

**EAST KENTUCKY
POWER COOPERATIVE**

(Kentucky 59 Fayette)

**ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED
SMITH STATION CT UNITS 9 & 10
AND THE SMITH-WEST GARRARD
ELECTRIC TRANSMISSION PROJECT**

June 2007

EXECUTIVE SUMMARY

East Kentucky Power Cooperative (EKPC), headquartered in Winchester, Kentucky, is proposing to install two new combustion turbine electric generating units (CTs) at its existing J.K. Smith Electric Generating Station in southern Clark County, Kentucky. The new units would utilize natural gas as a fuel source and would each have a net electrical output of between 82 and 98 megawatts. The proposed new units are needed to provide additional electric capacity that would allow EKPC to meet its projected electrical peaking demand in the 2009-2011 period. EKPC is also proposing to construct two new electric switching stations, one at its existing J.K. Smith Generating Station and one in western Garrard County, Kentucky; and a 36 mile, 345 kilovolt electric transmission line that would extend through Clark, Madison, and Garrard Counties, Kentucky, between the proposed new switching stations. The proposed new transmission facilities are needed to provide an outlet for the additional electric power that would be generated at the J.K. Smith Station as a result of the installation of the proposed new CT units.

EKPC has requested financing from the Rural Utilities Service, an agency that administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development), for the installation and construction of the proposed new facilities. USDA Rural Development must complete an environmental analysis and prepare an Environmental Assessment (EA) in accordance with its *Environmental Policy and Procedures for Implementing the National Environmental Policy Act* (7 CFR Part 1794), prior to approving the financing for the proposed project.

EKPC originally considered the installation five CT units at its existing J.K. Smith site; however, due to the cancellation of Warren Rural Electric Cooperative Corporation's

connection to EKPC's system, the need for the additional peaking power has been partially delayed. Three of the originally proposed units have been removed from consideration in the EA, and removed from the current application for RUS financing, as the need for the units is not projected to occur until between 2012 and 2014. Additionally, the USDA Rural Development made the decision, based on the need for the proposed facilities, to combine the Smith to West Garrard 345 kV Transmission Line and the Smith CT Units 9 & 10 in one environmental assessment.

From the beginning, USDA Rural Development and EKPC incorporated the public, agencies, government officials, and other interested parties into the project through a scoping process. USDA Rural Development and EKPC initiated scoping through a number of processes including newspaper notices; mailings to land owners, public officials, Native American tribes, and responsible agencies; a public scoping meeting; and public meetings. The concerns raised during the scoping process are addressed in the alternatives, environmental impacts, and consultation sections of this document.

EKPC investigated numerous alternatives, in addition to the proposed facilities, to meet its 2009-2011 projected electrical peaking demand, including: no action; alternate sources of power; conservation/interruptible load service; renewable energy sources; non-renewable energy sources; alternate CT and switching station sites; alternate transmission line routes; placing the proposed transmission line underground; and other various electrical alternatives. Based upon the alternatives investigated, EKPC determined that the proposed facilities afforded the best approach for meeting its projected electrical peaking demand.

The environmental investigation undertaken for the proposed action, and documented in this report, examined potential impacts on air and water quality; wetlands; floodplains;

soils, including prime and statewide important farmland soils; land use; recreation; vegetation; fisheries; wildlife; threatened, endangered, or rare species; cultural resources; transportation; noise; health and safety; radio, television, and cellular phone interference; socioeconomics; environmental justice; and aesthetics. The investigation did not uncover any significant adverse environmental impacts. However, through consultation with the Kentucky Heritage Council, State Historic Preservation Office (SHPO), consulting parties, and EKPC, the USDA Rural Development has identified the following four historic sites that could potentially be adversely impacted by the alternate transmission line routes:

- Gd-66 – 2-story brick Italianate house, listed in the NRHP; and
- Ma-203 – Igo House/Greenlan Farm, potentially eligible for listing in the NRHP.

The USDA Rural Development further identified that EKPC's proposed route could potentially adversely impact two of these historic sites, Ma-203 and Gd-66. The adverse effect determinations are based on visual impacts and do not result from the physical modifications or removal of the structures. The USDA Rural Development, working with EKPC, will consult with the SHPO to identify measures that would avoid, minimize, or mitigate any potential adverse effect on these historic structures, and, as a result, no significant adverse impacts would be expected.

Based upon the information provided, the investigations conducted for this proposal, the results of those investigations, and USDA Rural Development's on its independent review of this Environmental Report (ER), USDA Rural Development has adopted the ER as its EA to meet its environmental regulations for complying with the *National Environmental Policy Act of 1969* (NEPA).

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1.0 INTRODUCTION

East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky is a non-profit electric generation and transmission cooperative headquartered in Winchester, Kentucky. EKPC provides electric power to 16 locally based electric distribution cooperatives with its power plants, peaking units, hydro power and more than 2,600 miles of transmission lines. The distribution cooperatives distribute power to over 502,000 electric consumers in 89 counties located across the central and eastern portions of Kentucky. EKPC has requested financing from the Rural Utilities Service, an agency that administers the U.S. Department of Agriculture's Rural Development programs (USDA Rural Development), for the proposed installation of two new combustion turbine electric generating units (CTs) at its existing J.K. Smith Electric Generating Station in southern Clark County, Kentucky; and to construct and maintain an electric transmission line and associated facilities in Garrard, Madison, and Clark Counties, Kentucky. The Rural Utilities Service must complete an environmental analysis and prepare an Environmental Assessment (EA) in accordance with its *Environmental Policy and Procedures for Implementing the National Environmental Policy Act* (7 CFR Part 1794), prior to approving the financing for the proposed project.

GILPIN GROUP - Environmental Consulting & Planning of Oswego, New York has been contracted by EKPC to conduct an environmental investigation and analysis, and prepare an environmental report (ER) for independent review by the USDA Rural Development. Based on USDA Rural Development's review, the ER has been accepted as the agency's EA to meet environmental regulations for complying with the *National Environmental Policy Act of 1969* (NEPA). The EA will serve as a detailed written record of the environmental analysis completed for the proposed project and will be used to determine

whether the preparation of an Environmental Impact Statement is necessary. The EA incorporates a detailed description of the proposed project, along with a discussion of the purpose, need, and alternatives considered for the proposed action. A discussion of the affected environment within the proposed project areas, the potential environmental impact of the proposed action, and the mitigation of potential environmental impacts is also included.

1.1 PROPOSED ACTION

In order to provide the additional 200 MW of peaking generating power projected to be needed for the 2009 - 2011 time period, EKPC is proposing to construct:

- Two (2) Combustion turbine (CT) units (Units 9 & 10) at its existing Smith Electric Generating Station in Clark County, Kentucky
- Approximately 36 miles of 345kV electric transmission line with related facilities in Garrard, Madison, and Clark Counties, Kentucky
- A 345 kV switching station (West Garrard Switching Station) in Garrard County, KY &
- A 345 kV switching station (J.K. Smith Switching Station) at its existing Smith Electric Generating Station in Clark County, Kentucky

The proposed transmission and switching station facilities would be necessary to support the added generation that would be produced by the new CT units at the existing J.K. Smith Generating Station. A detailed description of the proposed action is located in *Section 2.2 Description of the Proposed Action* of this document.

EKPC was originally proposing the installation of five CT units at its existing J.K. Smith Generating Station based on projections contained in its *2006 Integrated Resource Plan (IRP)*, which included Warren Rural Electric Cooperative Corporation (WRECC)

becoming a member of EKPC's system in 2008 (See Section *1.3.2 Need for the Proposed Action*). Subsequent to the filing of the 2006 IRP, WRECC decided not to join EKPC's system and to remain with TVA as its power supplier. The change in EKPC's load requirements without WRECC, necessitated an update to the power supply plan that indicated a need for less peaking capacity needed in the immediate future, resulting in the reduction of number of currently proposed units from five to two.

1.2 AGENCY ACTION

The Rural Utilities Service, an agency that administers the U.S. Department of Agriculture's Rural Development Utilities Programs (USDA Rural Development), is the agency responsible for implementing the National Environmental Policy Act (NEPA) for this federal action. USDA Rural Development has followed its policies and procedures, 7 CFR Part 1794 *Environmental Policy and Procedures for Implementing the National Environmental Policy Act*, in order to assure compliance with the Council on Environmental Quality regulations for the implementation of NEPA. In doing so, USDA Rural Development worked with the local, state, and federal agencies with expertise in their resources, as well as Native American tribes and interested consulting parties to evaluate the potential environmental impacts of the proposal. The proposed federal action related to EKPC's proposed electric project would be the granting of financing for the construction of the proposed facilities.

1.2.1 Federal Decision

The USDA Rural Development's decision to be made, based on the environmental analysis outlined in the EA, would be whether to implement the proposed action and grant the financing assistance for the construction of the proposed electric facilities.

1.2.2 Classification

The Rural Utilities Service's *Environmental Policies and Procedures*, 7 CFR Part 1794, categorizes the construction of CT Units and the electric transmission line project, as proposed in this document, as *normally* requiring an Environmental Assessment (EA) with scoping. In the early planning stages of project development, the CT Units and the transmission line were initiated as two separate projects. The electric transmission line project proceeded as an EA with scoping; however, under the discretion afforded by 7 CFR Part 1794, the USDA Rural Development decided that the proposed new CT units at the J.K. Generating Station would not require scoping. The existing J.K. Smith generating site, including the proposed site for the new units, has been extensively studied in recent years.

The existing site currently has seven CTs for which four separate EAs were prepared. In addition to the four EAs, an Environmental Impact Statement (EIS) was prepared in 1981 to study the impacts of a proposed coal fired electric generating facility located at the Smith Generating Site. The EIS was submitted to RUS for review and approval, and a Record of Decision (ROD) was issued by USDA Rural Electrification Administration for the project. However, the proposed facility was never constructed. An EIS, prepared by the U.S. Department of Energy, was also completed in 2000-2001 for a proposed coal gasification plant at the existing Smith site. The Final EIS was made available for public comment in November of 2002, and a Record of Decision to implement the project was issued in February 2003. Like, the proposed coal fired facility; the coal gasification plant was never constructed.

