in BG 3 are family households.

## **3. Income and Poverty**

Oldham County residents have the highest median household income in Kentucky. The 2000 US Census lists the median household income for block group 2 as \$50,539 and block group 3 as \$72,321, which is much higher than the median household income for Kentucky residents as a whole (\$33,672), as well as the 1999 Census weighted average poverty threshold of \$17,029. Additionally, the percentage of individuals living below the poverty level is lower in block groups 2 and 3 (7.5 percent and 1.5 percent, respectively) than the state average of 15.8 percent. No clusters of homes for low-income individuals appeared to be present in the corridor.

Specific consideration was given to Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, through the evaluation of all alternatives. The purpose of Executive Order 12898 is to (i) identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low-income populations; (ii) to

ensure the full and fair participation by all potentially affected communities in the transportation decision-making process, and (iii) to prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Nine homes (which includes 2 possible acquisitions) will be acquired by the Preferred Alternative. The economic demographics for the area are high both on their own merits and compared to the state averages, and no low income properties were observed in the project corridor during the site visit. Additionally, no minority housing clusters were observed in the project area. Therefore, it appears that the proposed project will not have a disproportionately high and adverse impact upon minority or low-income populations, and environmental justice is not believed to be a concern for the project.

#### **4. Local Economy**

KY 53 near I-71 and LaGrange has several commercial developments, both existing and under construction. The largest of these include a Kroger's and Wal-Mart. A new commercial development, Pristine Pointe, is currently under construction just south of the Market Street Shopping Center, which includes Kroger's. These shopping centers also contain smaller shops and restaurants and generate a large amount of traffic. A substantial portion of the commercial development is located on the west side of KY 53 and within the urban boundary of LaGrange.

Seven manufacturing facilities are located in the city (2009); however, they employ only about 250 persons. Manufacturing employs only 800 people county-wide (2009). Most people (62 percent) who work in Oldham County are employed in the Services, Trade, and Public Administration sectors.

The proposed project will not have a direct impact on the regional or local economy. While an improved KY 53 will certainly allow improved access to homes, subdivisions, and developments along the route, such development will continue regardless of whether the roadway is improved.

#### **5. Farmland**

At the present time (2011), the project does not have federal funding. Therefore, the requirements of the Farmland Protection Policy Act (FPPA), 7 CSR 658.2 (a) do not apply. However, because some land along the corridor is undeveloped fields, the amount of farmland was taken into consideration for this Environmental Overview.

Land north of Prestwick Drive on the east side of KY 53 and Dogwood Lane on the west side of KY 53 are within the urban boundary of LaGrange. Therefore, the northern third of the study area is exempt from farmland consideration by the Farmland Protection Policy Act). The southern portion of the study area is outside the urban boundary. Therefore, acquisition of land in this portion of the study area would be subject to review for farmland impacts.

7 CFR 658.2(a) defines farmland to be soils of prime or statewide importance. Soils in the study area that qualify as prime or statewide important include Beasley silt loam (6 to 12 percent slopes), Lowell silt loam (2 to 6 percent and 6 to 12 percent slopes), and Nicholson silt loam (2 to 6 percent slopes). Exhibit 9 below shows soil types in the unincorporated portion of the study area. Approximate prime or statewide important farmland acquisition is as follows:

- Alternative 1: 51 acres
- Alternative 2: 34 acres
- Alternative 3: 43 acres
- Preferred Alternative: 53 acres

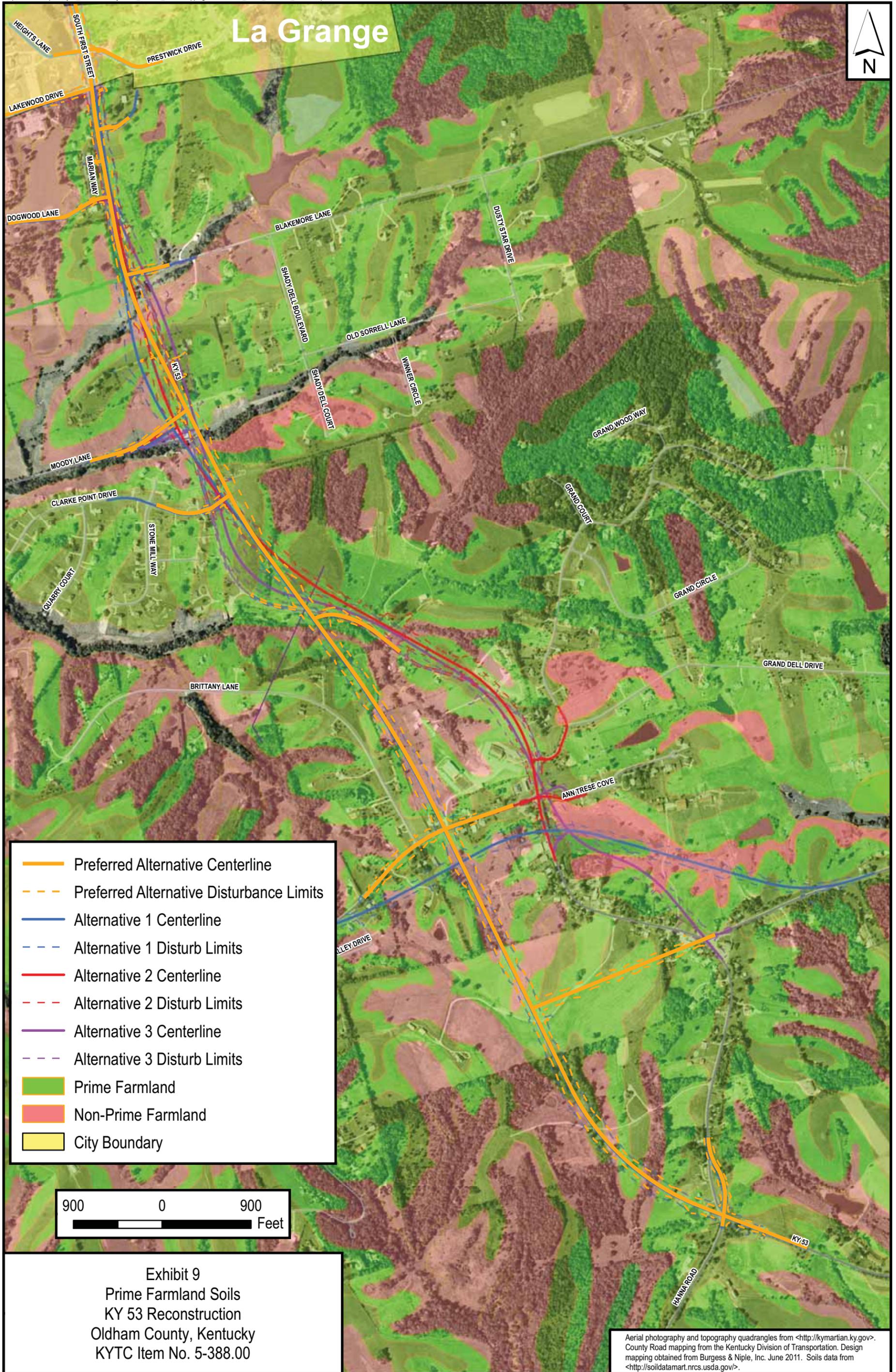


Exhibit 9  
Prime Farmland Soils  
KY 53 Reconstruction  
Oldham County, Kentucky  
KYTC Item No. 5-388.00

Aerial photography and topography quadrangles from <<http://kymartian.ky.gov>>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011. Soils data from <<http://soildatamart.nrcs.usda.gov>>.

## 6. *Communities and Community Facilities*

Three churches are present in the area: Holy Trinity Lutheran Church, LaGrange Presbyterian Church, and Ballardsville Baptist Church. The Eagle Creek Golf Course is located across from the LaGrange Presbyterian Church. The golf course is owned by the City of LaGrange and thus is a public recreation facility. No other parks or places of public recreation are present in the corridor.

Baptist Hospital Northeast is located just west of Wal-Mart at the northern end of the project corridor. Therefore, KY 53 serves ambulances and other emergency vehicles serving the outlying portions of the county.

While no schools are presently located within the project corridor, the Oldham County school system owns property north of KY 22 and west of the project corridor. This property, which is just west of the project corridor, is known as the East Campus of the Oldham County school system. Two schools, Locust Grove Elementary School and East Oldham Middle School, are located on this campus. Construction of a new high school is tentatively planned for 2012. Thus KY 53 currently serves as a school bus route for the existing and proposed schools. Improvement of KY 53 would therefore increase safety for children being transported to school.

No neighborhoods will be bisected by any of the proposed alternatives. Because of the widespread location of the community facilities and few impacts to businesses and residences, the proposed project will not adversely affect community cohesion.

## 7. *Sections 4(f) and 6(f)*

At the present time, federal funding is not available for the proposed project. In the event federal funding is sought, the project area contains a Section 4(f) facility: the Eagle Creek

Golf Course, which is owned by the City of LaGrange and is thus a public recreation facility.

Section 4(f) was originally enacted in the Department of Transportation Act of 1966 (re-codified in 1983) (49 USC 1653(f)) to preserve (i) publicly-owned land used for recreation, wildlife, and waterfowl refuges, and (ii) all historic properties eligible to be listed on the National Register of Historic Places. Approval of a federally-funded transportation project that requires use of a Section 4(f) property is contingent upon the conditions that (i) there is no prudent or feasible alternative to using that land and (ii) all possible measures have been taken to minimize harm to that property as a result of the project. "Use" is defined by Federal Highway Administration, in its Section 4(f) Policy Paper (2005), as:

- (1) when land from a Section 4(f) site is permanently incorporated into a transportation facility,
- (2) there is an temporary occupancy of land that is adverse in terms of the statute's preservationist purposes, or
- (3) when the proximity impacts of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired (constructive use).

If any federal funds are procured for construction of the proposed project, any impacts to the Eagle Creek Golf Course would invoke Section 4(f). However, at this location, all three proposed alternatives only widen the road on the existing centerline. Thus it is likely that a *de minimis* ruling could be obtained from the Federal Highway Administration. *De minimis* stipulates that the transportation project "will not adversely affect the activities, features, and attributes of the park," and that argument could clearly be applied to this case. Evaluation of the impact could be accomplished as a Programmatic Section 4(f).

Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) of 1965 (16 U.S.C. 4601-4) established a funding source for both Federal acquisition of park and recreation lands and matching grants to state and local governments for recreation planning, acquisition and development. Section 6(f) concerns transportation projects that propose impacts to, or the permanent conversion of outdoor recreation property that was acquired or developed with LWCFA grant assistance, which is distributed by the Interagency Committee for Outdoor Recreation of the Office of the Interagency Committee in Washington, DC.

Any right-of-way taking from a public park that has received LWCFA funding is considered a Section 6(f) impact. A review of the U.S Department of Interior, National Park Service website showed that no Section 6(f) funds have been expended for development of the Eagle Creek Golf Course. Therefore, the proposed project does not have Section 6(f) impacts.

#### **8. Public Involvement**

A public meeting was held at the LaGrange Presbyterian Church on September 25, 2008 from 6 PM to 8 PM. The meeting was lightly attended by the community. At this meeting, exhibits of all the project corridors were available. A continuous-loop PowerPoint presentation showed the project's purpose and need and existing roadway deficiencies. Members of the project team from the Kentucky Transportation Cabinet, the prime engineer and consulting firms were available to answer questions. A questionnaire was available, and the attending public was asked to complete and return it.

Thirty-three (33) completed questionnaires were received. The typical response was as follows:

- The respondent used KY 53 in the study area daily;

- Owned property that would be affected by one or more of the proposed corridors;
- Believed that the project was needed;
- Did not rank bikeways and shared use paths as important;
- Ranked sidewalks slightly important; and
- Found poor visibility, steep hills, narrow shoulders and few passing opportunities as the most important transportation problems on KY 53.

A copy of the public meeting summary of responses is contained in Appendix E. Little opposition to the project was expressed. A few landowners whose properties may be crossed expressed concern.

On June 9, 2011, the project team met with the Oldham County elected officials. The purpose of the meeting was to update them on the status of the project, to present the Preferred Alternative, typical sections, and estimated costs, and to obtain their input on the project.

The local officials present concurred with the Preferred Alternative. They indicated their preferred section for initial construction would be from Clarke Pointe Drive to near I-71. Constructing this section would address current capacity problems near the project end and address the more critical geometric deficiencies along the two-lane section of KY 53 between Clarke Pointe Drive and Zhale Smith Road.

The project team confirmed that, with submittal of the Environmental Overview, Phase I Design was complete and that no further work would be done on the project until Phase II Design funding was obtained.

#### **G. UST/Hazardous Materials**

A field reconnaissance was conducted in April 2008 by a qualified subject matter expert.

Prior to field reconnaissance activities, Environmental Data Resources (EDR) was contacted to produce an electronic review of applicable environmental databases. A total of 47 databases were reviewed, resulting in the identification of 34 facilities within the area. The existing I-71/KY 53 interchange contains 4 active gas stations operated by BP, Speedway, Chevron, and Kroger respectively. It may be presumed that numerous underground storage tanks are associated with these facilities. The BP station is currently listed as a known location of soil and/or groundwater contamination. One additional gas station operated by Marathon is located near the southern end of the project area at the intersection of KY 22 and KY 53.

Two auto repair facilities were also observed during the site reconnaissance. One facility, operated by Big O Tires, is located near the I-71/KY 53 interchange. The other facility, Barrett's Auto and Diesel Repair, is located on KY 53 near Ballardsville. Petroleum storage of some type is expected to occur at these facilities. Potential sites of concern are shown on Exhibits 10 and 11, pages 29 and 30.

Several agricultural properties are located along KY 53 near the southern terminus of the project area. One above-ground storage tank (AST) was observed near KY 53. It can be assumed that additional ASTs are located on the agricultural properties. Farm chemicals may also be stored on the various farms.

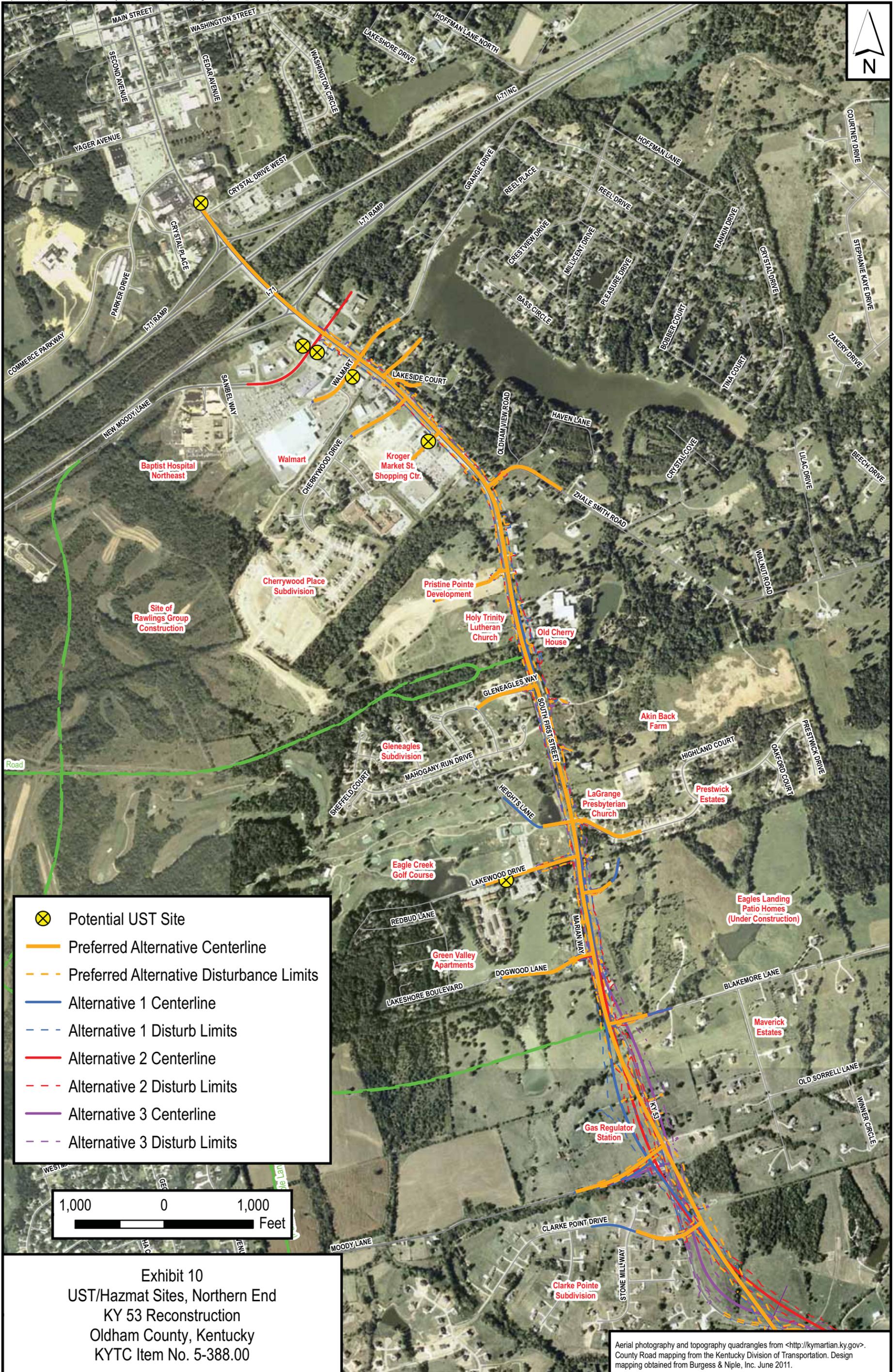
Additional concerns are gas and water wells, which the Kentucky Geological Survey indicated are present in the project area. These wells were not located during the field reconnaissance; however, many of these wells could be abandoned and not identifiable in the field. Additionally, it is a common practice for communities such as La Grange to locate a solid waste disposal site or landfill in close proximity to the city. No such facilities were observed,

however, there is still a potential to encounter an unregulated landfill in the project area.