Due to the previous environmental and scoping efforts, the location of the proposed units within an existing site, the extensive investigations resulting from these processes, and the results of the ensuing investigations at the J.K. Smith Power Station Site, USDA Rural

Development determined that holding scoping meetings for the proposed new units (CT Units 9 & 10) would not substantially add to the environmental investigation process. As planning for the proposed projects progressed, the USDA Rural Development determined that since the proposed electric transmission project would be necessary to support the added generation that would be produced by the new CT units at the existing J.K. Smith Generating Station, the projects should be treated as one and assessed in this EA.

1.3 PURPOSE & NEED

EKPC's determination that it needs 200 MW of additional peaking generation capacity and the transmission and switching stations to support the additional generation is explained below.

1.3.1 Purpose for the Proposed Action

The purpose of the proposed action is to provide additional electric generating capacity to allow EKPC to meet projected peaking demand in the 2009-2011 period and to construct necessary transmission facilities to allow EKPC to deliver the additional electric power required during that period.

1.3.2 Need for the Proposed Action

EKPC's load forecast indicates that the total energy requirements for its system are projected to increase by 2.3 percent per year over the 2006 through 2026 period. Net winter peak demand will increase by approximately 1,800 MW, and net summer peak demand will increase by approximately 1,100 MW. During the 2006 through 2026 period, energy sales to the residential users are expected to increase by 2.4 percent per year, small commercial sales by 2.4 percent per year, and large commercial sales by 2.6 percent per year. These increases in demand will result in the need to increase the amount of power EKPC produces.

EKPC's load forecast is prepared every two years in accordance with EKPC's Rural Utilities Service approved Work Plan. EKPC prepares the load forecast by working jointly with member systems to prepare their load forecasts. The load forecast provides the basis for EKPC's *Power Supply Plan*, which in turn, provides the generation determinations necessary for EKPC to prepare its *Integrated Resource Plan*. These forecasts, projections, and plans outline EKPC's system needs.

The current *Power Supply Plan* is an update of the plan documented in EKPC's 2006 *Integrated Resource Plan* (IRP) that was approved by the EKPC Board of Directors at the October 2006 Board Meeting and was filed with the Kentucky Public Service Commission on October 21, 2006. The 2006 IRP was based on the assumption that Warren Rural Electric Cooperative Corporation (WRECC) would become a member of EKPC's system in 2008. Subsequent to the filing of the 2006 IRP, WRECC decided to remain with TVA as its power supplier. The change in EKPC's load requirements without WRECC necessitated an update to the power supply plan. The current plan was updated in February of 2007 and documents the need for approximately 200 MW (winter rating) of peaking capacity to be added from 2009 to 2011 to meet member system load requirements.

EKPC's most recent capacity additions include Smith CTs 6 & 7 in January 2005 (98 MW each, winter rating), the Gilbert coal fired unit in March 2005 (278 MW), and two landfill gas to energy plants (total 5.6 MW) that began operation in 2006 and 2007. The J.K. Smith site currently contains seven CTs with a total winter generating capacity of 842 megawatts (MW). Even with the recent additions in capacity in place, EKPC will require the additional 200 MW of power to meet the winter peak demand in 2009-2011. The addition of this capacity will help bring EKPC's reserve margin from a projected negative seven percent

for the winter 2008-2009 season to about +12 percent for the winter 2011-12 season. The two proposed CT Units 9 and 10 would aid in meeting the projected 200 MW of peaking capacity that EKPC's system will require during the 2009-2011 timeframe.

EKPC's analysis supports construction of the additional CT Units at EKPC's existing J.K. Smith Power Station. EKPC will also need sufficient transmission facilities to deliver the additional electric power generation to meet peaking demand in 2009-2011. Additional transmission is needed to avoid brownouts and power interruptions caused by insufficient generation or transmission system overloads. Four existing 138 kV transmission lines are presently connected to the J.K. Smith Substation at the generating station. These lines are currently at maximum capacity and are insufficient to accommodate delivery of any additional electric power generation at an expanded J.K. Smith Generating Station. Thus, EKPC requires additional electric transmission facilities and associated system upgrades sufficient to provide an outlet for the additional 200 MW of power to be generated at the Smith station.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 INTRODUCTION

EKPC investigated numerous alternatives to provide its needed additional electric generating capacity, as well as alternatives for the delivery of the additional electric power. The following sections offer a detailed documentation of the alternatives investigated by EKPC.

2.1.1 Additional Generation Capacity

2.1.1.1 No Action

EKPC evaluated taking *no action* to meet the projected peaking capacity requirement outlined above in Section 1.3 *PURPOSE & NEED* and determined that the *no action* alternative was not a viable alternative to the proposed project. Choosing the *no action* alternative would mean EKPC would not construct the project, as proposed, and would not take the necessary steps to meet its system's projected peaking capacity requirements. As described in Section 1.3.2 *Need for the Proposed Action*, approximately 200 MW of peaking capacity needs to be added to EKPC's system to help overcome the current capacity deficits. Should EKPC maintain the status quo and not take the steps necessary to satisfy the load growth on its system, EKPC's electric consumers would eventually start experiencing a deterioration of electric service as the electrical peak load on the system grows. If adequate generation is not available, EKPC's consumers could experience power interruptions as the peak electrical demand on its system increases. EKPC is under contractual and statutory obligation to its member distribution systems to provide adequate reliable electric power for their present and future electric energy requirements. Should EKPC choose the *no action* alternative, it would not be able to meet its obligation to its members.

2.1.1.2 Alternate Sources of Power

EKPC issued a *Request for Proposals* (RFP) in April 2004 to evaluate potential peaking alternatives. The RFP outlined EKPC's peaking capacity needed, as well as a specific time frame for the peaking capacity needs and other requirements. Proposals were received for power purchase agreements and combustion turbine/peaking equipment and/or construction contracts. Due to the lack of availability of firm transmission on the grid (firm

transmission means power purchased is guaranteed to be shipped to the intended system), EKPC could not reasonably be guaranteed to receive the power purchases. In addition, market power prices have also increased, particularly in winter, which results in higher costs. The evaluation of the RFPs supported the construction of the proposed new combustion turbines at the existing electric generating site in Clark County, Kentucky, based mostly on the results of an economic analysis of the proposals. Thus, alternate sources of power, such as market power, were not considered as viable alternatives to the proposed project.

2.1.1.3 Conservation & Interruptible Load Service

Energy conservation was considered by EKPC, but was dismissed as an option that was not viable. Energy conservation would not sufficiently reduce demand, so as to eliminate the need for the additional planned generation at the J.K. Smith Power Station and would not provide an outlet for the additional electric capacity that would be generated. As described above in Section *1.3.2 Need for the Proposed Action*, the transmission lines servicing the J.K. Smith Generating Station are currently at maximum capacity and are insufficient to accommodate delivery of any additional electric power produced at the generating station.

EKPC has in the past and continues to negotiate as much as possible with its industrial consumers concerning interruptible load service (ILS). Interruptible loads are regular daytime loads which are normally supplied by EKPC and which may be interrupted at EKPC's discretion. ILS is a volunteer program and consumers who wish to participate receive a discounted rate for the service provided. EKPC uses ILS to decrease the demand for power on EKPC's system during peak hours. Decreasing peak demand can decrease or delay EKPC's need for peaking generation, and hopefully, provide the consumer with the necessary power at a reduced cost. Based on projections, EKPC will still need to acquire additional

electrical capacity even taking into account ILS. Consequently, EKPC determined that while continuing forward with ILS is important in helping to meet its total energy requirements, ILS cannot by itself meet its energy requirements and cannot be considered as a viable alternative to the proposed project.

2.1.1.4 Renewable Energy Resources

EKPC considers renewable energy as an important component of its power supply program. Therefore EKPC has worked to develop renewable programs to offer to its consumers. The renewable programs considered by EKPC and their ability to answer the need for 200MW of peaking capacity needed for the 2009 – 2011 period are outlined below.

2.1.1.4.1 Landfill Gas to Electricity

Landfill gas is created from organic matter decaying in a landfill. This gas is captured and used to make electricity. EKPC is the first and only utility in Kentucky to operate landfill gas to electricity (LFGTE) generation. EKPC markets this renewable energy to its member systems through a program called EnviroWatts, and 14 of the 16-member systems offer the voluntary program to their residents.

Fifteen (15) MW are currently produced at EKPC's five renewable plants. Kentuckians produce 10 pounds of waste per person, per year, and this waste is deposited in approximately 32 landfills across the state. Of these landfills, approximately 20 could feasibly host a LFGTE facility creating a total approximately 100 megawatts of capacity. Sixteen (16) of these landfills are within the EKPC member co-op service territories. Collectively, these sixteen sites have the potential to produce approximately fifty (50) megawatts of capacity in the next few years.

EKPC is currently working with landfills in an attempt to acquire the rights to utilize this resource. EKPC is unable to guarantee the willingness of landfill operators to enter into a contract to produce LFGTE power on their facilities. Consequently, EKPC determined that while continuing forward with LFGTE is important in helping to meet its total energy requirements, LFGTE cannot by itself meet its energy requirements and cannot be considered as a viable alternative to the proposed project.

2.1.1.4.2 Hydroelectric Power Capacity

In a process called hydroelectric power generation, flowing water creates energy that can be used to activate a turbine that drives an electric generator to create electricity. Currently, hydroelectric power provides approximately 10% of the nation's electricity. EKPC obtains 405 megawatts of hydroelectric power from three sources under two contracts. EKPC contracts with the Southeastern Power Administration (SEPA) for two sources of hydroelectric capacity – the Cumberland Basin System and the Laurel Dam facility. EKPC is under contract with SEPA for a 20-year period starting in 1999. For the third source, EKPC contracts with Duke Energy Ohio, Inc to obtain power from the Ohio River.

No additional sources of hydroelectric power are currently available for EKPC's use. In addition, one of the three sources EKPC previously used is currently unavailable. Consequently, EKPC determined that while continuing forward with hydroelectric power is important in helping to meet its total energy requirements, hydroelectric power cannot by itself meet its energy requirements and cannot be considered as a viable alternative to the proposed project. The three available sources of hydroelectric power are as follows:

2.1.1.4.2.1 Cumberland Basin System

The first source provides for 100 MW of scheduled peaking power from the Cumberland Basin System of Projects. Under normal conditions, EKPC is guaranteed 186,900 MWh per year with a minimum monthly take of 6,000 MWh and maximum monthly take of 24,000 MWh. This energy is scheduled for delivery through the Tennessee Valley Authority system. Due to current maintenance work at the Wolf Creek and Center Hill dams, SEPA cannot supply its energy guarantee requirements. The energy schedules for all SEPA customers have been modified to reflect energy as available from the Cumberland System.

2.1.1.4.2.2 Laurel Dam

The second source provides EKPC with 70 MW of peaking capacity from the Laurel Dam facility. EKPC is guaranteed 700 MWh per week or 36,400 MWh per year. EKPC receives all energy from this facility and can call for the unit with as little as five minutes notice. EKPC is required to run the unit a minimum of 30 minutes every 48 hours and is requested not to lower the lake level more than six inches in a 24-hour period. EKPC dispatches the Laurel Dam hydro-generating unit within the EKPC control area.

2.1.1.4.2.3 Greenup Hydro

EKPC is under contract with Duke Energy Ohio, Inc. to purchase all of the available energy output from the Greenup Hydro plant located on the Ohio River. The plant is dispatched into the EKPC control area. The plant is a run-of-river hydro unit and generates electric energy based on water conditions in the Ohio River. The average output of the plant is 40 MW and the maximum generating capacity is 65 MW. EKPC's current contract runs from January 1, 2007 through December 31, 2010. EKPC has routinely purchased the output of the Greenup hydro plant for several years.

2.1.1.4.3 Wind Power

As another potential "green power" source, EKPC is conducting a Wind Power Study in southeastern Kentucky to study the feasibility of wind generation. In 2002 two wind monitoring towers were installed in southeastern Kentucky. Wind studies began in 2003. In 2004, two wind towers were relocated and a third added. By 2005, data from the wind towers indicated current wind technology limits application to high elevation sites in Kentucky.

Unfortunately, the high elevation areas in Kentucky that provide the opportunity for wind power also are home to rare species and protected areas in the Commonwealth. Permitting for wind power in these areas is anticipated to be difficult, at best. In addition, wind power would not provide the 200 MW of power needed to address EKPC's peaking power needs for 2009 – 2011. Consequently, EKPC determined that while continuing forward with wind power studies and potential wind power projects is important in helping to meet its total energy requirements, wind power cannot by itself meet its energy requirements and cannot be considered as a viable alternative to the proposed project.

2.1.1.4.4 Solar

The Kentucky Governor's Office of Energy Policy has stated that solar energy can be used to generate electricity in Kentucky with the use of Photovoltaic (PV) systems. These PV systems can provide electricity to assist with various functions such as lighting, refrigeration, and telecommunications system. Solar power would not provide the power needed to address EKPC's need for 200 MW of peaking power in 2009 – 2011. Concentrated Solar Power (CSP) is a technology that is being developed to create large amounts of electricity from solar energy. CSP programs occur primarily in the southwest, and due to Kentucky's geographic location CSP is not a viable energy source. Consequently, EKPC determined that while

continuing forward with solar panels for individual uses, solar power could not by itself meet its energy requirements. In addition, solar power is an intermittent source of electricity because it is dependent upon weather conditions and is not available for electric power generation during inclement weather, such as rainy or overcast days, as compared to the proposed CT units that would consistently be available when needed. As a result, solar power cannot be considered as a viable alternative to the proposed project.

2.1.1.5 Non-Renewable Energy Sources

EKPC uses the fossil fuels in the form of coal, natural gas, and petroleum (No. 2 fuel oil) for its electric generation needs. EKPC evaluated these non-renewable energy sources when determining the resource it would utilize to answer its peaking system needs.

2.1.1.5.1 Petroleum

Petroleum (No. 2 fuel oil) was considered as the primary fuel source for running the CT units but was eliminated from further consideration as an alternative to answering EKPC's peaking capacity needs. The use of fuel oil to fire the CT's was eliminated primarily for two reasons – increased emissions and delivery. Using fuel oil to run the CT's results in increased rates of emissions, especially particulate matter and SO₂ in relation to natural gas. Increasing rates of emissions from the units results in a greater impact to the environment and leads to greater difficulty in obtaining air permits required for operation of the units. In addition, delivery of fuel oil to the Smith Site is more difficult to accomplish than natural gas. An existing natural gas pipeline bisects the J.K. Smith Power Station, and provides a reliable, abundant supply of natural gas into the facility.

2.1.1.5.2 Coal

Burning coal to create power was also considered as an alternative source of power to respond to EKPC's peaking demand. After evaluating this resource, coal was eliminated from further consideration as an alternative to answering EKPC's peaking capacity needs for several reasons. Coal fired units answer the needs for baseload generation needs. Operating coal-fired units in order to respond to peaking demands results in inefficient operation of the units. Also, baseload generation tends to have high fixed costs and low operating costs and if EKPC were to construct coal fired base load units to respond to its peaking needs, the high fixed costs associated with those types of units result in higher costs for EKPC and its members. The need for 200 MW of peaking capacity occurs in 2009 and construction of a baseload coal-fired unit to respond to that need would not be possible in that timeframe. Therefore, coal was eliminated from consideration as the source of fuel to respond to EKPC's peaking need.

2.1.1.5.3 Natural Gas

Natural gas is the proposed fuel source for operation of the combustion turbine units. The proposed CT units would be either model 7EA or model LMS100, both manufactured by GE Energy. The CTs would be operated on natural gas and utilize dry low nitrogen oxide (NO_x) combustion systems. The use of natural gas to fire the CT units results in lower emissions than those created from burning No. 2 fuel oil as discussed in Section *2.1.1.5.1 Petroleum*. Also, delivery of natural gas into the J.K. Smith Power Station can be accomplished through an existing facility that bisects the site. Therefore, natural gas is the optimal fuel source for running the CT Units to answer EKPC's peaking needs.

2.1.1.6 Alternate Sites

EKPC considered installing the proposed new CT units at other existing generating sites within its system; however, the infrastructure for the needed CT units that exists at J.K. Smith Power Station is not in place at the other generating sites. EKPC decided to utilize this existing infrastructure and avoid duplicating these existing facilities at other sites, and, therefore, did not investigate any other alternate sites for the proposed CT units. The proposed site is located at its existing J.K. Smith Electric Generating Station in southern Clark County, Kentucky, on land that has been previously disturbed. There are currently seven other peaking units at the generating station and the infrastructure is currently in place to support the new units. The existing generating station is also located on a large tract of land owned by EKPC that is located in a remote area and which isolates the generating station from other land uses (See Section 3.0 *AFFECTED ENVIRONMENT*). EKPC also dismissed the alternative of constructing new generating units at a new, or “*green field*” site, because locating the proposed new units on undisturbed land would have more of an impact on the environment due to site preparation, installation of infrastructure, etc., as compared to the proposed location.

2.1.2 Transmission Alternatives

A number of alternatives were investigated by EKPC for the proposed electric transmission line project including *no action*, placing the line underground, electrical alternatives, alternate substation sites, and alternate routes. Based upon all the alternatives that were investigated, EKPC determined that the transmission project, as proposed, offered the most viable option for providing the outlet needed for the addition of generation at the Smith site.

2.1.2.1 No Action

Choosing the *no action* alternative would involve maintaining the status quo and not constructing the electric transmission project, as proposed. Twenty-five transmission facilities are expected to overload in 2009 and 2010 as a result of the additional generation required to meet 2009-2011 peaking demand. If additional transmission facilities are not added to address this issue, EKPC will not be able to dispatch the additional generation produced at the J.K. Smith generating site to meet the electrical demand on its system. Therefore, EKPC determined that the *no action* alternative was not a viable alternative to the proposed action.

2.1.2.2 Placing the Line Underground

Placing the proposed transmission line underground was considered by EKPC, but it was determined that this alternative was not a viable option to satisfy the need for this project. Construction of underground facilities for the large voltages required for this project would create many hurdles and difficulties that would disrupt communities, individuals, and the environment. Underground lines are not as accessible as overhead lines because underground access points, or manholes, are located on average every 2,200 feet along underground lines for the purpose of pulling the electric cable, splicing the cable together, and performing emergency restoration in the event of an outage. As a result, the manholes need to be located close to roads so that they are accessible, and the line cannot be located across remote rural areas. This results in more angles and increased length of line, as compared to overhead lines. Underground line construction is also much more disruptive to the soils, vegetation, and archaeological resources in addition to existing structures (homes, etc.), if not avoidable, that may be present in a project area, as compared to overhead type construction. A six-foot wide

trench would need to be dug at least six feet deep along the entire length of any proposed underground transmission line in order to install the line underground. Overhead line construction only requires soil disturbance at support structure locations, which involves very little soil disturbance. Additionally, the cost of underground construction is prohibitive, as compared to overhead type construction, ranging from 10 to 12 times more costly. The estimated cost of construction for the proposed overhead transmission line is \$36.78 million, as compared to \$367.8 to \$551.7 million for constructing the line underground.

2.1.2.3 Electrical Alternatives

As described above in Section 1.3.2 *Need for the Proposed Action*, EKPC is proposing the construction of two new CTs at its existing J.K. Smith Generating Station that would produce an additional 200 MW of electric generation at the generating station. The existing electric transmission lines currently serving the generating station are insufficient to accommodate the added capacity. As a result, EKPC is proposing the construction of the Smith-West Garrard Electric Transmission Project to provide an outlet for the additional generating capacity associated with the proposed new CTs.

EKPC prepared a *System Impact Study* (SIS) to evaluate the electric transmission facilities needed to provide the necessary outlets for the proposed CTs. Thirty-eight possible 345 or 138 kV electric transmission outlets were evaluated from the J.K. Smith Substation to determine their ability to prevent thermal overloads identified by the study. The screening process eliminated most of these outlet options for one of the following two reasons:

- An outlet either singularly or in combination with other outlets did not eliminate a substantial number of the thermal overloads caused by the proposed additional capacity; or
- An outlet did not provide any significant additional benefits when compared to the performance of another outlet that would be shorter and/or less expensive.