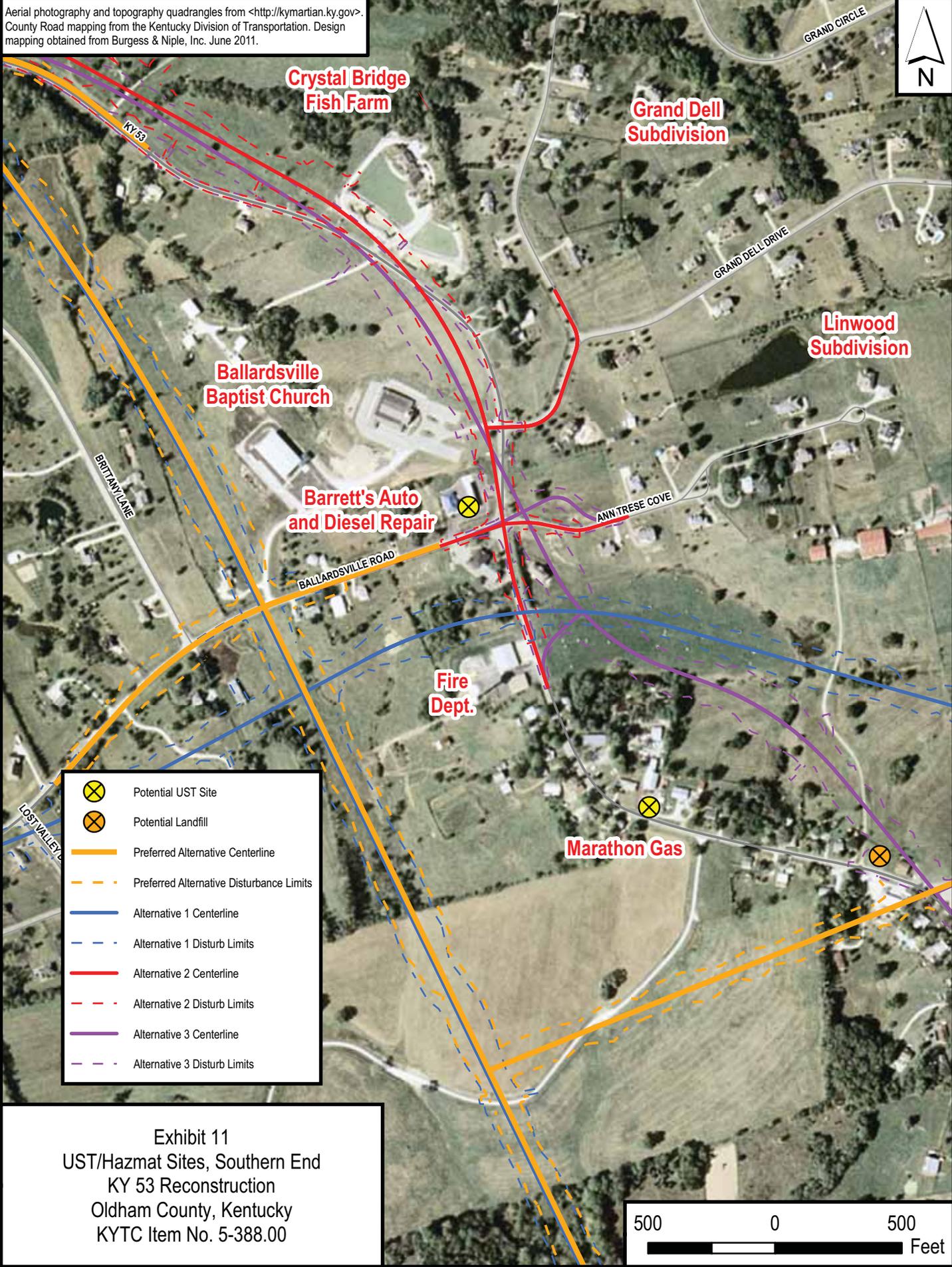
A commercial/demolition debris (CDD) landfill, which was permitted by the Oldham County Planning and Zoning Commission in 1995, is located at the intersection of KY 22 and KY 53 and is shown on Exhibit 11 below. Alternatives 1 and 3 will impact this site. A Phase II site investigation should be conducted at this site prior to construction.

#### ***H. Cultural Historic/Archaeology***

A cultural historic overview survey was conducted in April and May 2008 by Cultural Resource Analysts, Inc. (CRAI) to identify cultural historic resources within the corridor, particularly those that appear potentially eligible for listing in the National Register of Historic Places (NRHP). The Area of Potential Effect (APE) was defined as the project corridor (see Exhibit 1, page 3). Seven individual sites in the corridor had been documented previously, and the field survey identified an additional 38 individual historic sites. Included in this survey were barns that appeared to be over 50 years of age and examples of ranch houses that may or may not be over 50 years of age. As ranch-style homes are very common in Oldham County, only exemplary examples would be eligible for listing in the NRHP.

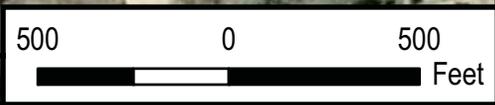


Aerial photography and topography quadrangles from <http://kymartian.ky.gov>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.



-  Potential UST Site
-  Potential Landfill
-  Preferred Alternative Centerline
-  Preferred Alternative Disturbance Limits
-  Alternative 1 Centerline
-  Alternative 1 Disturb Limits
-  Alternative 2 Centerline
-  Alternative 2 Disturb Limits
-  Alternative 3 Centerline
-  Alternative 3 Disturb Limits

Exhibit 11  
UST/Hazmat Sites, Southern End  
KY 53 Reconstruction  
Oldham County, Kentucky  
KYTC Item No. 5-388.00



Of the 45 sites identified either by previous documentation or the field visit, four were identified as potentially eligible for listing in the NRHP (Exhibit 12 below). However, final determinations of eligibility and NRHP boundaries cannot be determined until each site has been examined more closely and site-specific archival research has been completed. Such determination was outside the scope of this Phase I planning effort.

In July 2008, CRAI conducted a records review to determine the potential impact to archaeological resources from the proposed altering and widening of KY 53. The review included a review of records at the Office of State Archaeology (OSA), a summary of relevant information from historic maps of the area, and analysis of the probability for archaeological sites based on existing archaeological site data. No field investigations were conducted. The Area of Potential Effect (APE) was defined as the project corridor (see Exhibit 1, page 3).

OSA records revealed that six previous professional Phase I archaeological surveys have been conducted within a 2-kilometer radius of the APE. Within the same area, 10 archaeological sites have been recorded, but only 1 (15OI130) is within the APE. The 2-kilometer radius included areas within the Ballardsville, Smithfield, and LaGrange, Kentucky, 7.5-minute quadrangle maps.

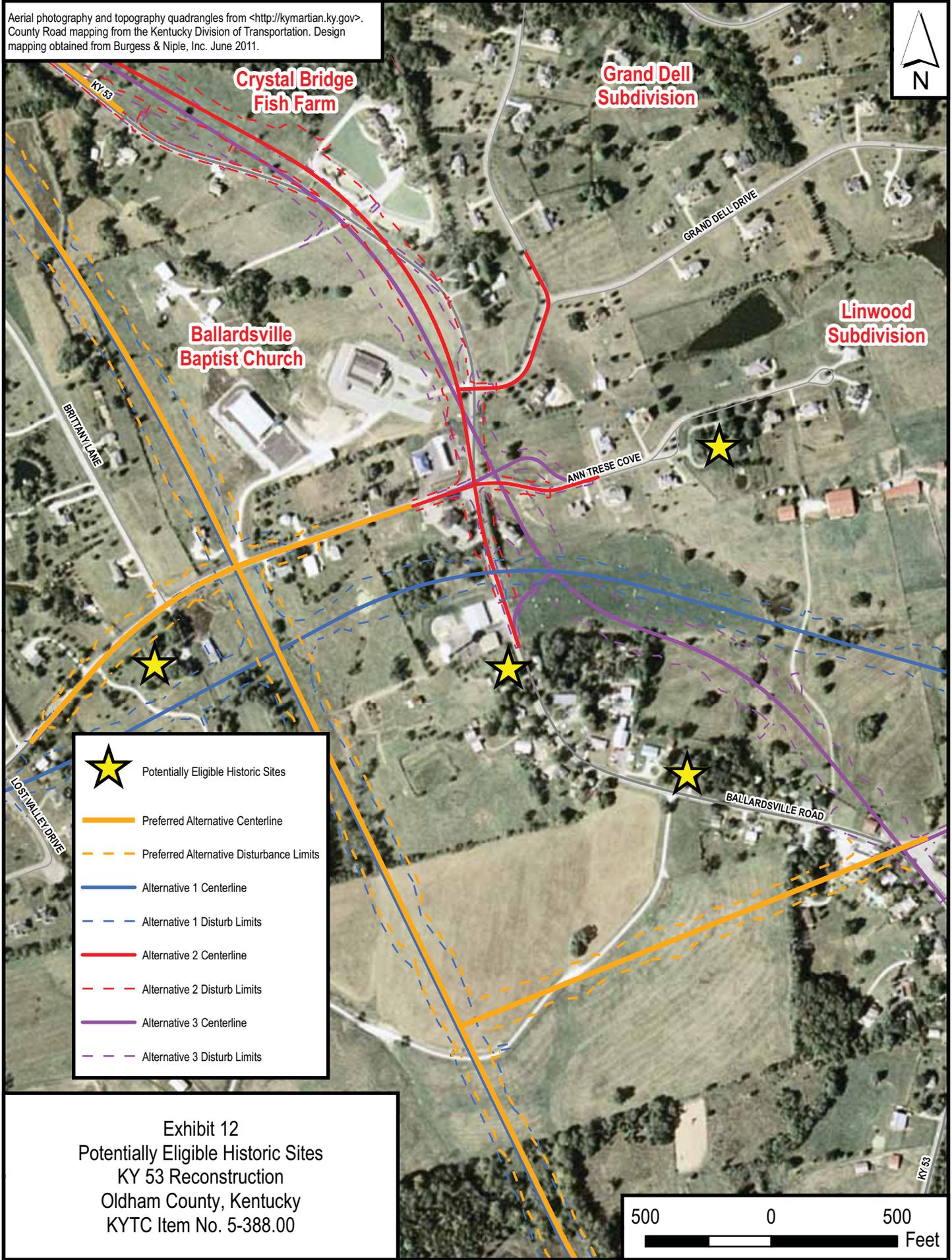
Due to patterns developed from existing data regarding prehistoric site distribution, soil types and series can be used to determine the probability of prehistoric sites in an area. Inside the APE, there were 32.8 acres of high-probability Lindside Series soils. These soils have the greatest potential to contain significant prehistoric archaeological sites because they consist of fine-grained alluvial sediments. These areas include two drainages that flow in a west to east direction across the APE. One of these is

North Fork of Curry Fork, which has been heavily disturbed by the construction of I-71. This disturbance limits the potential for finding archaeological sites in this drainage. The other drainage area, to the south, has less disturbance and thus a high potential for archaeological sites. This drainage area includes the South Fork of Curry Fork and two of its tributaries.

There is only one area with low probability Cynthiana Series soils. This area is only 13.7 acres in size, and the slope of these soils is greater than 20 percent, limiting the potential for archaeological sites. The rest of the soils in the APE, about 1000 acres, are moderate-probability upland flat soils. There are 14 different soil series represented in the moderate-probability area; these are all part of either the Beasley-Nicholson Association or the Lowell-Faywood-Beasley Association. These data suggest that there is an overall moderate potential for prehistoric archaeological sites throughout the entire APE. Nevertheless, much of this area has been disturbed by development. The soils in the northern areas around LaGrange and I-71 are highly disturbed, decreasing the possibility for both historic and prehistoric archaeological sites.

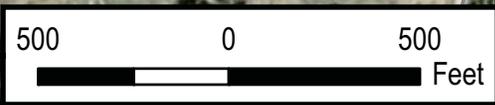
In conclusion, the OSA search and the soils data indicate a moderate probability for the presence of prehistoric archaeological sites. Ten previously recorded sites are within 2 kilometers of the APE; however, only 15OI130, a historic period farm/residence, is located within the APE. Due to the presence of buildings within the APE as early as the 1800s, the most probable archaeological site types are historic period farms/residences.

Aerial photography and topography quadrangles from <http://kymartian.ky.gov>. County Road mapping from the Kentucky Division of Transportation. Design mapping obtained from Burgess & Niple, Inc. June 2011.



-  Potentially Eligible Historic Sites
-  Preferred Alternative Centerline
-  Preferred Alternative Disturbance Limits
-  Alternative 1 Centerline
-  Alternative 1 Disturb Limits
-  Alternative 2 Centerline
-  Alternative 2 Disturb Limits
-  Alternative 3 Centerline
-  Alternative 3 Disturb Limits

Exhibit 12  
Potentially Eligible Historic Sites  
KY 53 Reconstruction  
Oldham County, Kentucky  
KYTC Item No. 5-388.00



**IV. SUMMARY OF IMPACTS**

Impacts to the social and natural environments are minimal. They are summarized below.

**A. Traffic Noise**

Under the scope of this study, no modeling of the traffic noise was conducted in order to predict the Build design year noise levels. However, traffic level forecasts predict increases of up to 100% for certain areas of the project corridor. Therefore, noise impacts to sensitive receptors should be considered.

Selection of a Build Alternative with the horizontal and vertical alignments providing the greatest distance from roadway to the receptors and the slowest speeds would minimize noise impacts and could be used as an abatement option.

If these measures are either not appropriate, not effective, or not feasible, the installation of structural noise barriers can be evaluated with respect to the severity of the impact, cost, structural feasibility and opinions of the affected residents.

**B. Aquatic Resource Impacts**

Stream impacts for each alternative are summarized below:

*Stream crossing impact:*

- Alternative 1: 3,485 linear feet (LF)
- Alternative 2: 556 LF
- Alternative 3: 460 LF

- Preferred Alternative: 1,025 LF stream relocation; 720 LF culvert impact

For the Preferred Alternative, stream impacts have been minimized as much as feasible. To avoid impacts would require major impacts to houses west of KY 53 through Ballardsville. Thus impacts were weighed in selecting the Preferred Alternative.

**C. Threatened and Endangered Species**

The project will impact habitat for the federally endangered species Indiana bat (*Myotis sodalis*). Habitat acquisition by alternative is shown below:

- Alternative 1: 3.8 acres
- Alternative 2: 3.1 acres
- Alternative 3: 1.2 acres
- Preferred: 4.2 acres

If tree-cutting is not performed out-of-season, a biological assessment to determine presence or absence of the species is recommended. Another option to compensate for the impact to Indiana bat habitat is the payment of an impact fee to the Indiana Bat Conservation Fund. If federal funding is obtained, coordination with US Fish & Wildlife Service should be conducted to obtain Section 7 Endangered Species Act clearance.

**D. Property Acquisition**

A summary of relocations acquired by alternative is shown in the table below.

**TABLE 6 – RELOCATIONS BY ALTERNATIVE**

Alternative	Relocations		
	Residential	Commercial	Storage/Farm Building
1	15	0	2
2	2	0	0
3	2	0	1
Preferred	7 (plus 2 possible)	1 (plus 1 possible)	1

While housing availability at the time of construction cannot be predicted, it is likely that, due to the continued development of residential communities in the area, displaced residents will be able to find comparable housing in or near LaGrange.

It is not anticipated that Last Resort Housing will be necessary for this project. However, sufficient notice should be given to the residents in order that they may find suitable alternative housing with the least amount of disruption possible.

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Policies Act of 1970, as amended. Relocation resources are available to the residential relocates without discrimination, in compliance with Title VI of the Civil Rights Act of 1968 and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*. All right-of-way acquisition will be conducted in accordance with the Kentucky Transportation Cabinet Division of Right-of-Way & Utilities' Relocation Assistance Program.

**E. UST/Hazardous Materials**

Barrett's Auto and Diesel Repair, located at the intersection with Ballardsville Road, will be impacted by the project (Alternatives 2 and 3). A Phase II site investigation is recommended for this site if either of those alternatives are selected.

Alternatives 1 and 3, as well as the Preferred Alternative, will impact a CDD landfill site (Exhibit 11). A Phase II site investigation should be conducted at this site prior to construction.

**F. Cultural Historic/Archaeology**

Of the 45 sites identified either by previous documentation or the field visit, four were identified as potentially eligible for listing in the

NRHP (Exhibit 12). However, final determinations of eligibility and NRHP boundaries cannot be determined until each site has been examined more closely and site-specific archival research has been completed. Such determination was outside the scope of this Phase I planning effort.

The OSA search and the soils data indicate a moderate probability for the presence of prehistoric archaeological sites throughout the entire APE. Nevertheless, much of this area has been disturbed by development. The soils in the northern areas around LaGrange and I-71 are highly disturbed, decreasing the possibility for both historic and prehistoric archaeological sites. Ten previously recorded sites are within 2 kilometers of the APE; however, only 15O1130, a historic period farm/residence, is located within the APE. Due to the presence of buildings within the APE as early as the 1800s, the most probable archaeological site types should be historic period farms/residences.