As a result of the screening analysis, it was determined that at least three 138 kV outlets from the J.K. Smith site and significant additional upgrades on the transmission system are required to accommodate the additional generating capacity. Transmission system losses would also be higher with 138 kV outlet alternatives, as compared to 345 kV outlet alternatives. A 345 kV transmission line would have capacity to accommodate additional foreseeable electric generation produced at the J.K. Smith site. For these reasons, 138 kV transmission alternatives were eliminated from further consideration for the J.K. Smith Substation.

The screening analysis determined that two of the 345 kV transmission outlet alternatives more fully resolved the transmission system problems identified, as compared to the remainder of the outlet options. These two transmission outlet options are:

1. The J.K. Smith-Tyner 345 kV line and the installation of a 345-161 kV transformer at Tyner; and
2. The J.K. Smith-West Garrard 345 kV line and a new 345 kV switching station at West Garrard connecting this line with E ON US's Brown-Pineville 345 kV circuit.

These two outlets would substantially reduce the number and severity of overloads that would be caused by the addition of new generation at the J.K. Smith site.

Three alternatives were identified that could address the two outlet options outlined above.

2.1.2.3.1 Alternative 1

Alternative 1 includes the construction of a new 345 kV switching station in the western Garrard County area (West Garrard), and the construction of a new 36 mile, 345 kV transmission line between the existing J.K. Smith Substation in Clark County and the West Garrard Switching Station. A number of existing 69 and 138 kV transmission line corridors

were also determined to be in the area, which may be able to be used for rebuild and/or co-location.

2.1.2.3.2 Alternative 2

Alternative 2 includes the addition of all facilities required at the existing Tyner Substation to terminate the proposed J.K. Smith-Tyner 345 kV line and to add the new 345-161 kV autotransformer. Additional land would be needed to construct the new 345-161 kV substation, and to connect it to the existing Tyner Substation. Included in this alternative is the construction of a new 40 to 50 mile, 345 kV transmission line between the J.K. Smith Substation and the Tyner Substation, and the addition of a 138 kV reactor at EKPC's Dale Generating Station. The area that would be traversed by this line does not appear to have any large areas of concentrated development. However, a large portion of the line would have to cross the Daniel Boone National Forest (DBNF), requiring a Special Use Permit from the U.S. Forest Service for any portion of the line on National Forest System land.

2.1.2.3.3 Alternative 3

Alternative 3 has many of the same physical issues as Alternative 2 discussed above related to the Tyner Substation Expansion and the new 345 kV line between J.K. Smith and Tyner. The primary difference is that Alternative 3 includes the construction of a 17.9 mile 138 kV transmission line between J.K. Smith and E ON US's Spencer Road Substation in lieu of the addition of a series reactor at Dale Station. Alternative 3 would also require the expansion of the Spencer Road Substation and replacement of both 138/69 kV transformers with larger units, resulting in a significant amount of work at this site.

2.1.2.3.4 Comparison of Alternatives 1, 2, & 3

All three of the alternatives described above would require significant new 345 kV transmission line construction. However, Alternative 2 and 3 would be expected to require significantly more lead time to secure an approval for the construction of the transmission line, than Alternative 1, due to the crossing of the DBNF and having to acquire a Special Use Permit from the U.S. Forest Service for the construction of the line. Alternative 2 and 3 would also be expected to have more potential impact. The transmission line located within either of these two alternate routes would be longer in length and have fewer opportunities for co-location with existing transmission lines, as compared to Alternative 1; thereby involving more land owners, having more of an effect on existing land use and natural resources located in the area, and being more costly to construct. Furthermore, Alternative 3 would require additional construction of approximately 18 miles of new 138 kV transmission line, and Alternatives 2 and 3 would require substantially more system upgrades than Alternative 1, increasing economic and environmental costs associated with the construction of the proposed new line. The West Garrard Switching Station associated with Alternative 1 is also centrally located within EKPC's system and would provide better opportunities for future expansion and support of EKPC's system than Alternatives 2 and 3. Based on the comparison of the three alternatives, Alternative 1 was determined to be the optimal transmission plan that also offers the lowest construction costs and, therefore, is being recommended for implementation by EKPC (See Table 2.1.2.3.4.a below for a summary of the comparison between the three 345 kV electric transmission outlet alternatives).

Table 2.1.2.3.4.a - Comparison of 345kV Transmission Outlet Alternatives

	Crosses DBNF – Special Use Permit Required	Approx. Miles of 345kV Line Needed	Approx. Miles of 138kV Line Needed	Reactor at Dale Needed	Co-location /Rebuild Opportunities	Summary
Alternative 1 (Proposed)	No	36	0	No	Many	This alternative requires fewer miles of ROW, does not require special use permit, and provides many opportunities to co-locate or rebuild existing facilities
Alternative 2	Yes	40-50	0	Yes	Few	This alternative requires more miles of ROW, requires a special use permit from the DBNF, requires a reactor at Dale Station, and provides few opportunities to co-locate or rebuild existing facilities
Alternative 3	Yes	40-50	18	No	Few	This alternative requires more miles of ROW, requires a special use permit from the DBNF, requires 18 additional miles of 138 kV transmission line, and provides few opportunities to co-locate or rebuild existing facilities

More detailed information pertaining to the electrical alternatives investigated for the proposed Smith to West Garrard Transmission project is contained in the report titled *Electric Alternative Analysis, Smith-West Garrard 345 kV Transmission Project*, prepared by EKPC June 2006. This report can be referred to online for further information at the USDA Rural Development’s website: <http://usda.gov/rus/water/ees/ea.htm>.

2.1.2.4 Alternate Routes

Based on the evaluation of the electrical alternatives described above (Section 2.1.2.3 *Electric Alternatives*), EKPC prepared a Macro-Corridor Study of route alternatives for the proposed construction of a new 345 kV transmission line between the proposed J.K. Smith Switching Station in Clark County, and a proposed new West Garrard Switching Station in Garrard County. In order to accomplish this task, EKPC incorporated a computer-based

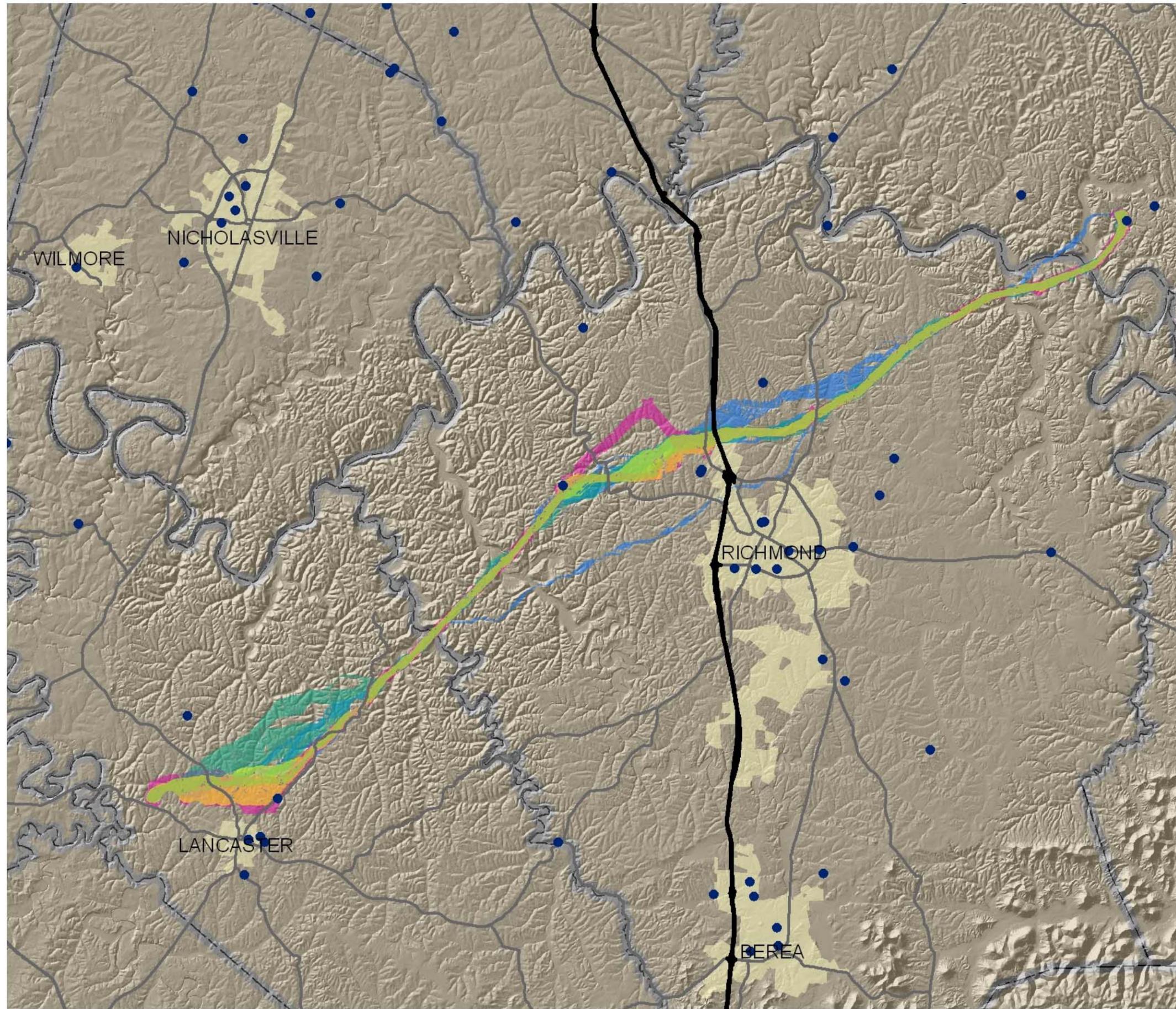
methodology that was developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC), and was calibrated by an interdisciplinary group of experts for use in Kentucky. The EPRI-GTC methodology was used as a tool to evaluate the suitability of individual land tracts, or *grid cells*, for locating the proposed transmission line. Based on the analysis of a large area located between the endpoints for the proposed new line, a macro-corridor and study area were developed that incorporated portions of Clark, Fayette, Garrard, Jessamine and Madison Counties in central Kentucky. Then, using more detailed information about the grid cells within the study area, alternate corridors were developed for further consideration. The Macro-Corridor Study was provided at the scoping meeting and can be referred to online for further information at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

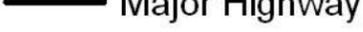
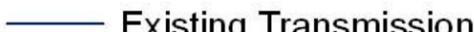
The EPRI-GTC methodology approaches corridor development by considering three broad perspectives or *environments*:

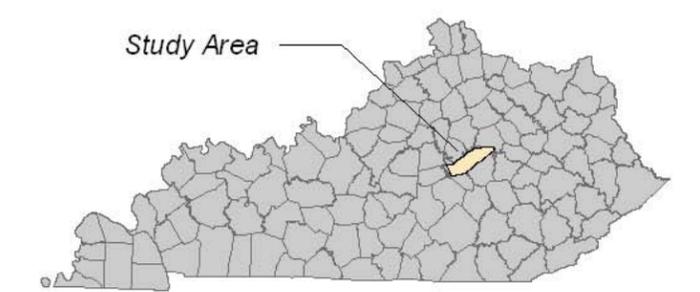
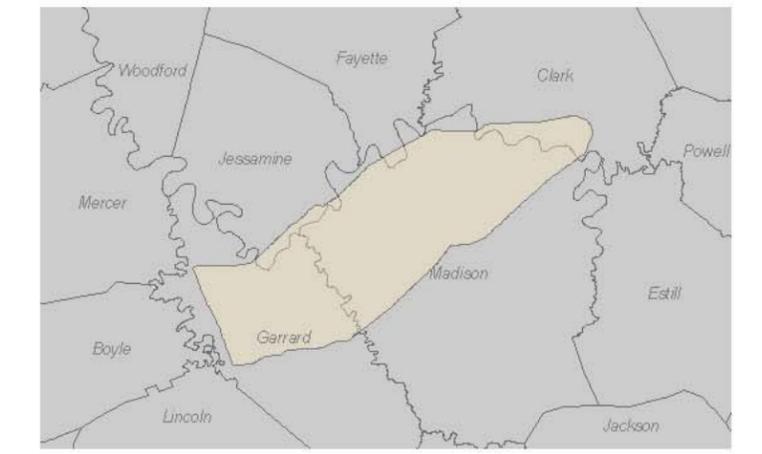
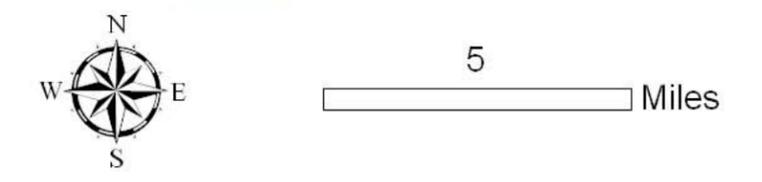
- *Built Environment* that is concerned with minimizing the impact on people and cultural resources;
- *Natural Environment* that is concerned with protecting water resources, plants and animals; and
- *Engineering Environment* that is concerned with maximizing co-location and considering physical constraints.

Using the EPRI-GTC methodology, corridors within which to route the line were developed for each of the three broad perspectives, or environments. The corridors initiate at the Smith Substation on the eastern end of the study area and generally follow EKPC's existing 138 kV Smith-Fawkes Transmission Line to the west. At Richmond, near Interstate Highway 75, the corridors widen and include other existing transmission lines as possibilities for co-location. The corridors follow the existing lines to the Newby Substation, then generally follow the route of EKPC's existing Newby-Lancaster Transmission Line, which

Alternative Corridors Map



-  Average Corridor
-  Built Corridor
-  Natural Corridor
-  Engineering Corridor
-  Major Highway
-  Major Road
-  Existing Substation
-  Existing Transmission
-  City Boundary



runs southwest to Lancaster. From here the corridors again widen and head west to the proposed West Garrard Switching Station site (See Alternative Corridors Map, page 24).

Once the corridors were developed, EKPC further refined the route of the proposed transmission line with the assistance of the EPRI-GTC routing methodology to develop a proposed final centerline. Two independent teams of transmission line professionals at EKPC then analyzed aerial photography, topographic maps, windshield survey information, and GIS data in conjunction with the EPRI-GTC model, along with information gathered as a result of the public scoping meeting, to identify Alternative Route Corridors. After developing the Alternative Route Corridor centerlines independently, the routing teams met to discuss the centerlines they developed and to combine common segments into one set of route corridor centerlines. EKPC then hosted open houses in August, one in Lancaster, Kentucky and one in Richmond, Kentucky, to solicit comments from the public regarding the Alternative Route Corridors, following which the routing team met to further refine the routes.

After taking into account public input, agency input, engineering constraints, GIS data, and professional judgment, the alternative routes were developed. Sixteen (16) alternative routes have been considered throughout the NEPA process. The alternatives considered have been labeled A, Ar, B, Br, C, Cr, D, Dr, E, Er, F, Fr, G, Gr, H, and Hr. An “r” in the route name indicates a route that would involve rebuilding segments 10 and/or 12 rather than paralleling these segments. (See Alternative Sections Identification Map, page 26). The following table shows the total length, amount of new ROW, amount of co-location/parallel, amount of rebuild, etc., for each of the alternate routes investigated.

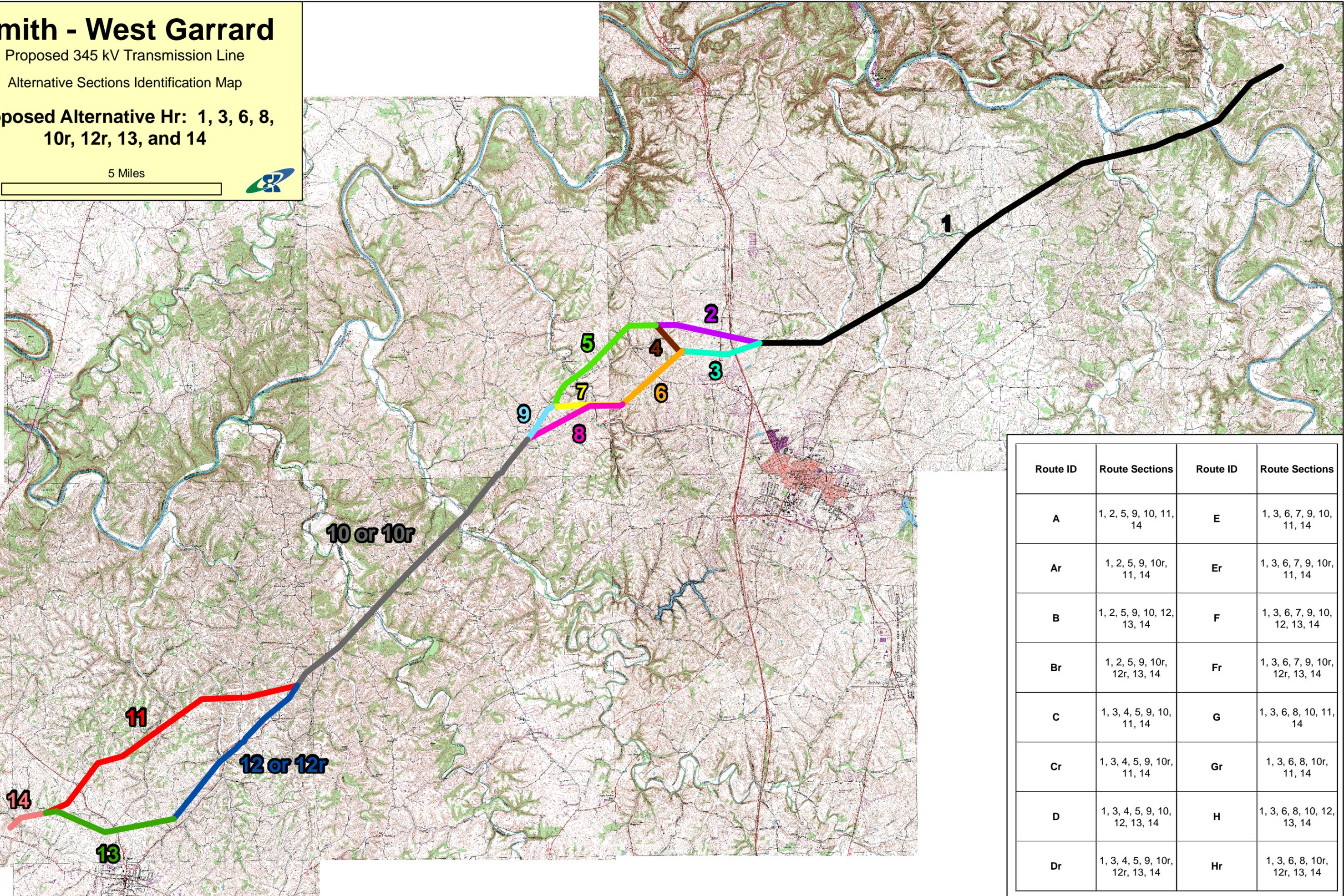
Smith - West Garrard

Proposed 345 kV Transmission Line

Alternative Sections Identification Map

Proposed Alternative Hr: 1, 3, 6, 8, 10r, 12r, 13, and 14

5 Miles



Route ID	Route Sections	Route ID	Route Sections
A	1, 2, 5, 9, 10, 11, 14	E	1, 3, 6, 7, 9, 10, 11, 14
Ar	1, 2, 5, 9, 10r, 11, 14	Er	1, 3, 6, 7, 9, 10r, 11, 14
B	1, 2, 5, 9, 10, 12, 13, 14	F	1, 3, 6, 7, 9, 10, 12, 13, 14
Br	1, 2, 5, 9, 10r, 12r, 13, 14	Fr	1, 3, 6, 7, 9, 10r, 12r, 13, 14
C	1, 3, 4, 5, 9, 10, 11, 14	G	1, 3, 6, 8, 10, 11, 14
Cr	1, 3, 4, 5, 9, 10r, 11, 14	Gr	1, 3, 6, 8, 10r, 11, 14
D	1, 3, 4, 5, 9, 10, 12, 13, 14	H	1, 3, 6, 8, 10, 12, 13, 14
Dr	1, 3, 4, 5, 9, 10r, 12r, 13, 14	Hr	1, 3, 6, 8, 10r, 12r, 13, 14