**REFERENCES**

2000 US Census <http://factfinder.census.gov>

Federal Highway Administration, MSAT Guidance.  
(<http://www.fhwa.dot.gov/environment/air/toxic/020306guidmem.htm>) Kentucky State Data Center  
<http://ksdc.louisville.edu/>

Kentucky Cabinet for Economic Development  
<http://www.thinkkentucky.com>

Kentucky Department of Education.  
<http://www.kde.state.ky.us/KDE/>

Kentucky State Data Center.  
<http://ksdc.louisville.edu/>

Kerr, Jonathan P. 2008. An Archaeological Overview of KY 53, Oldham County, KYTC Item No. 5-388.00. Cultural Resource Analysts, Inc., Lexington, KY.

National Park Service, US Department of the Interior. Land & Water Conservation Fund.  
<http://www.nps.gov/ncrc/programs/lwcf/>

Spurlock, Trent and Kathryn M. Joseph. 2008. Cultural Historic Overview Survey for Widening KY 53 (La Grange-Ballardsville Road) from KY 22 at Ballardsville to I-71 South of La Grange, Oldham County, Kentucky (Item Number 5-388.00). Cultural Resource Analysts, Inc., Lexington, KY.

US Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/>

## APPENDICES

## APPENDIX A – PHOTOGRAPHIC JOURNAL



*KY 53, looking north towards I-71*



*KY 53 entrance at shopping plaza containing Kroger and several other businesses*



*KY 53, north view from Lakewood showing poor line of sight*



*KY 53, south view from Lakewood, showing poor sight distance to intersection*



*Clarke Point intersection looking north showing poor sight distance*



*Near Stream 1, showing marginal Indiana bat habitat*



*Alternative 1 near southern terminus crossing farmland, with small patch of Indiana bat habitat in background*



*Crystal Bridge fish farm*



*Wetland across from KY 53 intersection at Blakemore Lane*



*Alternative 3 centerline at southern terminus;  
small portion of alleged landfill in foreground*



*Pond at Green Valley Golf Course*



*Former quarry at Green Valley Golf Course  
along KY 53*



*Stream 1, intermittent*



*Stream 2, intermittent*



*Stream 3, intermittent/perennial*



*Barrett's Auto and Diesel Repair*

## APPENDIX B – CAPACITY ANALYSIS REPORT



# **Capacity Analysis Report**

## **KY 53 Improvements From KY 22 at Ballardsville to I-71**

October 10, 2008

Existing traffic volumes along the KY 53 are expected to increase significantly by 2030. Rapidly growing residential communities along with the OCEDA development will double traffic volumes along the corridor. Capacity analysis was conducted for the KY 53 corridor. This analysis included the 2008 Existing Condition, the 2030 No-Build Condition, the 2030 Short-Term Condition and the 2030 Full-Build Condition. The analysis was performed in *Synchro 7* using the *Highway Capacity Manual* methodology. Output files for the capacity analysis can be found in the Appendix.

### **2008 Existing Condition**

Table 1 shows the LOS and Delays for the existing condition. As shown in Table 1, the existing condition operates at LOS D or better at most locations. The only capacity deficiencies occur at the I-71 ramp intersections and Crystal Drive. In the PM Peak, the northbound ramp intersection operates at LOS F. This creates long queues in the northbound direction that extend upstream to New Moody Lane.

**Table 1 – Existing Condition LOS**

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Crystal Drive</b>				
<b>Eastbound</b>	C	32.3	D	46.5
<b>Westbound</b>	D	37.7	E	57.8
<b>Northbound</b>	A	6.2	B	12.0
<b>Southbound</b>	A	6.2	A	5.7
<b>Overall</b>	B	11.3	B	17.9
<b>KY 53 @ I-71 Southbound</b>				
<b>Westbound</b>	D	50.2	E	62.9
<b>Northbound</b>	A	8.8	A	7.0
<b>Southbound</b>	C	24.3	D	37.1
<b>Overall</b>	C	20.0	C	23.4
<b>KY 53 @ I-71 Northbound</b>				
<b>Eastbound</b>	D	45.5	F*	201.6
<b>Northbound</b>	B	14.9	F*	184.3
<b>Southbound</b>	A	9.4	B	15.9
<b>Overall</b>	C	23.2	F*	141.9
<b>KY 53 @ New Moody Lane</b>				
<b>Eastbound</b>	C	23.3	D	40.7
<b>Westbound</b>	C	31.1	D	39.8
<b>Northbound</b>	B	13.3	C	21.6
<b>Southbound</b>	B	13.1	B	15.2
<b>Overall</b>	B	14.7	C	23.7

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Grange Drive</b>				
Eastbound	C	23.2	C	31.7
Westbound	C	23.4	C	25.0
Northbound	B	13.1	A	9.8
Southbound	A	1.3	A	2.7
Overall	B	10.5	A	8.9
<b>KY 53 @ Cherrywood Drive (Stop Controlled)</b>				
Eastbound	C	23.6	E	41.2
Overall	-	1.9	-	2.7
<b>KY 53 @ Kroger Entrance</b>				
Eastbound	C	33.0	C	29.8
Westbound	C	29.2	C	21.4
Northbound	A	8.7	B	18.0
Southbound	B	10.8	A	5.0
Overall	B	12.0	B	14.3
<b>KY 53 @ Zhale Smith Road (Stop Controlled)</b>				
Westbound	C	19.6	C	18.0
Overall	-	2.9	-	2.7
<b>KY 53 @ Glen Eagles Way (Stop Controlled)</b>				
Eastbound	C	18.7	C	21.1
Overall	-	1.3	-	0.9
<b>KY 53 @ Blakemore Lane (Stop Controlled)</b>				
Westbound	B	13.0	B	12.3
Overall	-	0.7	-	0.8
<b>KY 53 @ East Moody Lane (Stop Controlled)</b>				
Eastbound	B	13.2	C	16.5
Overall	-	1.4	-	1.4
<b>KY 53 @ West KY 22 (Stop Controlled)</b>				
Eastbound	D	28.3	D	25.1
Westbound	C	16.9	C	16.9
Overall	-	8.0	-	7.3

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ East KY 22 (Stop Controlled)</b>				
<b>Westbound</b>	B	10.8	B	10.8
<b>Overall</b>	-	5.7	-	4.5
<b>KY 53 @ Hannah Road (Stop Controlled)</b>				
<b>Eastbound</b>	A	9.8	B	10.5
<b>Overall</b>	-	1.9	-	1.8

**2030 No-Build Condition**

As traffic volumes continue to grow, most of the unsignalized intersections will require signalization to maintain acceptable LOS. It was assumed that by the design year of 2030, installation of traffic signals would take place at the following locations:

- Zhale Smith Road
- Peak Road
- Blakemore Lane
- KY 22 (West)
- KY 22 (East)

Table 2 shows the results of the capacity analysis for the 2030 No-Build Condition. Traffic signal installation was the only improvement included in this alternative.

**Table 2 – 2030 No-Build Condition LOS**

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Crystal Drive</b>				
<b>Eastbound</b>	D	42.9	D	51.4
<b>Westbound</b>	D	52.8	F*	103.2
<b>Northbound</b>	B*	15.9	E*	70.3
<b>Southbound</b>	C	21.4	C	31.0
<b>Overall</b>	C	24.5	E*	57.3
<b>KY 53 @ I-71 Southbound</b>				
<b>Westbound</b>	F*	179.1	F*	207.9
<b>Northbound</b>	F*	74.2	E*	58.5
<b>Southbound</b>	F*	101.0	F*	144.3
<b>Overall</b>	F*	109.3	F*	118.8

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ I-71 Northbound</b>				
Eastbound	F*	92.5	F*	349.1
Northbound	D*	48.8	F*	302.1
Southbound	B	19.5	F*	77.2
Overall	D*	48.8	F*	233.1
<b>KY 53 @ New Moody Lane</b>				
Eastbound	C	27.8	E	64.3
Westbound	C	31.2	D	43.1
Northbound	B	11.2	C	21.7
Southbound	C	28.8	B	14.1
Overall	C	22.1	C	28.1
<b>KY 53 @ Grange Drive</b>				
Eastbound	C	25.0	E	56.8
Westbound	C	26.5	C	34.3
Northbound	B	16.4	A	9.0
Southbound	A	1.1	A	2.0
Overall	B	12.8	B	11.2
<b>KY 53 @ Cherrywood Drive (Stop Controlled)</b>				
Eastbound	F	64.7	F	531.7
Overall	-	4.9	-	35.5
<b>KY 53 @ Kroger Entrance</b>				
Eastbound	D	37.1	D	49.2
Westbound	C	31.4	C	26.5
Northbound	A	6.0	B	17.8
Southbound	A	8.6	A	7.7
Overall	B	10.1	C	20.0
<b>KY 53 @ Zhale Smith Road</b>				
Westbound	E	76.7	E	57.2
Northbound	B	17.5	A	7.1
Southbound	B	10.7	C	19.5
Overall	C	24.3	B	16.8
<b>KY 53 @ Peak Road</b>				
Eastbound	D	35.6	F*	162.1
Northbound	B	18.0	F*	179.1
Southbound	B	11.2	A	11.0
Overall	B	16.4	F*	90.4

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Glen Eagles Way (Stop Controlled)</b>				
<b>Eastbound</b>	F	59.8	F	101.4
<b>Overall</b>	-	3.3	-	3.2
<b>KY 53 @ Blakemore Lane</b>				
<b>Eastbound</b>	F*	88.2	F*	219.6
<b>Westbound</b>	C	29.9	D	36.3
<b>Northbound</b>	E	71.4	F*	141.7
<b>Southbound</b>	A	1.7	C	21.1
<b>Overall</b>	D*	54.1	F*	102.9
<b>KY 53 @ East Moody Lane (Stop Controlled)</b>				
<b>Eastbound</b>	F*	52.3	F*	555.6
<b>Overall</b>	-	8.1	-	52.3
<b>KY 53 @ West KY 22</b>				
<b>Eastbound</b>	D	52.9	F*	117.9
<b>Westbound</b>	B	18.3	C	30.9
<b>Northbound</b>	C	34.2	B	14.7
<b>Southbound</b>	C	29.4	D*	51.5
<b>Overall</b>	D	36.4	D*	55.2
<b>KY 53 @ East KY 22</b>				
<b>Westbound</b>	B	17.4	C	30.2
<b>Northbound</b>	B	10.2	A	6.2
<b>Southbound</b>	B	12.5	C	28.2
<b>Overall</b>	B	13.4	C	21.8
<b>KY 53 @ Hannah Road (Stop Controlled)</b>				
<b>Eastbound</b>	B	12.9	C	17.8
<b>Overall</b>	-	3.4	-	4.1

\* = volume/capacity ratio > 1.0

From Table 2 it is evident that traffic operations have deteriorated along the corridor. Some specific areas of concern are described below.

#### I-71 Interchange and Crystal Drive

Operation at the I-71 and Crystal Drive intersections has significantly worsened from the existing condition. Traffic queues that are extending to the New Moody Lane intersection today will extend farther upstream and occasionally reach the Cherrywood intersection by 2030. To reduce congestion and improve operations along the KY 53 corridor, improvements need to be made to these intersections.

### Cherrywood Drive Intersection

The Cherrywood Drive intersection is stop-controlled and shows very long delays by 2030. The intersection would likely meet the traffic volumes required for a traffic signal, however, with the closely spaced signals at Grange Drive and Kroger a signal is not likely feasible. The high left turn volume on Cherrywood creates a safety concern as it tries to complete the maneuver against a very high cross street volume with very few gaps in traffic. Consideration should be given to converting the Cherrywood approach to a right-in/right-out configuration. Left-in and left-out movements can be completed at the traffic signal at the Kroger entrance. The existing internal connection between Cherrywood and the Kroger entrance will be used to service the left turning traffic.

### Intersections from Zhale Smith to KY 22 (West)

These intersections are located on the two-lane section of KY 53. With the large traffic growth predicted, there is not enough capacity to handle the future traffic. Some locations may be able to be improved by adding left turn and/or right turn lanes to KY 53 and the cross street. However, some locations will require a second through lane to maintain acceptable level of service.

### 2030 Short-Term Condition

The ultimate improvement for KY 53 would be to extend the existing 5-lane section from the Kroger entrance to KY 22 (West). However, it is likely that a short-term improvement will be constructed initially, and the full-build improvement will be made at a later date. The short-term improvement will be a three-lane section from the Kroger entrance to KY 22 (West). This will provide one through/right lane in each direction plus left turn lanes at all intersections. In the future, the second through lane will be added to create the five-lane section. Other short-term improvements included are traffic signals where necessary and left turn lanes on the cross streets where needed. Table 3 shows the results of the capacity analysis for the short-term condition.

**Table 3 – 2030 Short-Term Condition LOS**

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Crystal Drive</b>				
<b>Eastbound</b>	D	39.8	E*	72.3
<b>Westbound</b>	E	64.9	F*	150.9
<b>Northbound</b>	B*	16.9	F*	79.8
<b>Southbound</b>	C	20.3	C	24.2
<b>Overall</b>	C	24.6	E*	66.9
<b>KY 53 @ I-71 Southbound</b>				
<b>Westbound</b>	F*	180.7	F*	207.9
<b>Northbound</b>	D*	48.5	E*	61.2
<b>Southbound</b>	F*	135.7	F*	145.1
<b>Overall</b>	F*	113.9	F*	120.3

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ I-71 Northbound</b>				
Eastbound	F*	85.3	F*	349.1
Northbound	E*	58.7	F*	302.1
Southbound	B	16.6	F*	96.3
Overall	D*	50.1	F*	239.8
<b>KY 53 @ New Moody Lane</b>				
Eastbound	C	31.2	E	64.3
Westbound	C	36.1	D	43.1
Northbound	B	10.8	C	21.5
Southbound	C	31.2	B	12.3
Overall	C	23.6	C	27.2
<b>KY 53 @ Grange Drive</b>				
Eastbound	C	28.3	E	56.8
Westbound	C	29.7	C	34.3
Northbound	B	11.5	B	10.1
Southbound	A	1.3	A	2.0
Overall	B	13.8	B	11.7
<b>KY 53 @ Cherrywood Drive (Stop Controlled)</b>				
Eastbound	F	65.1	F*	531.7
Overall	-	4.9	-	35.5
<b>KY 53 @ Kroger Entrance</b>				
Eastbound	D	42.1	D	48.6
Westbound	D	35.6	D	42.9
Northbound	A	6.4	B	11.1
Southbound	B	12.3	A	6.9
Overall	B	12.1	B	17.9
<b>KY 53 @ Zhale Smith Road</b>				
Westbound	D	52.5	D	49.4
Northbound	B	19.7	A	8.3
Southbound	A	2.6	A	4.2
Overall	B	19.8	A	9.4
<b>KY 53 @ Peak Road</b>				
Eastbound	D	41.9	E	75.5
Northbound	B	11.9	B	12.0
Southbound	B	18.9	D	31.3
Overall	B	16.6	C	32.0

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Glen Eagles Way (Stop Controlled)</b>				
<b>Eastbound</b>	F	59.8	F	101.4
<b>Overall</b>	-	3.2	-	2.9
<b>KY 53 @ Blakemore Lane</b>				
<b>Eastbound</b>	B	19.0	D	47.9
<b>Westbound</b>	B	16.8	C	32.0
<b>Northbound</b>	B	15.5	C	23.8
<b>Southbound</b>	A	9.6	D*	51.5
<b>Overall</b>	B	14.6	D	41.0
<b>KY 53 @ East Moody Lane</b>				
<b>Eastbound</b>	C	23.2	C	33.7
<b>Northbound</b>	B	16.7	C	24.6
<b>Southbound</b>	A	8.3	D*	52.7
<b>Overall</b>	B	15.1	D	39.4
<b>KY 53 @ West KY 22</b>				
<b>Eastbound</b>	D	48.4	D	35.4
<b>Westbound</b>	B	16.0	C	22.3
<b>Northbound</b>	C	21.0	C	23.9
<b>Southbound</b>	B	17.7	D	18.8
<b>Overall</b>	C	25.8	C	23.5
<b>KY 53 @ East KY 22 (Stop Controlled)</b>				
<b>Westbound</b>	C	17.5	F	67.6
<b>Overall</b>	-	6.9	-	13.5
<b>KY 53 @ Hannah Road (Stop Controlled)</b>				
<b>Eastbound</b>	B	12.9	C	17.8
<b>Overall</b>	-	3.4	-	4.1

\* = volume/capacity ratio > 1.0

Table 3 shows that improvements have been made over the No-Build condition, however, some areas of concern still exist.

Crystal Drive, I-71, Cherrywood Drive

Operation at these intersections is unchanged from the No-Build condition and the same concerns still apply.

### Intersections from Zhale Smith to KY 22 (West)

The addition of turn lanes has made a significant improvement at these intersections. In 2030 there are only two locations that are over capacity (Blakemore Lane and East Moody Lane). Additional through lanes are required to remove these deficiencies.

### KY 53 Corridor south of Zhale Smith

Although the intersections are for the most part operating at an acceptable LOS, the link segments between the intersections will operate at LOS E. This poor operation is caused by the high volumes and the inability to pass slower traffic. During the peak hours, vehicles will travel the links between intersections in long platoons at speeds well below the posted speed limit.