Table 2.1.2.4.a – Alternate Route Comparison

Alternate Routes	A	B	C	D	E	F	G	H
Total No. of Miles	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Total No. of Acres	649	658	653	663	642	651	639	648
Acres of Clearing	132	131	133	132	140	139	133	131
Percentage of Clearing	20.3	19.9	20.4	19.9	21.8	21.4	20.8	20.2
Miles of New ROW (Greenfield)	12.0	8.4	10.7	7.1	11.9	8.3	12.6	9.0
Miles of Collocation	23.7	27.8	52.2	29.3	23.4	27.5	22.5	26.6
Miles of Rebuild	0	0	0	0	0	0	0	0
Miles of Single Circuit	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Miles of Double Circuit	0	0	0	0	0	0	0	0

(Table 2.1.2.4.a – continued)

Alternate Routes	Ar	Br	Cr	Dr	Er	Fr	Gr	Hr
Total No. of Miles	35.7	36.2	35.9	36.4	35.3	35.8	35.1	35.6
Total No. of Acres	648	658	653	662	642	651	639	648
Acres of Clearing	108	100	109	101	115	108	109	101
Percentage of Clearing	16.7	15.2	16.7	15.3	17.9	16.6	17.1	15.6
Miles of New ROW (Greenfield)	12.0	8.4	10.7	7.1	11.9	8.3	12.6	9.0
Miles of Collocation	15.8	15.8	17.3	17.3	15.5	15.5	14.8	14.8
Miles of Rebuild	7.9	12.0	7.9	12.0	7.9	12.0	7.7	11.8
Miles of Single Circuit	27.8	24.2	28.0	24.4	27.4	23.8	27.4	23.8
Miles of Double Circuit	7.9	12.0	7.9	12.0	7.9	12.0	7.7	11.8

The EPRI-GTC Route Evaluation Model applies a statistical comparison to alternative routes based on predefined weighted criteria that focuses on the built, natural, and engineering environment. In order to calibrate the EPRI-GTC methodology for use in Kentucky, a siting model was developed using data collected from a group of Kentucky stakeholders during a workshop conducted in February 2006. The workshop was conducted and the model was developed and tested by a project team of independent experts. Stakeholders at the workshop represented a range of interests from around the state, such as environmental concerns, historic preservation, homeowners associations, agricultural groups and government agencies, as well as EKPC personnel and representatives of other utilities. The resulting model

includes data layers, features, layer weights and suitability values that are specific to Kentucky.

Numbers between 1 and 9 were used to represent degrees of suitability, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line. These values are described in the EPRI-GTC Project Report (which can be made available upon request) as follows:

- Areas that have High Suitability for an Overhead Electric Transmission Line (1, 2, 3) - These are areas that do not contain known sensitive resources or physical constraints, and therefore should be considered as suitable areas for the development of corridors.
- Moderate Suitability for an Overhead Electric Transmission Line (4, 5, 6) - These are areas that contain resources or land uses that are moderately sensitive to disturbance or that present a moderate physical constraint to overhead electric transmission line construction and operation. Resource conflicts or physical constraints in these areas can generally be reduced or avoided using standard mitigation measures.
- Low Suitability for an Overhead Electric Transmission Line (7, 8, 9) - These are areas that contain resources or land uses that present a potential for significant impacts that cannot be readily mitigated. Locating a transmission line in these areas would require careful siting or special design measures. Note that these areas can be crossed but it is not desirable to do so if other alternatives are available.

The EPRI-GTC methodology recognizes it is prohibitive to locate overhead transmission lines on or around some features, because of physical constraints or permitting delays. These areas are termed “avoidance areas” because the methodology seeks to avoid entering them, *if possible*. Features that constitute avoidance areas were determined by the Kentucky stakeholder groups and are listed in red in Figure 3. One of the first steps in implementing the EPRI-GTC methodology is identifying avoidance areas on the Study Area surface to avoid locating transmission in those areas, *if possible*.

Three top routes emerged from this comparison, which were analyzed in the final step of the EPRI-GTC routing methodology by applying expert judgment. This was accomplished by reviewing select issues on each of the routes and assigning them a rating of low, medium,

or high. The categories of expert judgment include visual, community, rights-of-way schedule, construction/maintenance accessibility, and regulatory issues, as well as issues related to impacts on cultural/historic resources. Based upon the impact scores in the expert judgment process, EKPC determined that alternate route Hr is the most favorable of the alternate routes investigated and is recommending this alternate route for the proposed construction of the new transmission line.

For more detailed information regarding the development of the Average Alternative Corridor, refer to EKPC's *Macro-Corridor Study, Smith to West Garrard 345-kV Transmission Line*, June 2006, available online at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>. EKPC's *Selection of Preferred Route, Smith to West Garrard 345 kV Transmission Project*, December 2006 at this same website can also be referred to for more detailed information regarding the route selection process.

2.1.3 Alternate Switching Station Sites

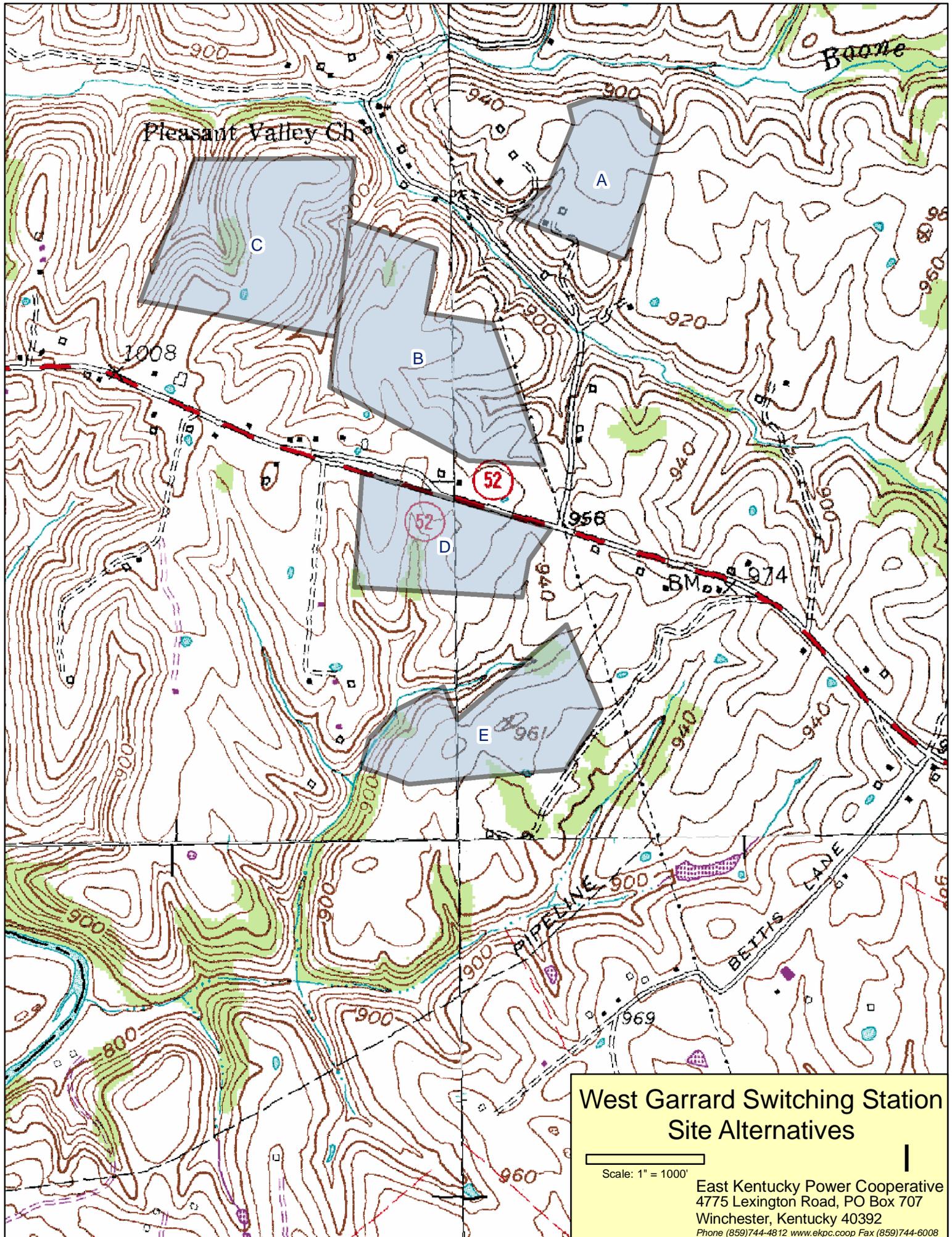
EKPC considered 11 alternate sites for the construction of the proposed West Garrard Switching Station. All of these sites are located within Garrard County and are located in the general area the line needs to connect into E ON US's existing 345kV transmission line. The majority of these alternate sites were eliminated early in the evaluation process. Most of the alternate sites located to the north of the proposed site were eliminated from consideration due to congestion and development (homes, subdivisions, etc) associated with State Route 27 and Lake Herrington that would limit further expansion of the sites. Hilly terrain of the area also limited the size of the sites to the north, as well as access to the sites. Most of the sites located to the south of the proposed site were excluded from further evaluation due to congestion in the vicinity of the city of Lancaster. Locating the proposed switching station to

the south of the proposed site would also unnecessarily add to the length of the proposed new transmission line, thereby affecting more property owners, as compared to the proposed site.

Of the 11 alternate sites that were initially considered for the proposed new West Garrard Switching Station, five sites were investigated in further detail. One of these five sites is located directly west of the proposed site, approximately 1,000 feet north of State Route 52 (See Site C, West Garrard Switching Station Site Alternatives Map, page 31). However, upon further investigation, this site was determined not to be large enough for the intended use since the terrain in the immediate area would have required extensive grading. This site was also determined to be further away from the existing transmission line, as compared to the other alternate sites that were evaluated, and would have required more transmission line construction, as well as affect more property owners. As a result, this alternate site was eliminated from further consideration.

EKPC also evaluated an alternate site located south of the proposed site on the southern side of State Route 52, approximately 1,000 to 2,000 feet from the road (See Site E, West Garrard Switching Station Site Alternatives Map, page 31). The shape of this alternate site was determined not to be conducive for the intended use and the site was not favorably located for the construction of the proposed new transmission line due to development in the area.