### **2030 Full-Build Condition**

The full-build condition assumed all the improvements made in the short-term condition were in place and a second through lane in each direction was added to KY 53 from the Kroger entrance to KY 22 (West). Table 4 shows the capacity results for the 2030 Full-Build Condition.

**Table 4 – 2030 Full-Build Condition LOS**

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Crystal Drive</b>				
<b>Eastbound</b>	C	34.6	E*	70.6
<b>Westbound</b>	D	52.8	F*	157.4
<b>Northbound</b>	B*	16.0	F*	76.2
<b>Southbound</b>	C	20.3	C	22.6
<b>Overall</b>	C	22.7	E*	64.9
<b>KY 53 @ I-71 Southbound</b>				
<b>Westbound</b>	F*	197.6	F*	217.9
<b>Northbound</b>	D*	50.6	E*	63.8
<b>Southbound</b>	F*	121.6	F*	137.6
<b>Overall</b>	F*	113.1	F*	120.0
<b>KY 53 @ I-71 Northbound</b>				
<b>Eastbound</b>	F*	92.5	F*	360.7
<b>Northbound</b>	E*	61.4	F*	336.4
<b>Southbound</b>	B	16.0	E*	62.9
<b>Overall</b>	D*	52.7	F*	245.1

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ New Moody Lane</b>				
Eastbound	C	27.8	E	58.1
Westbound	C	31.2	C	32.9
Northbound	B	13.8	C	30.0
Southbound	C	28.2	B	16.4
Overall	C	22.7	C	29.9
<b>KY 53 @ Grange Drive</b>				
Eastbound	C	25.8	D	51.8
Westbound	C	27.2	C	29.3
Northbound	A	7.8	A	4.0
Southbound	A	1.1	A	2.3
Overall	A	8.1	A	8.8
<b>KY 53 @ Cherrywood Drive (Stop Controlled)</b>				
Eastbound	F	65.1	F*	531.7
Overall	-	4.9	-	35.5
<b>KY 53 @ Kroger Entrance</b>				
Eastbound	C	26.5	C	31.9
Westbound	C	24.1	C	32.3
Northbound	A	2.9	B	17.8
Southbound	B	19.0	C	22.7
Overall	B	10.7	C	23.5
<b>KY 53 @ Zhale Smith Road</b>				
Westbound	C	27.5	C	28.8
Northbound	B	10.7	A	6.1
Southbound	A	3.0	B	15.7
Overall	B	11.1	B	12.4
<b>KY 53 @ Peak Road</b>				
Eastbound	C	27.9	C	31.7
Northbound	A	9.3	A	7.1
Southbound	B	11.5	B	11.7
Overall	B	11.4	B	13.4
<b>KY 53 @ Glen Eagles Way (Stop Controlled)</b>				
Eastbound	D	26.0	F	55.3
Overall	-	1.4	-	1.7

Approach	LOS and Average Delay (sec)			
	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
<b>KY 53 @ Blakemore Lane</b>				
<b>Eastbound</b>	B	19.0	C	31.6
<b>Westbound</b>	B	16.8	C	25.7
<b>Northbound</b>	A	8.9	B	14.2
<b>Southbound</b>	A	6.8	A	7.9
<b>Overall</b>	B	10.3	B	15.2
<b>KY 53 @ East Moody Lane</b>				
<b>Eastbound</b>	B	19.9	C	33.7
<b>Northbound</b>	B	10.0	A	7.0
<b>Southbound</b>	A	8.0	B	15.9
<b>Overall</b>	B	10.6	B	13.7
<b>KY 53 @ West KY 22</b>				
<b>Eastbound</b>	D	42.1	C	26.8
<b>Westbound</b>	B	14.4	B	13.4
<b>Northbound</b>	C	23.0	B	18.3
<b>Southbound</b>	B	10.6	B	14.2
<b>Overall</b>	C	22.3	B	17.9
<b>KY 53 @ East KY 22 (Stop Controlled)</b>				
<b>Westbound</b>	C	17.5	F	67.6
<b>Overall</b>	-	6.9	-	13.5
<b>KY 53 @ Hannah Road (Stop Controlled)</b>				
<b>Eastbound</b>	B	12.9	C	17.8
<b>Overall</b>	-	3.4	-	4.1

\* = volume/capacity ratio > 1.0

With the exception of Crystal Drive, I-71 and Cherrywood Drive, the capacity concerns in the corridor have been resolved with the Full-Build Condition.

APPENDIX C – COLLISION SITE DIAGRAMS, 2005-2007

County: OLDHAM

Route: KY-53

Mile Point: 6.642

Intersection: PARKER DR

City: LAGRANGE

From Date: JAN 01, 2007

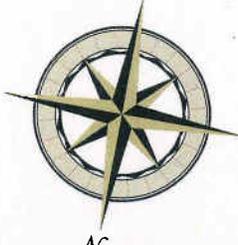
To Date: DEC 31, 2007

Page:

PNC BANK ENTRANCE

Crash Summary

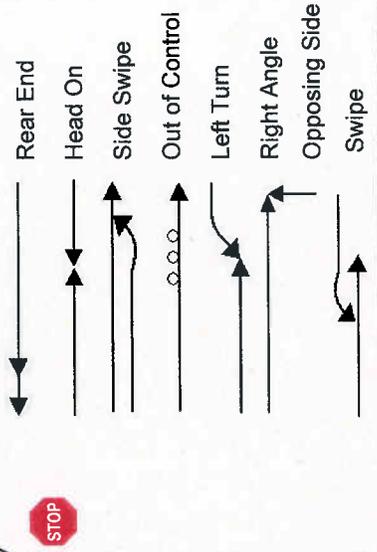
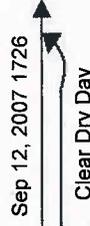
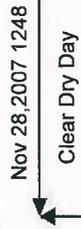
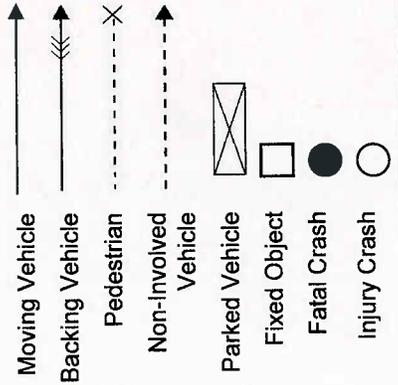
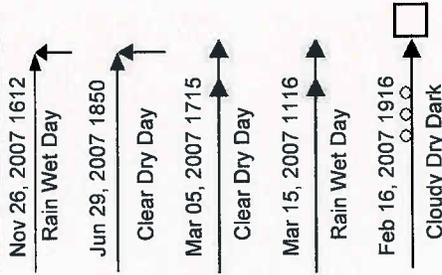
Fatal:	0
Injury:	0
Property:	7
Total:	7



Completed By: KYLE COOPER

Date: NOV 20, 2008

KY-53 1st STREET



KY-53 1st STREET

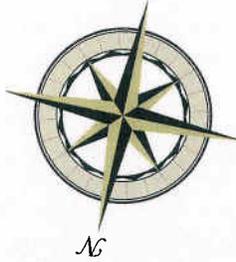
PARKER DR

PNC BANK ENTRANCE

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.642  
 Intersection: PARKER DR  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page:

Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 5  
 Total: 6



Completed By: KYLE COOPER  
 Date: NOV 19, 2008

Jul 11, 2006 1200  
 Cloudy Dry Day

Jul 02, 2006 0120  
 Clear Dry Dark

Sep 27, 2006 1948  
 Cloudy Dry Dark

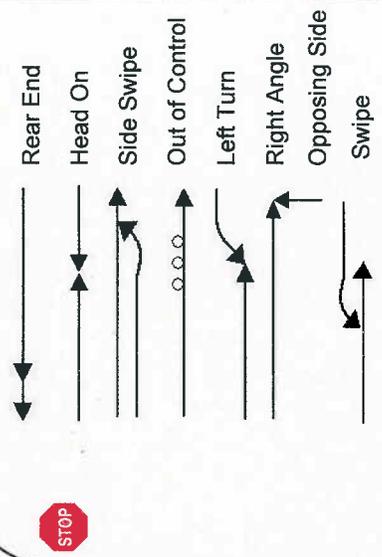
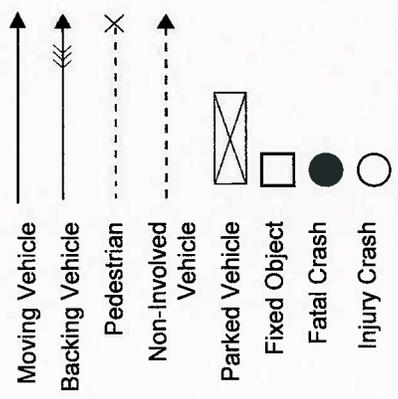
Jul 13, 2006 1200  
 Cloudy Dry Day

KY-53 1st STREET

KY-53 1st STREET

Nov 03, 2006 0841  
 Cloudy Dry Day

Aug 13, 2006 1235  
 Clear Dry Clear



PARKER DR

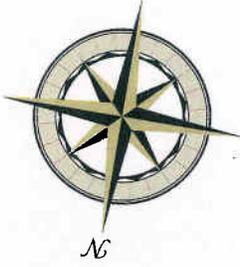
County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.642  
 Intersection: PARKER DR  
 City: LA GRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page:

PNC Bank Entrance

Crash Summary

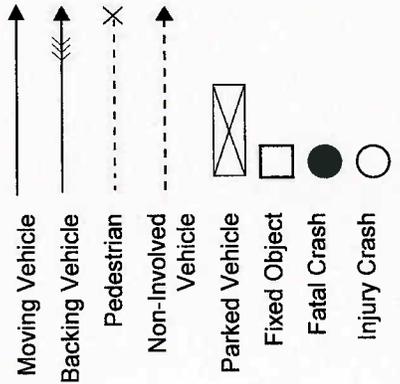
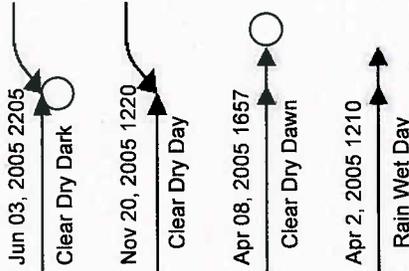
Fatal: 0  
 Injury: 2  
 Property: 5  
 Total: 7

Completed By: KYLE COOPER  
 Date: NOV 19, 2008



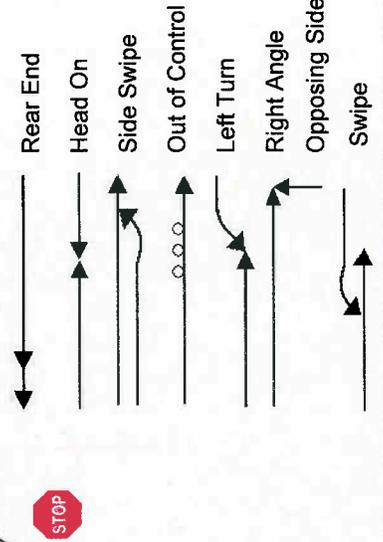
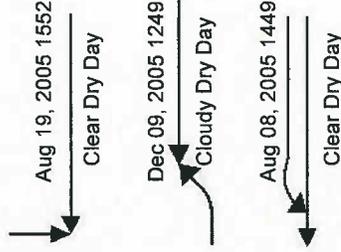
N

KY-53 1st STREET



PARKER DR

KY-53 1st STREET



E. CRYSTAL

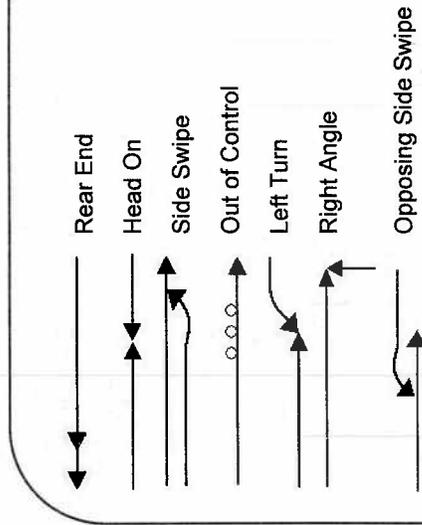
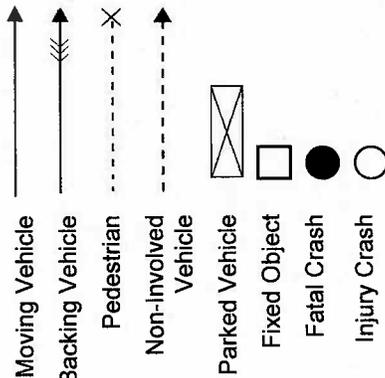
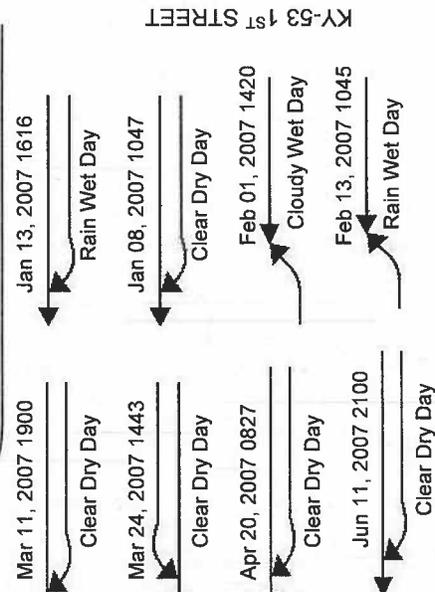
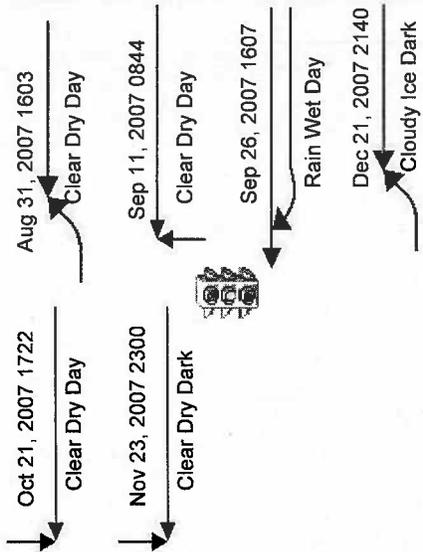
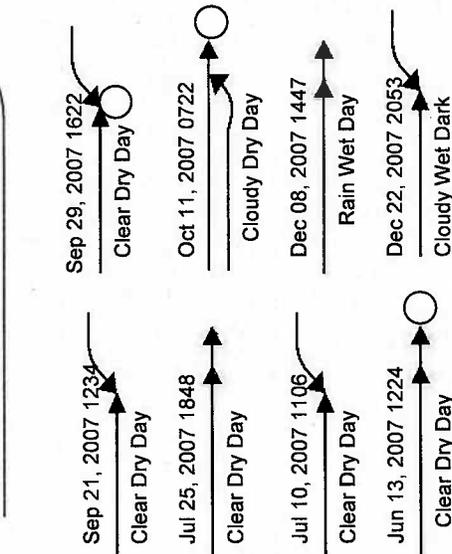
County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.524  
 Intersection: CRYSTAL DR  
 City: LAGRANGE  
 From Date: JAN 01, 2007  
 To Date: DEC 31, 2007

Page: of:

Crash Summary

Fatal: 0  
 Injury: 3  
 Property: 20  
 Total: 23

Completed By: KYLE COOPER  
 Date: NOV 21, 2008

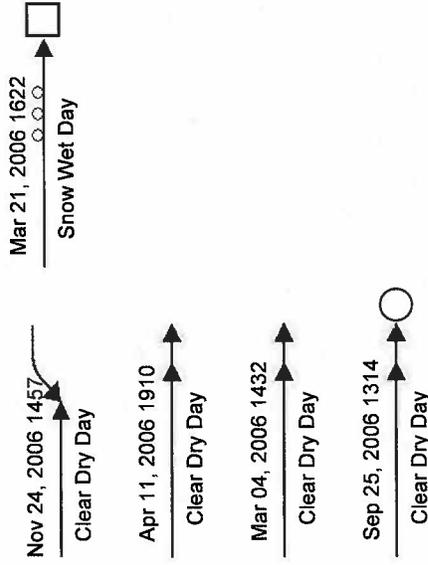


W. CRYSTAL

E. CRYSTAL

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.524  
 Intersection: CRYSTAL DR  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006

Page: of:



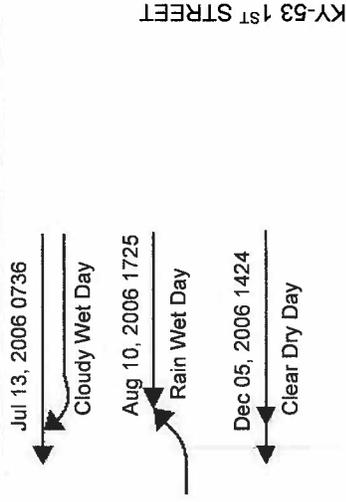
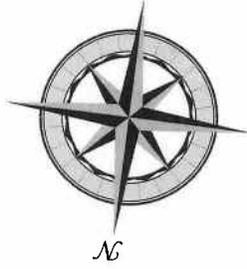
KY-53 1st STREET



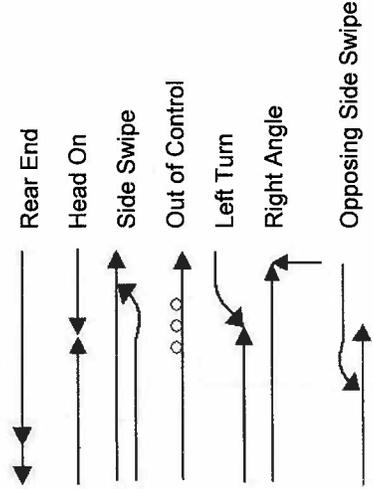
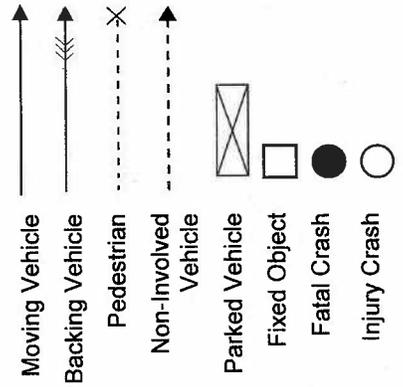
Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 7  
 Total: 8

Completed By: KYLE COOPER  
 Date: NOV 20, 2008



KY-53 1st STREET



W. CRYSTAL

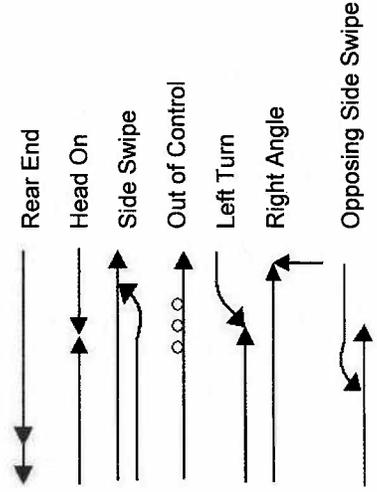
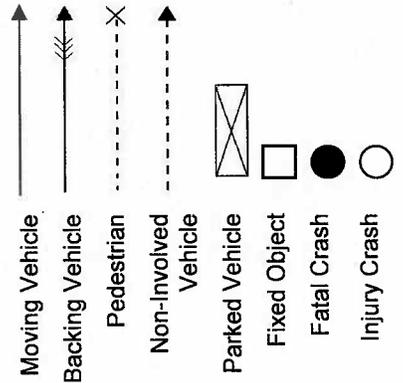
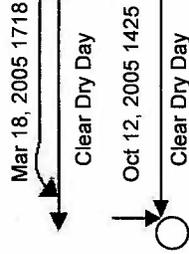
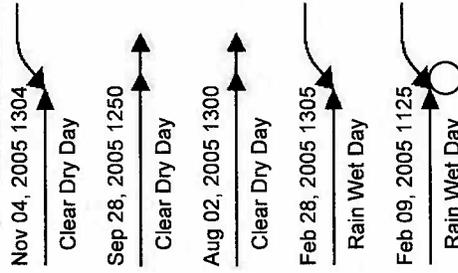
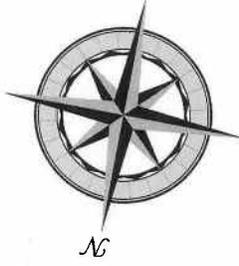
E. CRYSTAL

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.524  
 Intersection: CRYSTAL DR  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 2  
 Property: 8  
 Total: 10

Completed By: KYLE COOPER  
 Date: NOV 20, 2008



KY-53 1st STREET

KY-53 1st STREET

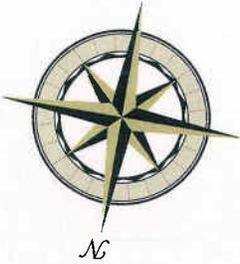


W. CRYSTAL

I-71 SB EXIT RAMP

County: OLDHAM  
 Route: KY-53 1 ST STREET  
 Mile Point: 6.438  
 Intersection: I-71 SB EXIT/ON RAMP  
 City: LAGRANGE  
 From Date: JAN 01, 2007  
 To Date: DEC 31, 2007  
 Page: of:

**Crash Summary**  
 Fatal: 0  
 Injury: 1  
 Property: 9  
 Total: 10



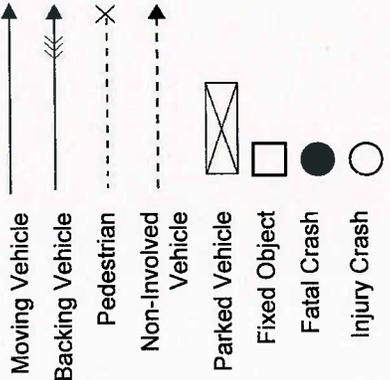
Completed By: KYLE COOPER  
 Date: NOV 21, 2008

Apr 13, 2007 1930  
 Cloudy Dry Day

Aug 28, 2007 2108  
 Clear Dry Dark  
 Jul 19, 2007 2237  
 Clear Dry Dark  
 Apr 02, 2007 2331  
 Clear Dry Dark  
 Jan 25, 2007 0740  
 Cloudy Wet Day

KY-53 1ST STREET

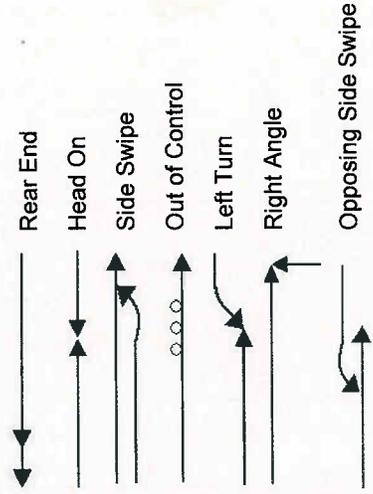
Feb 23, 2007 1920  
 Clear Dry Dark  
 [free flow ramp]



I-71 SB ON RAMP

Jul 13, 2007 1352  
 Clear Dry Day  
 Jul 27, 2007 0950  
 Clear Dry Day  
 Dec 21, 2007 1245  
 Cloudy Dry Day  
 Apr 20, 2007 1403  
 Clear Dry Day

KY-53 1ST STREET



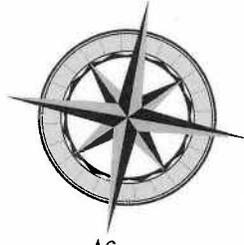
I-71 SB EXIT RAMP

County: OLDHAM  
 Route: KY-53 1 ST STREET  
 Mile Point: 6.438  
 Intersection: I-71 SB EXIT/ON RAMP  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 2  
 Property: 12  
 Total: 14

Completed By: KYLE COOPER  
 Date: NOV 21, 2008



Apr 20, 2006 1630  
 Rain Wet Day

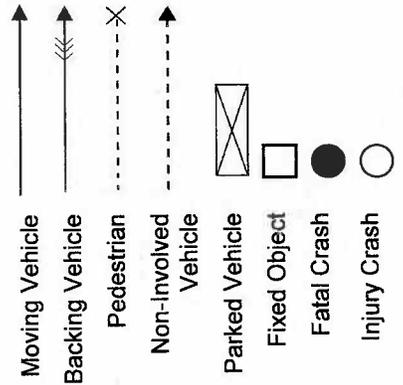
Oct 12, 2006 1720  
 Clear Dry Day

Oct 28, 2006 2021  
 Clear Dry Dark

Jul 07, 2006 1547  
 Clear Dry Day

Jan 30, 2006 0709  
 Clear Dry Dawn

Nov 11, 2007 0955  
 Cloudy Wet Day



KY-53 1st STREET



Jun 04, 2006 1855  
 Clear Dry Day

Nov 18, 2006 1158  
 Clear Dry Day

Apr 14, 2006 1242  
 Clear Dry Day

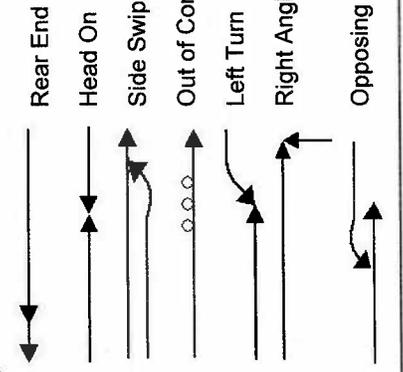
Jan 13, 2006 1132  
 Rain Wet Day

Sep 19, 2006 1735  
 Clear Dry Day

Oct 27, 2006 2031  
 Rain Wet Dark

Jun 26, 2006 1418  
 Clear Dry Day

Jun 31, 2006 1441  
 Clear Dry Day



KY-53 1st STREET

I-71 SB ON RAMP

I-71 NB ENTRANCE RAMP

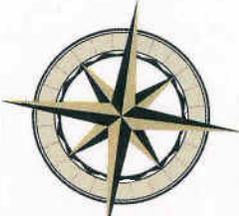
County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.249  
 Intersection: I-71 NB EXIT ON RAMPS  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

\*  
 Tractor Trailer struck front end of Vehicle in the SB left turn lane while attempting to make a left turn from NB I-71 exit ramp.

Crash Summary

Fatal: 0  
 Injury: 0  
 Property: 12  
 Total: 12

Completed By: KYLE COOPER  
 Date: NOV 24, 2008



KY-53 1ST STREET

KY-53 1ST STREET

Mar 24, 2005 1404  
 Cloudy Dry Day

Jan 17, 2005 2245  
 Clear Dry Dark

May 31, 2005 1337  
 Clear Dry Day

Jun 22, 2005 1700  
 Clear Dry Day

Nov 14, 2005 1700  
 Clear Dry Day

Dec 10, 2005 1424  
 Clear Dry Day

Jun 22, 2005 1700  
 Clear Dry Day

Nov 16, 2005 1405 \*  
 Cloudy Dry Day

Feb 24, 2005 1335  
 Snow Wet Day

- Moving Vehicle
- Backing Vehicle
- Pedestrian
- Non-Involved Vehicle
- Parked Vehicle
- Fixed Object
- Fatal Crash
- Injury Crash

- Rear End
- Head On
- Side Swipe
- Out of Control
- Left Turn
- Right Angle
- Opposing Side Swipe

Apr 13, 2005 0940  
 Cloudy Wet Day

Sep 25, 2005 1313  
 Rain Wet Day

Dec 12, 2005 1704  
 Cloudy Dry Dusk

Apr 13, 2005 0940  
 Cloudy Wet Day

I-71 NB EXIT RAMP

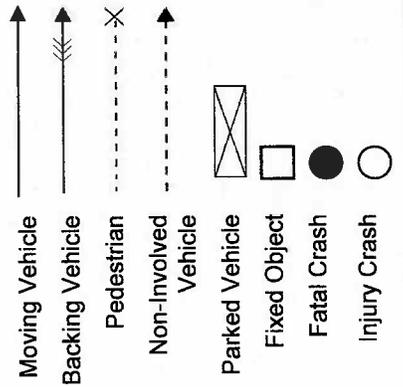
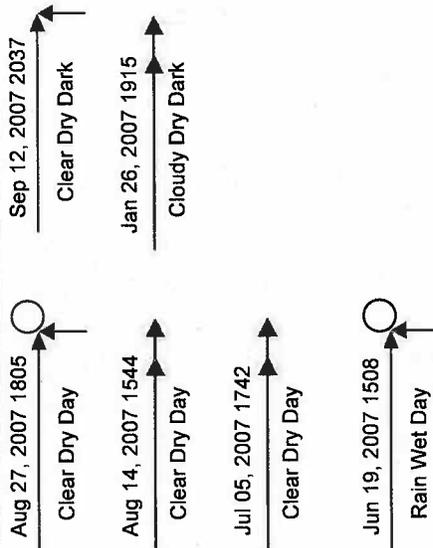
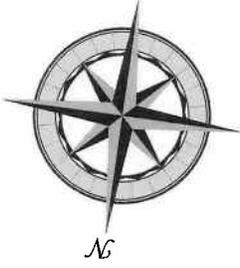


I-71 NB ENTRANCE RAMP

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.249  
 Intersection: I-71 NB EXIT ON RAMPS  
 City: LAGRANGE  
 From Date: JAN 01, 2007  
 To Date: DEC 31, 2007  
 Page: of:

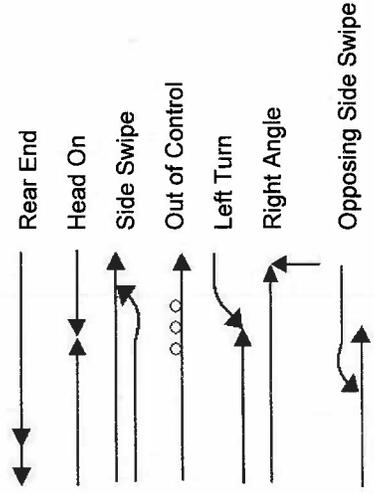
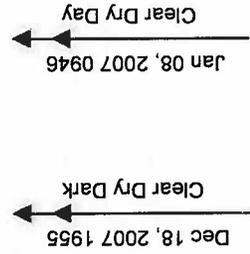
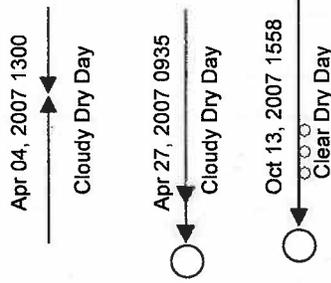
Crash Summary  
 Fatal: 0  
 Injury: 4  
 Property: 7  
 Total: 11

Completed By: KYLE COOPER  
 Date: NOV 24, 2008



KY-53 1<sup>ST</sup> STREET

KY-53 1<sup>ST</sup> STREET

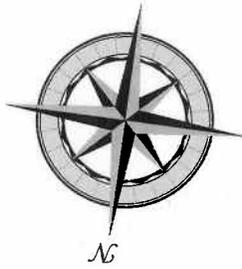


I-71 NB EXIT RAMP

I-71 NB ENTRANCE RAMP

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.249  
 Intersection: I-71 EXIT ON RAMPS  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:

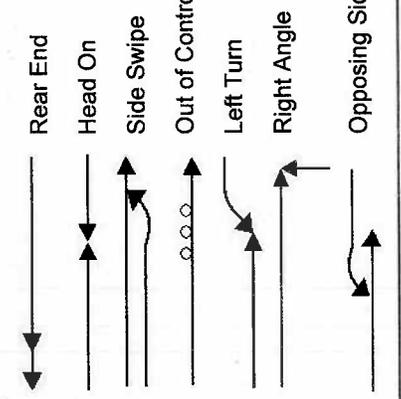
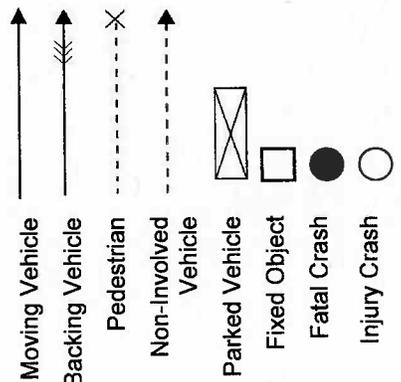
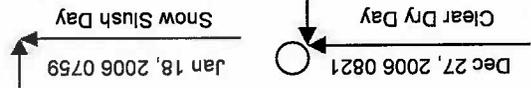
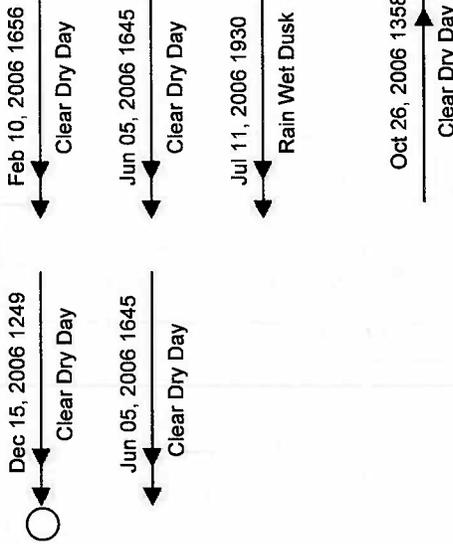
Crash Summary  
 Fatal: 0  
 Injury: 3  
 Property: 11  
 Total: 14



Completed By: KYLE COOPER  
 Date: NOV 24, 2008

KY-53 1<sup>ST</sup> STREET

KY-53 1<sup>ST</sup> STREET



I-71 NB EXIT RAMP

I-71 NB ENTRANCE RAMP

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.249  
 Intersection: I-71 NB EXIT ON RAMPS  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

\* Tractor Trailer struck front end of Vehicle in the SB left turn lane while attempting to make a left turn from NB I-71 exit ramp.