Another alternate site investigated for the proposed new switching station is located south of the proposed site, immediately adjacent to the southern side of State Route 52 (See Site D, West Garrard Switching Station Site Alternatives Map, page 31). This site was eliminated from consideration because the property owner was not willing to sell and due to engineering design constraints. The site was determined not to be large enough for the



West Garrard Switching Station Site Alternatives

Scale: 1" = 1000'

East Kentucky Power Cooperative
4775 Lexington Road, PO Box 707
Winchester, Kentucky 40392
Phone (859)744-4812 www.ekpc.coop Fax (859)744-6008

intended use and the proposed new line would have to cross below the existing transmission line in order to connect to the site.

EKPC also investigated a site approximately 1,000 feet northeast of the proposed site (See Site A, West Garrard Switching Station Site Alternatives Map, page 31). This site was initially eliminated because EKPC determined that it was within close proximity to an historic structure that was eligible for inclusion in the *National Register of Historic Places*. However, it was later determined that the structure had been razed by the property owner. As a result, EKPC reexamined the site but determined that it was not large enough for the intended use. The site also does not have good access because it is not located along a road and would have required a fairly long access road involving a number of property owners in order to secure access.

EKPC is recommending the proposed switching station site for the construction of the proposed new West Garrard Switching Station (See Site B, West Garrard Switching Station Site Alternatives Map, page 31) because the site is large enough for the intended use and has good access from State Route 52. The site is also located within very close proximity to the existing transmission line requiring minimal line construction to connect the new station to the existing line. Additionally, the initial evaluations of the site indicated minimal effects could be expected to the environment. The landowner was also willing to sell the property for a reasonable price.

Alternate sites were not investigated for the proposed J.K. Smith Switching Station because this switching station is being proposed for location on industrial land currently owned by EKPC and associated with the J.K. Smith Generating Station. The site for this

switching station has also been graded as a result of previous construction activity at the generating station and would require minimal site preparation.

2.2 DESCRIPTION OF PROPOSED ACTION

The proposed action is to construct, operate and maintain CT Units 9 & 10 and 345kV Smith – West Garrard transmission line and West Garrard and J.K. Smith Switching stations needed to transmit this additional generation. These facilities are proposed for construction in Clark, Madison, and Garrard counties, KY, and the following sections provide a detailed description of the proposed action.

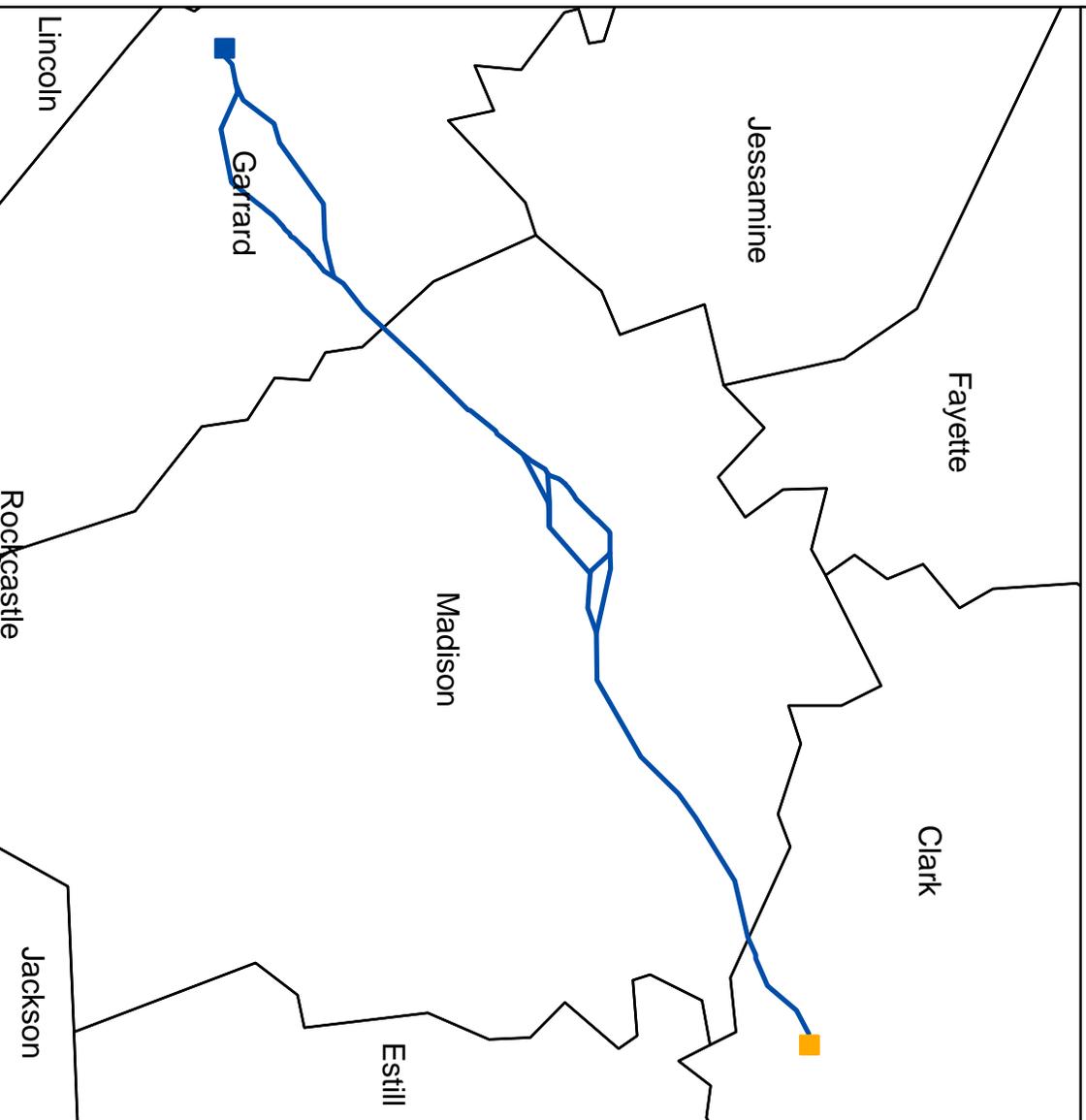
2.2.1 Location

As described in Section 1.0 INTRODUCTION, the proposed project area is located in Clark, Garrard, and Madison Counties, Kentucky (See PROJECT AREA LOCATION MAP, page 34).

EKPC is proposing to install the two new CT units at the existing combustion turbine site located at its existing J.K. Smith Electric Generating Station in southern Clark County, Kentucky (See PROJECT AREA LOCATION MAP, page 34). EKPC's J.K. Smith Generating Station is located on the northern side of the Kentucky River, west of State Route 89, and east of Red River Road. The existing site currently has seven CTs and the proposed new units would be installed in line, and parallel with, the existing units (See Alternate Routes Map 9 of 9, Combustion Turbine Site Layout, and Site Diagram, pages 48, 35, & 36).

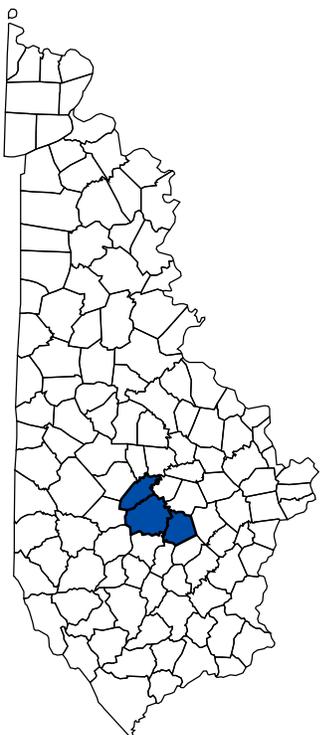
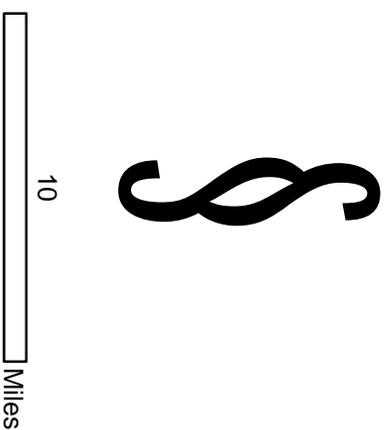
The proposed site for the West Garrard Switching Station is located in western Garrard County (See PROJECT AREA LOCATION MAP, page 34), northwest of Lancaster, Kentucky, near the northwestern corner of the intersection of State Route 52 and Boones

PROJECT AREA LOCATION MAP



- Proposed CT and JK Smith Switching Station Site
- Proposed West Garrard Switching Station Site
- Alternate Transmission Line Routes

Proposed CT Units 9 & 10 / Smith - West Garrard 345 kV Transmission Line Project
 Garrard, Madison, and Clark Counties, KY