Crash Summary

Fatal: 0  
 Injury: 0  
 Property: 12  
 Total: 12

Completed By: KYLE COOPER  
 Date: NOV 24, 2008

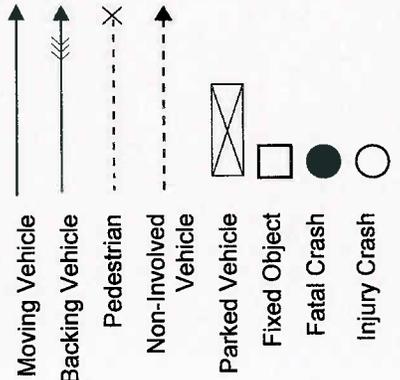


KY-53 1st STREET

KY-53 1st STREET

Nov 16, 2005 1405 \*  
 Cloudy Dry Day

Feb 24, 2005 1335  
 Snow Wet Day



Jan 17, 2005 2245  
 Clear Dry Dark

May 31, 2005 1337  
 Clear Dry Day

Jun 22, 2005 1700  
 Clear Dry Day

Nov 14, 2005 1700  
 Clear Dry Day

Dec 10, 2005 1424  
 Clear Dry Day

Jun 22, 2005 1700  
 Clear Dry Day

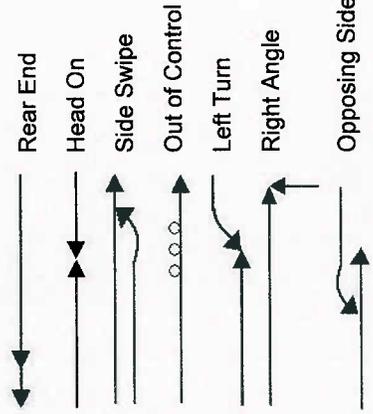
Apr 13, 2005 0940  
 Cloudy Wet Day

Sep 25, 2005 1313  
 Rain Wet Day

Dec 12, 2005 1704  
 Cloudy Dry Dusk

Apr 13, 2005 0940  
 Cloudy Wet Day

I-71 NB EXIT RAMP



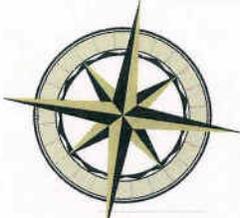
ENTRANCE TO BURGER KING

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.166  
 Intersection: NEW MOODY LANE  
 City: LAGRANGE  
 From Date: JAN 01, 2007  
 To Date: DEC 31, 2007  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 6  
 Total: 7

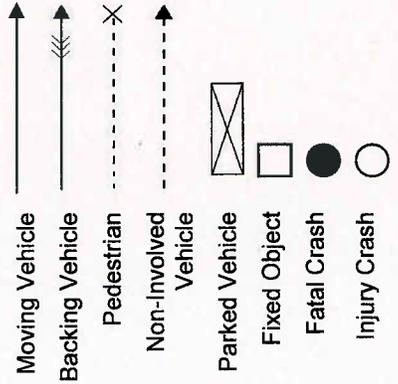
Completed By: KYLE COOPER  
 Date: NOV 25, 2008



N

KY-53

Oct 08, 2007 2147  
 Clear Dry Dark  
 Apr 24, 2007 1300  
 Clear Dry Day



Feb 16, 2007 1259  
 Clear Dry Day

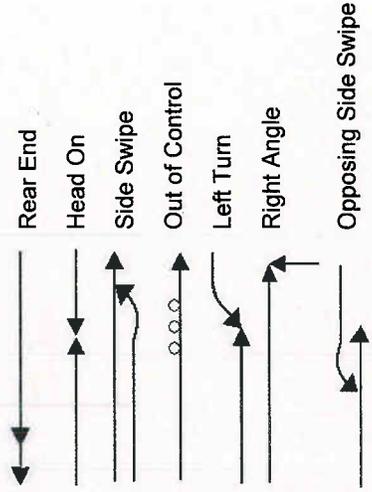
May 21, 2007 2100  
 Clear Dry Dusk

Aug 21, 2007 1730  
 Clear Dry Day

Dec 31, 2007 1513  
 Clear Dry Day

Sep 02, 2008 1731  
 Clear Dry Day

800 S. 1st



NEW MOODY LANE

KY-53

ENTRANCE TO BURGER KING

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.166  
 Intersection: NEW MOODY LANE  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 2  
 Property: 15  
 Total: 17



Completed By: KYLE COOPER  
 Date: NOV 25, 2008

Sept 01, 2006 0757  
 Rain Wet Day

May 18, 2006 1350  
 Cloudy Wet Day

Dec 14, 2006 1340  
 Clear Dry Day

Dec 05, 2006 1133  
 Clear Dry Day

Dec 09, 2006 2125  
 Clear Dry Dark

Jul 07, 2006 1430  
 Clear Dry Day

Jul 20, 2006 1045  
 Cloudy Dry Day

Oct 17, 2006 0900  
 Rain Wet Day

Sep 28, 2006 1903  
 Cloudy Wet Day

May 25, 2006 1534  
 Clear Dry Day

Jun 10, 2006 1358  
 Clear Dry Day

Jun 23, 2006 1350  
 Cloudy Dry Day

Jun 27, 2006 1608  
 Rain Wet Day

Feb 01, 2006 1708  
 Clear Dry Day

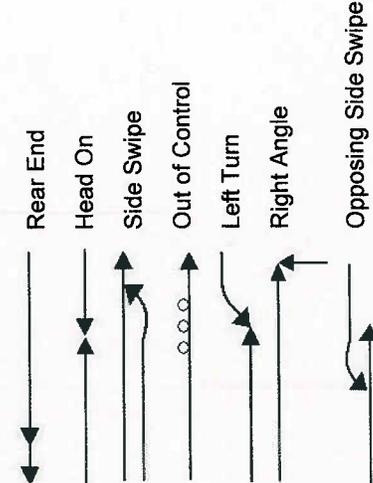
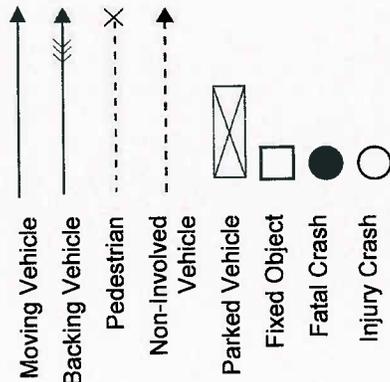
Feb 02, 2006 1805  
 Rain Wet Dark

Apr 21, 2006 0659  
 Cloudy Wet Day

May 10, 2006 1725  
 Rain Wet Day

KY-53

KY-53



NEW MOODY LANE

ENTRANCE TO BURGER KING

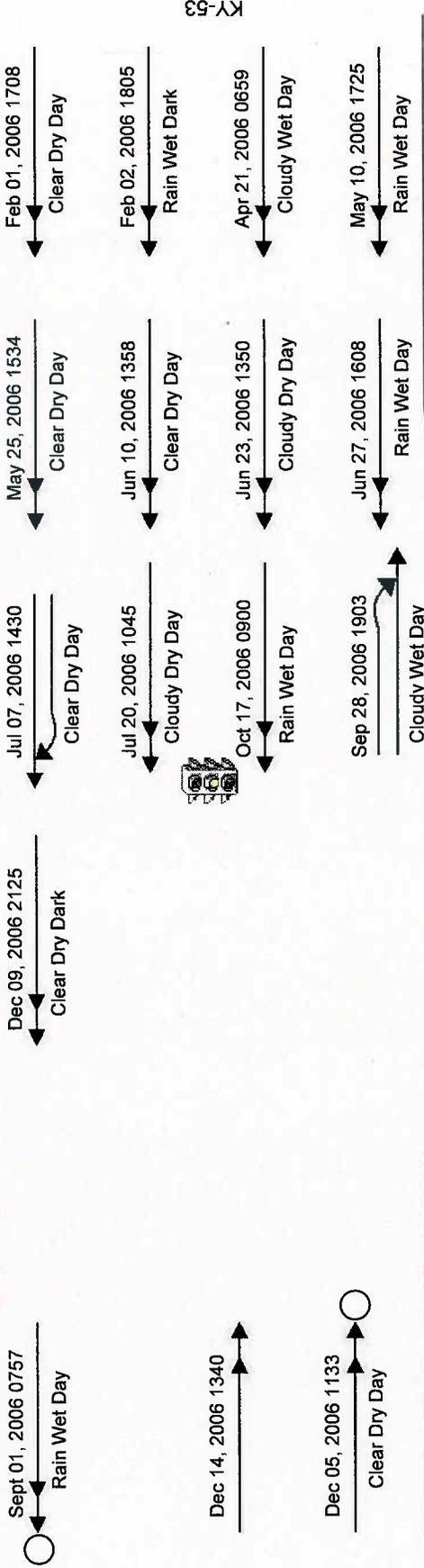
County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.166  
 Intersection: NEW MOODY LANE  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 2  
 Property: 14  
 Total: 16



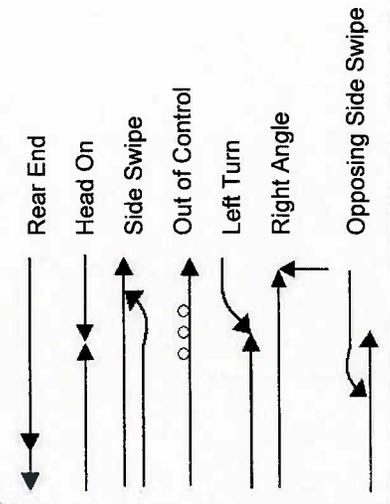
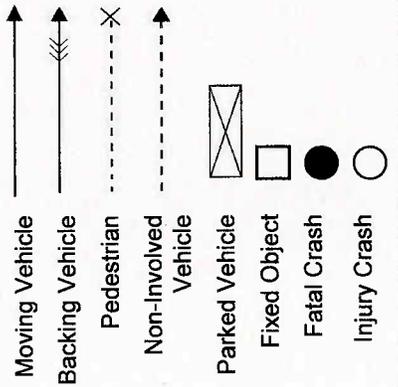
Completed By: KYLE COOPER  
 Date: NOV 25, 2008



KY-53



KY-53



NEW MOODY LANE

ENTRANCE TO BURGER KING

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.166  
 Intersection: NEW MOODY LANE  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 11  
 Total: 12



Completed By: KYLE COOPER  
 Date: NOV 25, 2008

Apr 23, 2005 1318  
 Cloudy Wet Day

Jul 01, 2005 0930  
 Clear Dry Day

Jan 01, 2005 1404  
 Clear Dry Day

May 03, 2005 0710  
 Clear Dry Day  
 [Marathon Station]

Nov 23, 2005 1833  
 Clear Dry Dark

Sep 25, 2005 1530  
 Rain Wet Day

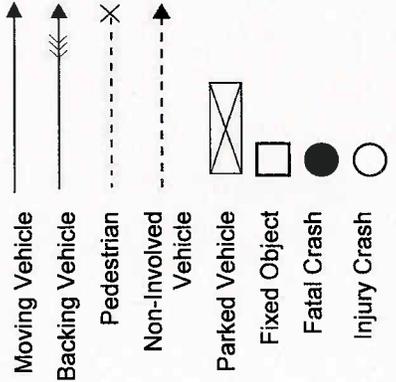
Jul 28, 2005 1815  
 Clear Dry Day  
 [Marathon Station]

Apr 29, 2005 1757  
 Rain Wet Day

Apr 22, 2005 2051  
 Rain Wet Dark

Feb 07, 2005 1921  
 Rain Wet Dark  
 [exit from Pondorosa]

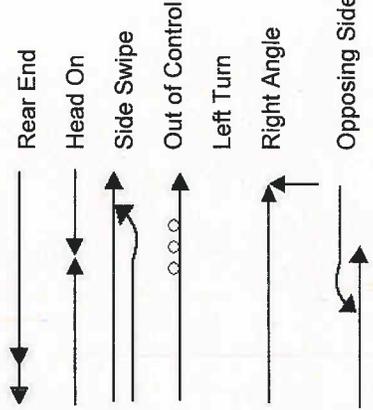
KY-53



Jun 03, 2005 1325  
 Clear Dry Day

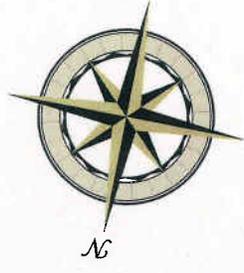
Dec 23, 2005 0846  
 Clear Dry Day

NEW MOODY LANE

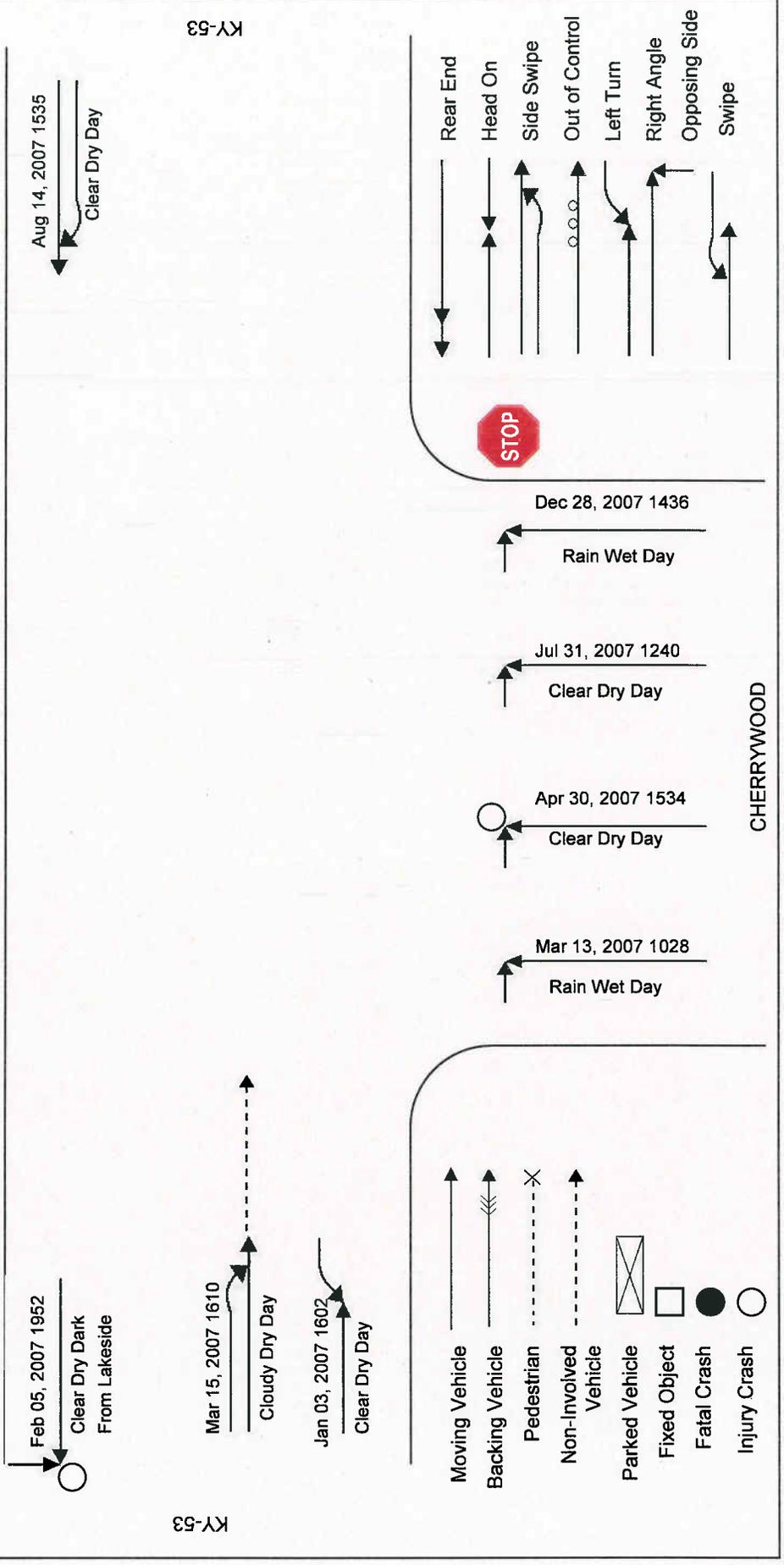


County: OLDHAM  
 Route: KY-53  
 Mile Point: 5.939  
 Intersection: CHERRYWOOD  
 City: LAGRANGE  
 From Date: JAN 31, 2007  
 To Date: DEC 31, 2007  
 Page: of:

**Crash Summary**  
 Fatal: 0  
 Injury: 2  
 Property: 6  
 Total: 8



Completed By: KYLE COOPER  
 Date: DEC 09, 2008



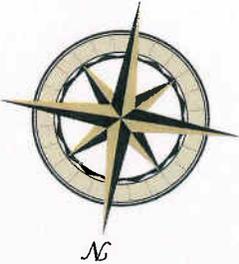
KY-53

KY-53

County: OLDHAM  
 Route: KY-53  
 Mile Point: 5.939  
 Intersection: CHERRYWOOD  
 City: LAGRANGE  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:

Crash Summary

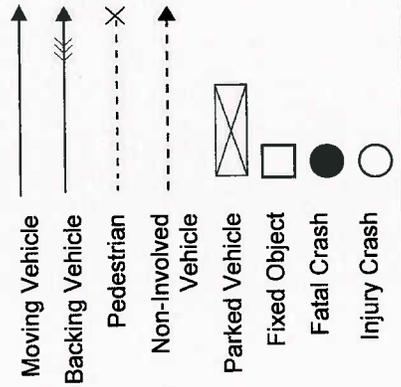
Fatal: 0  
 Injury: 1  
 Property: 3  
 Total: 4



Completed By: KYLE COOPER  
 Date: DEC 08, 2008

May 17, 2006 1537  
 Clear Dry Day  
 From Lakeside

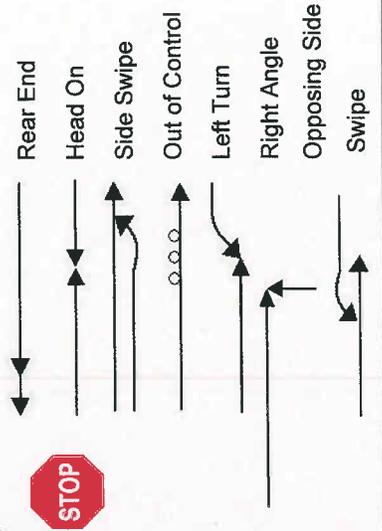
Jan 24, 2006 0636  
 Cloudy Dry Dark  
 into 1840 S. Hwy 53



May 06, 2006 1110  
 Clear Dry Day  
 Cherrywood

Sep 19, 2006 0906  
 Clear Dry Day

Feb 04, 2006 1740  
 Snow Wet Dusk



County: OLDHAM  
 Route: KY-53  
 Mile Point: 5.939  
 Intersection: CHERRYWOOD  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 0  
 Property: 5  
 Total: 5



N

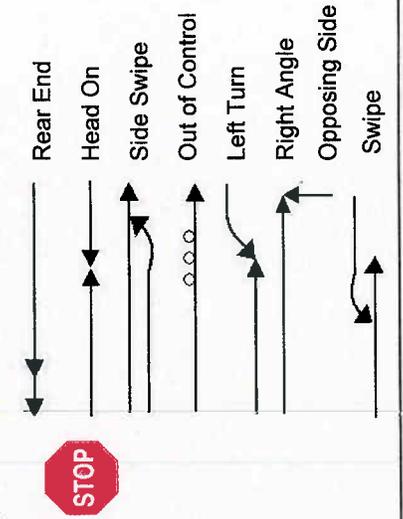
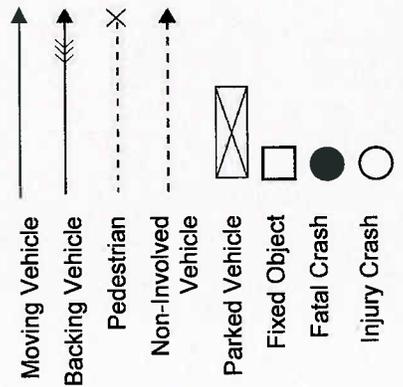
Completed By: KYLE COOPER  
 Date: DEC 08, 2008

Dec 12, 2005 1852  
 Clear Dry Dark  
 Nov 28, 2005 1945  
 Rain Wet Dark  
 Sept 02, 2005 1107  
 Clear Dry Day  
 Apr 15, 2005 1154  
 Clear Dry Day

Dec 05, 2005 1030  
 Clear Dry Dark

KY-53

KY-53



Cherrywood

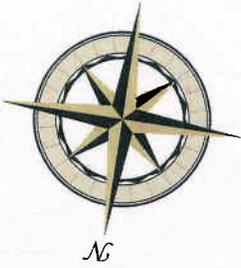
GRANGE

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.075  
 Intersection: GRANGE/WALMART  
 City: LAGRANGE  
 From Date: JAN 01, 2007  
 To Date: DEC 31, 2007  
 Page: of:

Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 0  
 Total: 1

Completed By: KYLE COOPER  
 Date: DEC 08, 2008



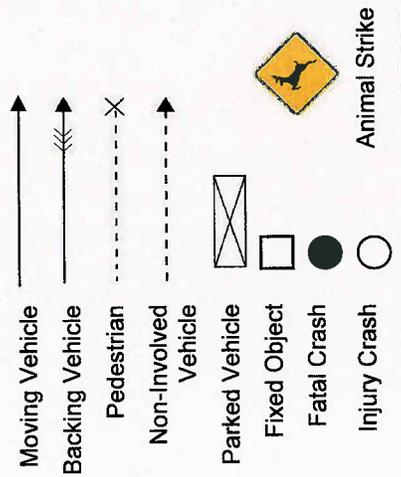
N

Dec 28, 2007 1515  
 Rain Wet Day

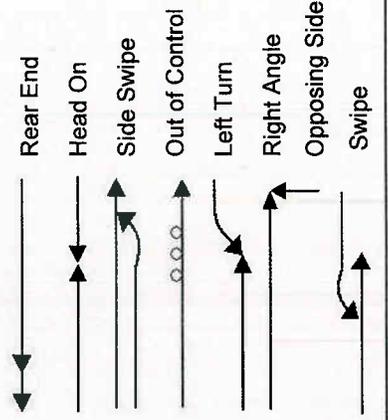


KY-53

KY-53



WALMART



GRANGE

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.075  
 Intersection: GRANGE/WALMART  
 City: LAGRANGE 8002 '61, PO  
 From Date: JAN 01, 2006  
 To Date: DEC 31, 2006  
 Page: of:



Jan 18, 2006 1516  
 Cloudy Dry Day

May 16, 2006 1937  
 Rain Wet Day

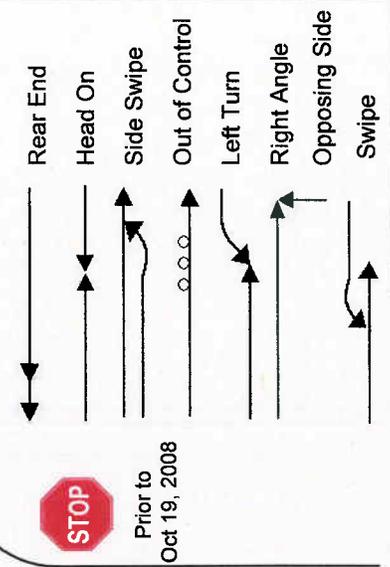
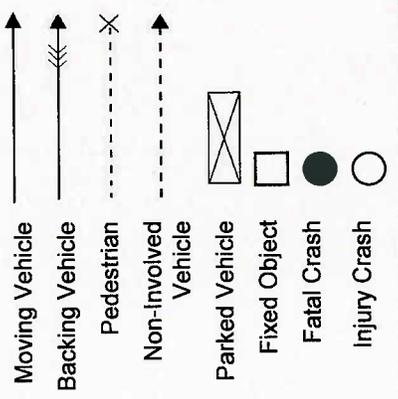
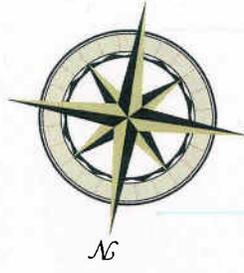
Signal turn on date  
 Oct 19, 2006

KY-53

Crash Summary

Fatal: 0  
 Injury: 2  
 Property: 2  
 Total: 4

Completed By: KYLE COOPER  
 Date: DEC 05, 2008



STOP  
 Prior to  
 Oct 19, 2008

WALMART

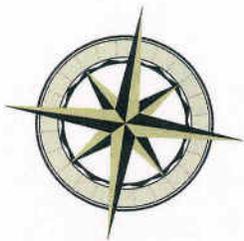
GRANGE

County: OLDHAM  
 Route: KY-53  
 Mile Point: 6.075  
 Intersection: GRANGE/WALMART  
 City: LAGRANGE  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:

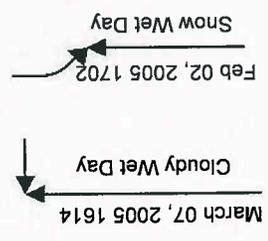
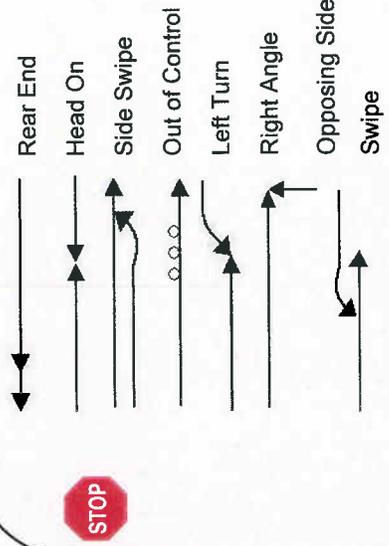
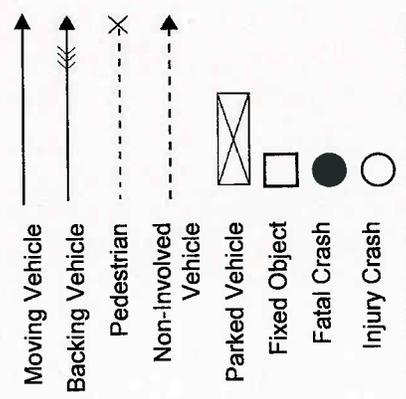
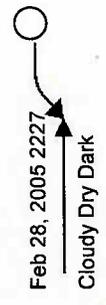
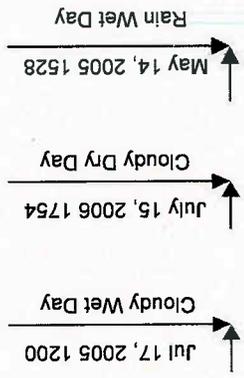


**Crash Summary**

Fatal:	0
Injury:	2
Property:	7
Total:	9



Completed By: KYLE COOPER  
 Date: DEC 04, 2008



WALMART

KY-53

KY-53

PRESTWICK DR

County: OLDHAM  
 Route: KY-53  
 Mile Point: 4.936  
 Intersection: PRESTWICK DR  
 City:

From Date: Jan 01, 2007  
 To Date: Dec 31, 2007

Page: of:



Crash Summary

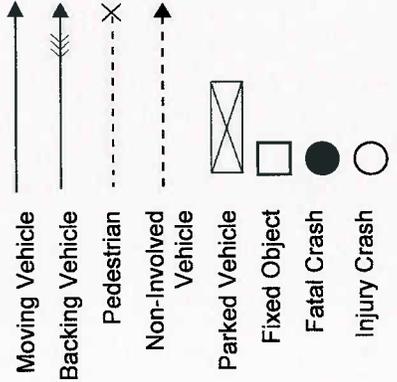
Fatal: 0  
 Injury: 2  
 Property: 3  
 Total: 5



Completed By: KYLE COOPER  
 Date: JAN 06, 2009

KY-53

Dec 21, 2007 1634  
 Cloudy Wet Day



GLENN EAGLE GOLF COURSE

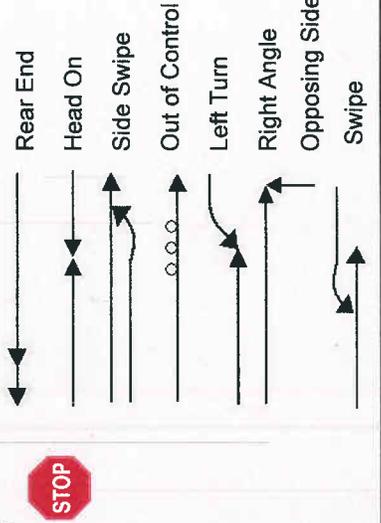
KY-53

Apr 11, 2007 1256  
 Cloudy Dry Day

Sep 15, 2007 1430  
 Clear Dry Day

Oct 08, 2007 1630  
 Clear Dry Day

Nov 12, 2007 0700  
 Clear Dry Dark

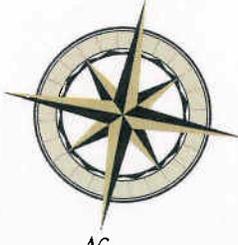


PRESTWICK DR

County: OLDHAM  
 Route: KY-53  
 Mile Point: 4.936  
 Intersection: PRESTWICK DR  
 City:  
 From Date: Jan 01, 2006  
 To Date: Dec 31, 2006  
 Page: of:

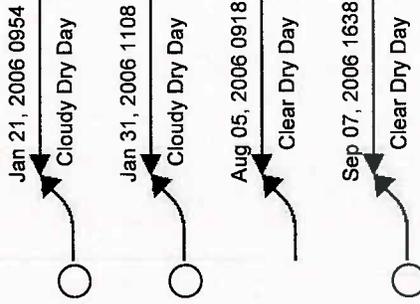
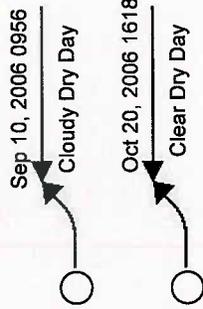
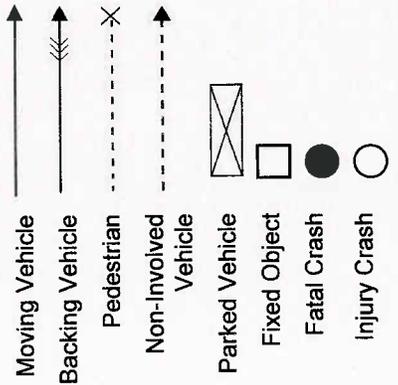


Crash Summary  
 Fatal: 0  
 Injury: 6  
 Property: 2  
 Total: 8

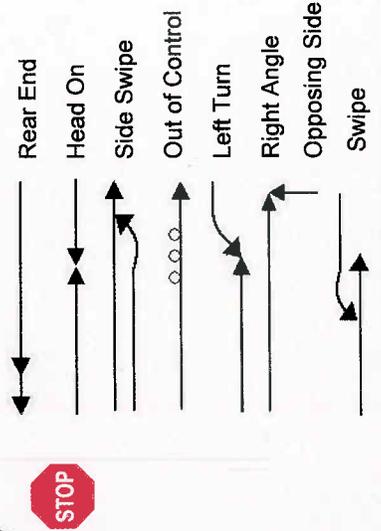
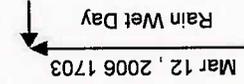


Completed By: KYLE COOPER  
 Date: JAN 06, 2009

KY-53



KY-53



GLENN EAGLE GOLF COURSE

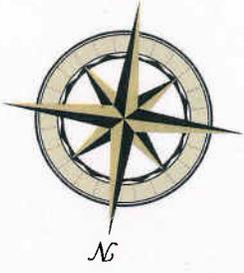
PRESTWICK DR

County: OLDHAM  
 Route: KY-53  
 Mile Point: 4.936  
 Intersection: PRESTWICK DR  
 City:  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:



Crash Summary

Fatal: 0  
 Injury: 1  
 Property: 3  
 Total: 4



Completed By: KYLE COOPER  
 Date: JAN 06, 2009

Feb 24, 2005 0945  
 Snow Wet Day

May 05, 2005 0830  
 Clear Dry Day

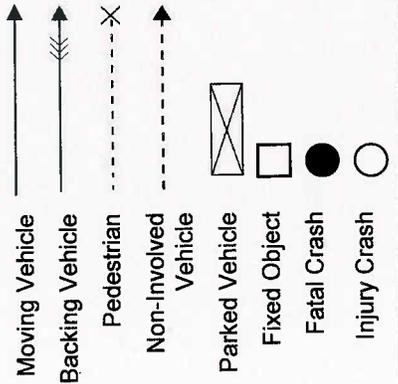
Jul 07, 2007 0753  
 Clear Dry Day

KY-53

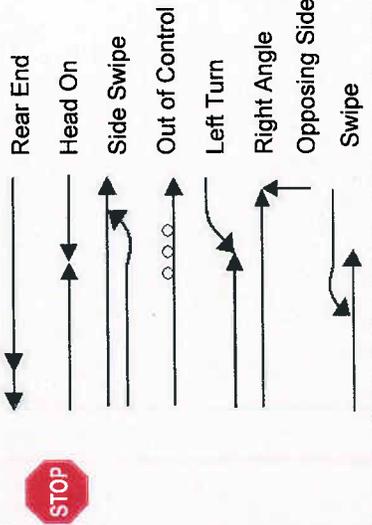
KY-53

Nov 14, 2005 1550  
 Rain Wet Day

Mar 03, 2005 1836  
 Clear Dry Day



GLENN EAGLE GOLF COURSE



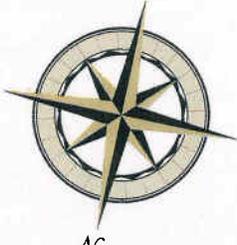
BLAKEMORE RD

County: OLDHAM  
Route: KY-53  
Mile Point: 4.487  
Intersection: BLAKEMORE RD  
City:  
From Date: JAN 01, 2007  
To Date: DEC 31, 2007  
Page: of:



Crash Summary

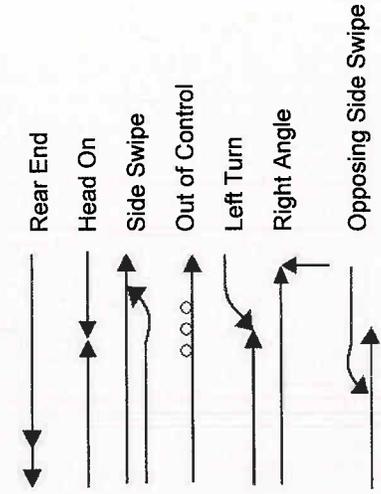
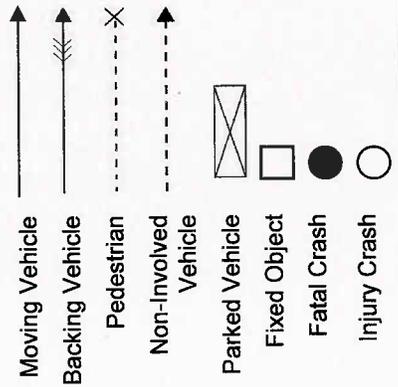
Fatal: 0  
Injury: 1  
Property: 0  
Total: 1



Completed By: KYLE COOPER  
Date: JAN 07, 2009

KY-53

KY-53



BLAKEMORE RD

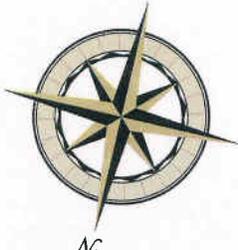
County: OLDHAM  
Route: KY-53  
Mile Point: 4.487  
Intersection: BLAKEMORE RD  
City:  
From Date: JAN 01, 2006  
To Date: DEC 31, 2006  
Page: of:



Mar 20, 2006 2130  
Clear Dry Dark

Crash Summary

Fatal: 0  
Injury: 0  
Property: 2  
Total: 2

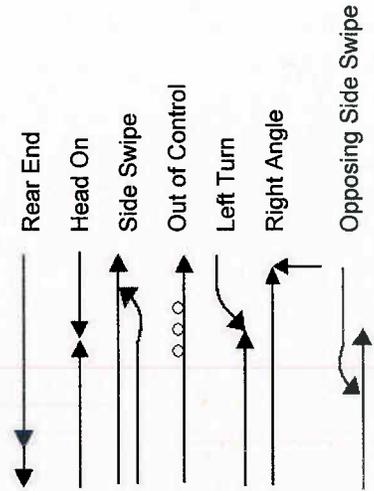
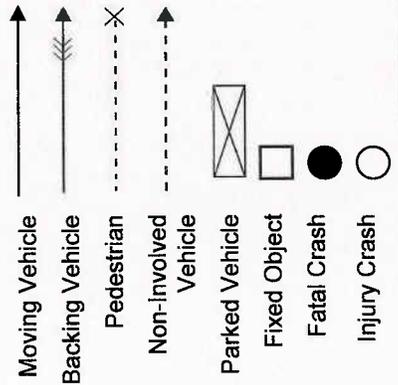


Completed By: KYLE COOPER  
Date: JAN 07, 2009

Dec 24, 2006 2109  
Clear Dry Dark

KY-53

KY-53



BLAKEMORE RD

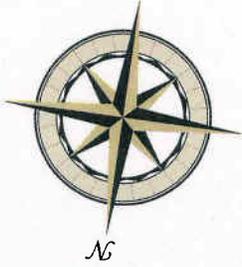
County: OLDHAM  
 Route: KY-53  
 Mile Point: 4.487  
 Intersection: BLAKEMORE RD  
 City:  
 From Date: JAN 01, 2005  
 To Date: DEC 31, 2005  
 Page: of:



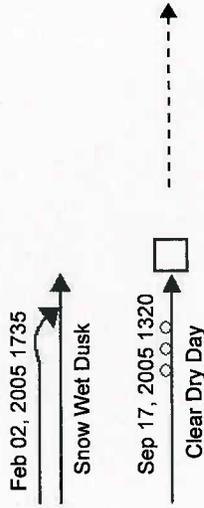
Crash Summary

Fatal: 0  
 Injury: 0  
 Property: 2  
 Total: 2

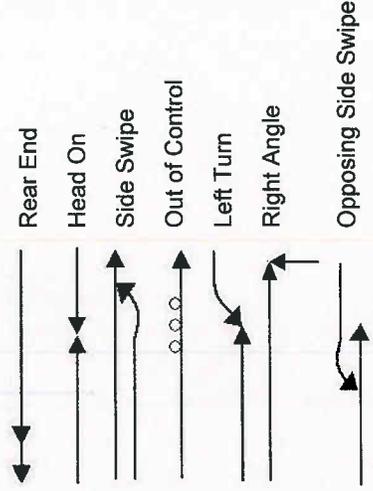
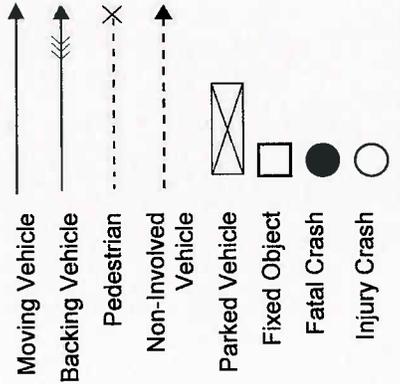
Completed By: KYLE COOPER  
 Date: JAN 07, 2009



KY-53



KY-53



APPENDIX D – THREATENED & ENDANGERED SPECIES LISTS



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

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

Endangered, Threatened, & Candidate  
 Species in   OLDHAM   County, KY

Group	Species	Common name	Legal* Status	Known** Potential	Special Comments
Mammals	<i>Myotis sodalis</i>	Indiana bat	E	P	
	<i>Myotis grisescens</i>	gray bat	E	K	
Mussels	<i>Lampsilis abrupta</i>	pink mucket	E	P	
	<i>Obovaria retusa</i>	ring pink	E	P	
	<i>Plethobasus cooperianus</i>	orangefoot pimpleback	E	P	
	<i>Plethobasus cyphus</i>	sheepnose	C	K	
	<i>Pleurobema clava</i>	clubshell	E	P	
	<i>Pleurobema plenum</i>	rough pigtoe	E	P	
	<i>Cyprogenia stegaria</i>	fanshell	E	P	
Plants	<i>Trifolium stoloniferum</i>	running buffalo clover	E	P	

**NOTES:**

\* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat

\*\*Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

**Species Information****KDFWR Maps****Public Hunting Area Maps****Game Maps****Download GIS Data****Links**

## Species Information

**Federal Threatened, Endangered, and Candidate Species observations for selected counties**Linked life history provided courtesy of [NatureServe Explorer](#).**Records may include both recent and historical observations.**[US Status Definitions](#)[Kentucky Status Definitions](#)**List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.****Selected county is: Oldham.**

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
<a href="#">Falco peregrinus</a>	<a href="#">Peregrine Falcon</a>	Aves	Oldham	PS:LE	E	<a href="#">Yes</a>	<a href="#">Reference</a>

**1 species are listed**

**Species  
Information****KDFWR Maps****Public Hunting  
Area Maps****Game Maps****Download GIS  
Data****Links**

## Species Information

State Threatened, Endangered, and Special Concern Species observations for selected quads

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

**Records may include both recent and historical observations.**

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

**List State Threatened, Endangered, and Special Concern Species observations in 2 selected quads.**

**Selected quads are: Smithfield.**

Scientific Name and Life History	Common Name and Pictures	Class	Quad	US Status	KY Status	WAP	Reference
<a href="#">Ardea herodias</a>	<a href="#">Great Blue Heron</a>	Aves	Ballardsville	N	S		<a href="#">Reference</a>
<a href="#">Passerculus sandwichensis</a>	<a href="#">Savannah Sparrow</a>	Aves	Ballardsville	N	S	Yes	<a href="#">Reference</a>

**2 species are listed.**

Species  
Information

## KDFWR Maps

Public Hunting  
Area Maps

## Game Maps

Download GIS  
Data

## Links

## Species Information

State Threatened, Endangered, and Special Concern Species observations for selected counties

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

Records may include both recent and historical observations.

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

List State Threatened, Endangered, and Special Concern Species observations in 1 selected county.

Selected county is: Oldham.

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
<a href="#">Ammodramus henslowii</a>	<a href="#">Henslow's Sparrow</a>	Aves	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Anas clypeata</a>	<a href="#">Northern Shoveler</a>	Aves	Oldham	N	E		<a href="#">Reference</a>
<a href="#">Ardea herodias</a>	<a href="#">Great Blue Heron</a>	Aves	Oldham	N	S		<a href="#">Reference</a>
<a href="#">Calephelis borealis</a>	<a href="#">Northern Metalmark</a>	Insecta	Oldham	N	T		<a href="#">Reference</a>
<a href="#">Cryptobranchus alleganiensis alleganiensis</a>	<a href="#">Eastern Hellbender</a>	Amphibia	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Dolichonyx oryzivorus</a>	<a href="#">Bobolink</a>	Aves	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Falco peregrinus</a>	<a href="#">Peregrine Falcon</a>	Aves	Oldham	PS: LE	E	Yes	<a href="#">Reference</a>
<a href="#">Junco hyemalis</a>	<a href="#">Dark-eyed Junco</a>	Aves	Oldham	N	S		<a href="#">Reference</a>
<a href="#">Lithasia verrucosa</a>	<a href="#">Varicose Rocksnail</a>	Gastropoda	Oldham	N	S		<a href="#">Reference</a>
<a href="#">Nehalennia irene</a>	<a href="#">Sedge Sprite</a>	Insecta	Oldham	N	E		<a href="#">Reference</a>
<a href="#">Nyctanassa violacea</a>	<a href="#">Yellow-crowned Night-heron</a>	Aves	Oldham	N	T	Yes	<a href="#">Reference</a>
<a href="#">Orconectes jeffersoni</a>	<a href="#">Louisville Crayfish</a>	Malacostraca	Oldham	N	E		<a href="#">Reference</a>
<a href="#">Passerculus sandwichensis</a>	<a href="#">Savannah Sparrow</a>	Aves	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Percopsis omiscomaycus</a>	<a href="#">Trout-perch</a>	Actinopterygii	Oldham	N	S		<a href="#">Reference</a>
<a href="#">Riparia riparia</a>	<a href="#">Bank Swallow</a>	Aves	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Satyrium favonius ontario</a>	<a href="#">Northern Hairstreak</a>	Insecta	Oldham	N	S		<a href="#">Reference</a>
<a href="#">Thryomanes bewickii</a>	<a href="#">Bewick's Wren</a>	Aves	Oldham	N	S	Yes	<a href="#">Reference</a>
<a href="#">Villosa lienosa</a>	<a href="#">Little Spectaclecase</a>	Bivalvia	Oldham	N	S	Yes	<a href="#">Reference</a>

18 species are listed

**Report of  
Endangered, Threatened, and Special Concern  
Plants, Animals, and Natural Communities  
for Oldham County, Kentucky**

**Kentucky State Nature Preserves  
Commission  
801 Schenkel Lane  
Frankfort, KY 40601  
(502) 573-2886 (phone)  
(502) 573-2355 (fax)**

**[www.naturepreserves.ky.gov](http://www.naturepreserves.ky.gov)**

# Kentucky State Nature Preserves Commission

## Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

### STATUS

KSNPC: Kentucky State Nature Preserves Commission status:

N or blank = none    E = endangered    T = threatened    S = special concern    H = historic    X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none    C = candidate    LT = listed as threatened    LE = listed as endangered  
SOMC = Species of Management Concern

### RANKS

GRANK: Estimate of element abundance on a global scale:

G1 = Critically imperiled	GU = Unrankable
G2 = Imperiled	G#? = Inexact rank (e.g. G2?)
G3 = Vulnerable	G#Q = Questionable taxonomy
G4 = Apparently secure	G#T# = Intraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species)
G5 = Secure	
GH = Historic, possibly extinct	GNR = Unranked
GX = Presumed extinct	GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled	SU = Unrankable	Migratory species may have separate ranks for different population segments (e.g. S1B, S2N, S4M):
S2 = Imperiled	S#? = Inexact rank (e.g. G2?)	S#B = Rank of breeding population
S3 = Vulnerable	S#Q = Questionable taxonomy	S#N = Rank of non-breeding population
S4 = Apparently secure	S#T# = Intraspecific taxa	S#M = Rank of transient population
S5 = Secure	SNR = Unranked	
SH = Historic, possibly extirpated	SNA = Not applicable	
SX = Presumed extirpated		

### COUNT DATA FIELDS

# OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county  
H - reported from the county but not seen for at least 20 years  
F - reported from county & cannot be relocated but for which further inventory is needed  
X - known to have extirpated from the county  
U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission  
801 Schenkel Lane  
Frankfort, KY 40601  
(502) 573-2886 (phone)  
(502) 573-2355 (fax)  
email: [naturepreserves@ky.gov](mailto:naturepreserves@ky.gov)  
internet: [www.naturepreserves.ky.gov](http://www.naturepreserves.ky.gov)

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky  
 Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Oldham	Vascular Plants	<i>Castanea pumila</i>	Allegheny Chinkapin	T /	G5 / S2	0	1	0	0	0
Oldham	Vascular Plants	<i>Dichanthelium boreale</i>	Northern Witchgrass	S /	G5 / S2S3	0	1	0	0	0
Oldham	Vascular Plants	<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	S /	G5 / S3	0	0	1	0	0
Oldham	Vascular Plants	<i>Heteranthera dubia</i>	Grassleaf Mud-plantain	S /	G5 / S3	2	0	0	0	0
Oldham	Vascular Plants	<i>Ranunculus ambigens</i>	Waterplantain Spearwort	S /	G4 / S3	0	1	0	0	0
Oldham	Vascular Plants	<i>Vallisneria americana</i>	Eelgrass	S /	G5 / S2S3	1	0	0	0	0
Oldham	Vascular Plants	<i>Veratrum woodii</i>	Wood's Bunchflower	T /	G5 / S2	0	1	0	0	0
Oldham	Vascular Plants	<i>Vitis labrusca</i>	Northern Fox Grape	S /	G5 / S2S3	0	1	0	0	0
Oldham	Freshwater Mussels	<i>Cyprogenia stegaria</i>	Fanshell	E / LE	G1Q / S1	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Fusconaia subrotunda</i>	Longsolid	S /	G3 / S3	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Lampsilis abrupta</i>	Pink Mucket	E / LE	G2 / S1	0	1	0	0	0
Oldham	Freshwater Mussels	<i>Lampsilis ovata</i>	Pocketbook	E /	G5 / S1	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Obovaria retusa</i>	Ring Pink	E / LE	G1 / S1	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Plethobasus cyphus</i>	Sheepnose	E / C	G3 / S1	1	0	0	1	0
Oldham	Freshwater Mussels	<i>Pleurobema plenum</i>	Rough Pigtoe	E / LE	G1 / S1	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Pleurobema rubrum</i>	Pyramid Pigtoe	E / SOMC	G2G3 / S1	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Quadrula fragosa</i>	Winged Mapleleaf	X / LE	G1 / SX	0	0	0	1	0
Oldham	Freshwater Mussels	<i>Villosa lienosa</i>	Little Spectaclecase	S /	G5 / S3S4	0	1	0	0	0
Oldham	Crustaceans	<i>Orconectes jeffersoni</i>	Louisville Crayfish	E / SOMC	G1 / S1	0	1	0	0	0
Oldham	Insects	<i>Nehalennia irene</i>	Sedge Sprite	E /	G5 / S1	1	0	0	0	0
Oldham	Insects	<i>Satyrium favonius ontario</i>	Northern Hairstreak	S /	G4T4 / S2	0	1	0	0	0
Oldham	Fishes	<i>Percopsis omiscomaycus</i>	Trout-perch	S / SOMC	G5 / S3	1	2	0	0	0
Oldham	Breeding Birds	<i>Aimophila aestivalis</i>	Bachman's Sparrow	E / SOMC	G3 / S1B	0	0	0	1	0
Oldham	Breeding Birds	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S / SOMC	G4 / S3B	2	1	0	0	0
Oldham	Breeding Birds	<i>Bartramia longicauda</i>	Upland Sandpiper	H /	G5 / SHB	0	1	0	0	0
Oldham	Breeding Birds	<i>Botaurus lentiginosus</i>	American Bittern	H /	G4 / SHB	0	0	0	1	0
Oldham	Breeding Birds	<i>Chondestes grammacus</i>	Lark Sparrow	T /	G5 / S2S3B	0	1	0	0	0
Oldham	Breeding Birds	<i>Cistothorus platensis</i>	Sedge Wren	S /	G5 / S3B	0	1	0	0	0
Oldham	Breeding Birds	<i>Dolichonyx oryzivorus</i>	Bobolink	S /	G5 / S2S3B	2	0	0	0	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky  
 Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Oldham	Breeding Birds	<i>Passerculus sandwichensis</i>	Savannah Sparrow	S /	G5 / S2S3B,S2S3 N	3	1	0	0	0
Oldham	Breeding Birds	<i>Riparia riparia</i>	Bank Swallow	S /	G5 / S3B	1	0	0	0	0
Oldham	Breeding Birds	<i>Thryomanes bewickii</i>	Bewick's Wren	S / SOMC	G5 / S3B	1	0	0	0	0
Oldham	Mammals	<i>Myotis grisescens</i>	Gray Myotis	T / LE	G3 / S2	1	0	0	0	0
<b>Oldham County Total:</b>						<b>16</b>	<b>16</b>	<b>1</b>	<b>10</b>	<b>0</b>

APPENDIX E – PUBLIC MEETING SUMMARY







## The Kentucky Transportation Cabinet Needs Your Input

Concerning improvements to KY 53 in Oldham County between KY 22 at Ballardsville and I-71  
Item No. 5-388.00

**Public Information Meeting**  
**Thursday, September 25, 2008, 6:00 – 8:00 p.m.**  
**LaGrange Presbyterian Church**  
**1901 Prestwick Drive, LaGrange, KY**

*A project overview will be given at 6:15 p.m. and 7:15 p.m.; however an informal meeting format will be used (stop by anytime between 6 and 8 p.m.)*

*This meeting is to get input from the public about improvements to KY 53 in Oldham County between KY 22 at Ballardsville and I-71. Handouts containing information about the project, comment sheets and displays will be available at the meeting. Representatives from the KY Transportation Cabinet and their consultant will be available to answer questions. Written and oral comments will be accepted during the meeting. Written comments will be accepted, and information made available, up to 15 days after the meeting at the District Five Office address listed below.*

*Written and oral comments from this meeting will become a part of the official record for the project. Once compiled, the meeting record will be made available for review and copying only after an Open Records Request has been received and approved. All Open Records Requests must be submitted to the Office of Legal Services, Transportation Cabinet Office Building, 200 Mero Street, Frankfort, Kentucky 40622.*

*In accordance with the Americans with Disabilities Act (ADA), if anyone has a disability and requires assistance, please notify **Aman Razavi**, no later than **Friday, September 19, 2008**. Please call **502-210-5400** or mail your request to the address listed below.*

*Please address any questions regarding this meeting or project to:*

**Aman Razavi, P.E.**  
**Department of Highways**  
**8310 Westport Road**  
**Louisville, KY 40242**  
**(502)210-5400**