EAST KENTUCKY POWER COOPERATIVE
 P.O. Box 707
 Winchester, KY 40392-0707



J.K. Smith Power Station Clark County, Kentucky

Combustion Turbine Site Layout



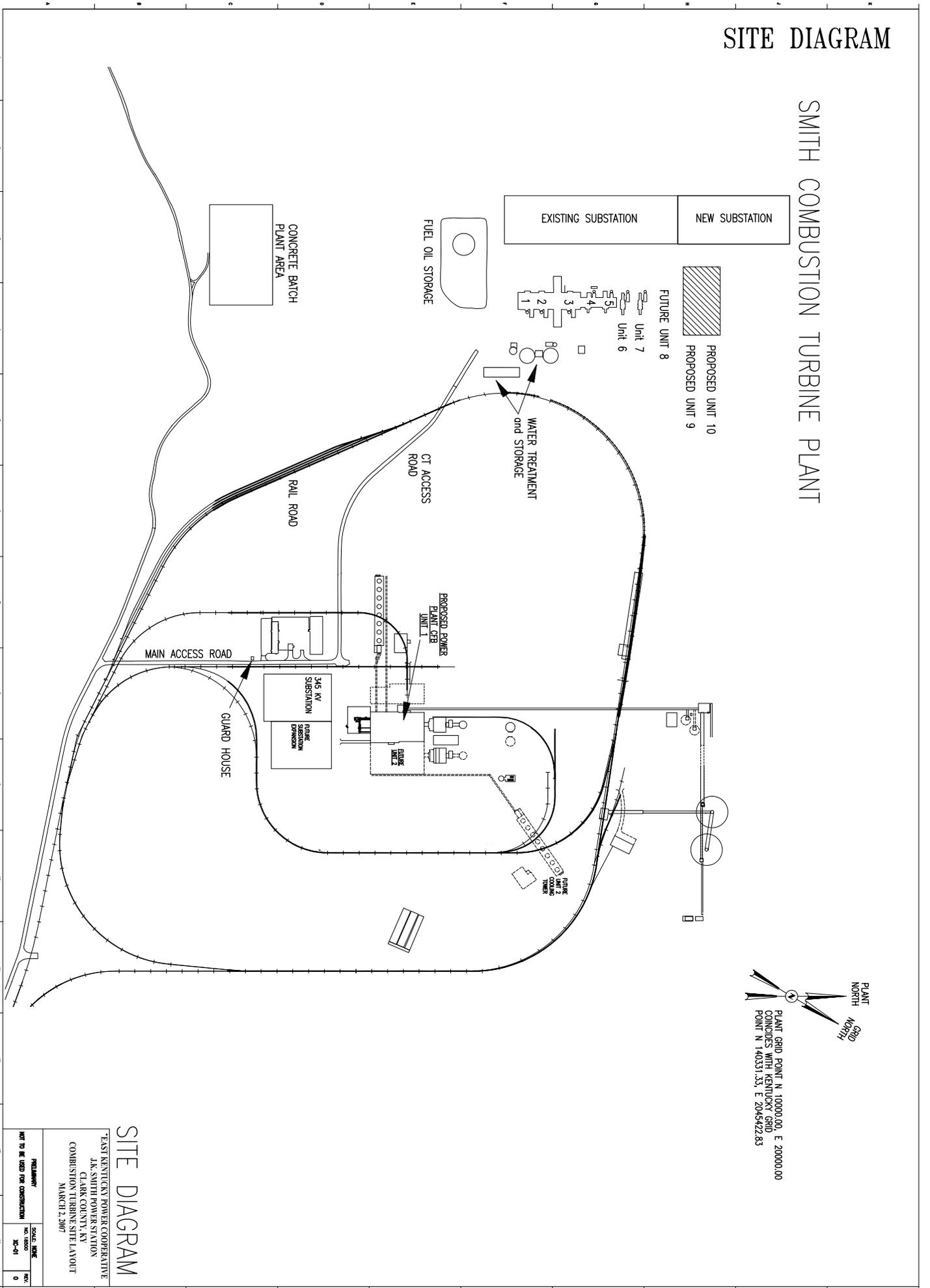
Scale: 1" = 1 mile



East Kentucky Power Cooperative
4775 Lexington Road, PO Box 707
Winchester, Kentucky 40392
Phone (859)744-4812 www.ekpc.coop Fax (859)744-6008

SITE DIAGRAM

SMITH COMBUSTION TURBINE PLANT



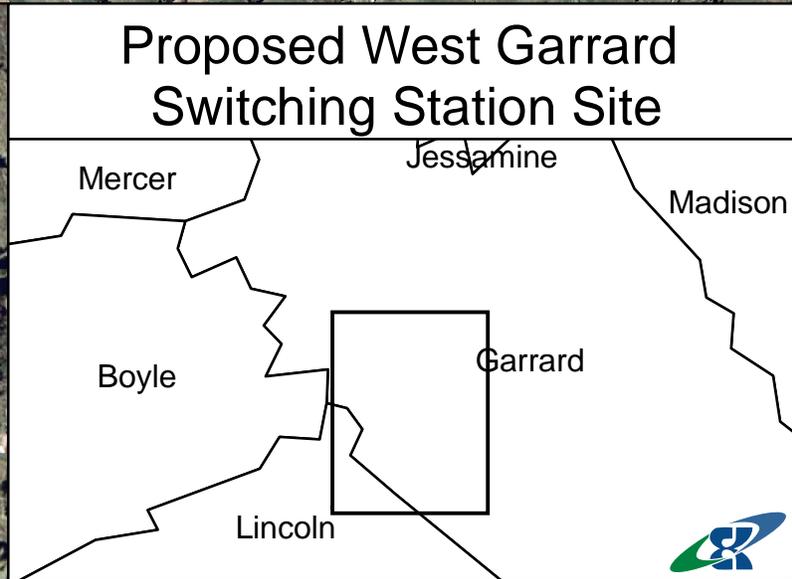
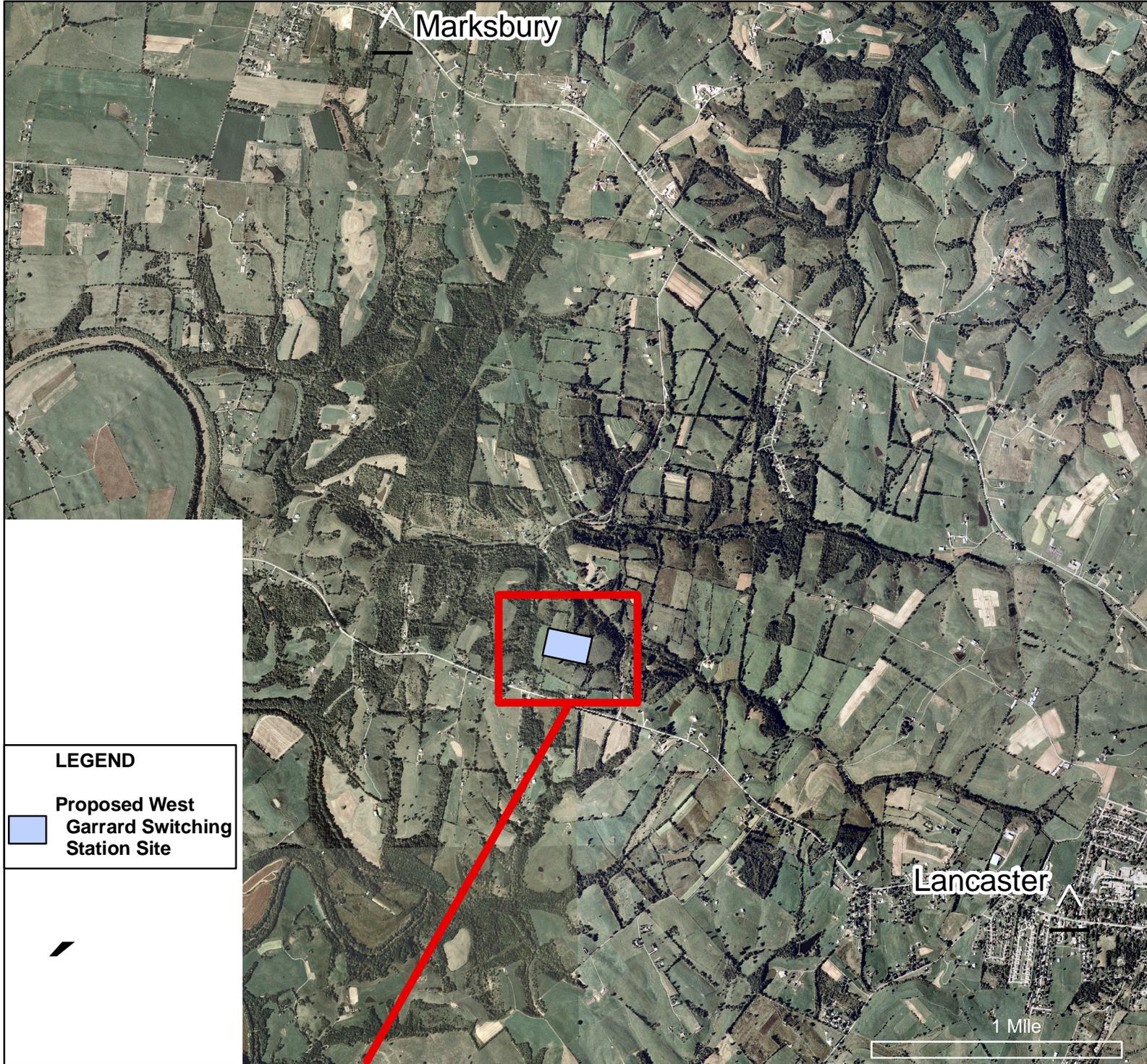
PLANT NORTH
GRID NORTH

PLANT GRID POINT N 10000.00, E 200000.00
CORRELATES WITH KENTUCKY GRID
POINT N 140331.33, E 2045422.83

SITE DIAGRAM

EAST KENTUCKY POWER COOPERATIVE
J.K. SMITH POWER STATION
CLARK COUNTY, KY
COMBUSTION TURBINE SITE LAYOUT
MARCH 2, 2007

PREPARED BY	SCALE	DATE
NOT TO BE USED FOR CONSTRUCTION	AS SHOWN	03-01
		REV. 0



Creek Road just west of Trapp, Kentucky (See Alternate Routes Map 1 of 9 and West Garrard Switching Station Site, pages 40 & 37).

The proposed site for the J.K. Smith 345 kV Switching Station is located adjacent to an existing substation within EKPC's existing J.K. Smith Electric Generating Station in southeastern Clark County (See Alternate Routes Map 9 of 9 and Combustion Turbine Site Layout, pages 40 & 35).

A number of alternate routes are being investigated for the proposed new Smith to West Garrard Electric Transmission Line (See Alternative Sections Identification Map, page 26). All of the alternate routes extend in a general northeasterly direction from the proposed new West Garrard Switching Station site in Garrard County, Kentucky (*described above*) to the proposed new J.K. Smith 345 kV Switching Station site in Clark County, Kentucky (*described above*) (See PROJECT AREA LOCATION MAP, page 34). The alternate routes for the proposed new line extend to the north of Lancaster and Richmond, Kentucky, and involve varying amounts of new ROW, co-location/paralleling existing electric utility lines, and rebuilding of existing 69 kV electric utility line on existing ROW (See PROJECT REFERENCE MAPS, pages 39 - 48).

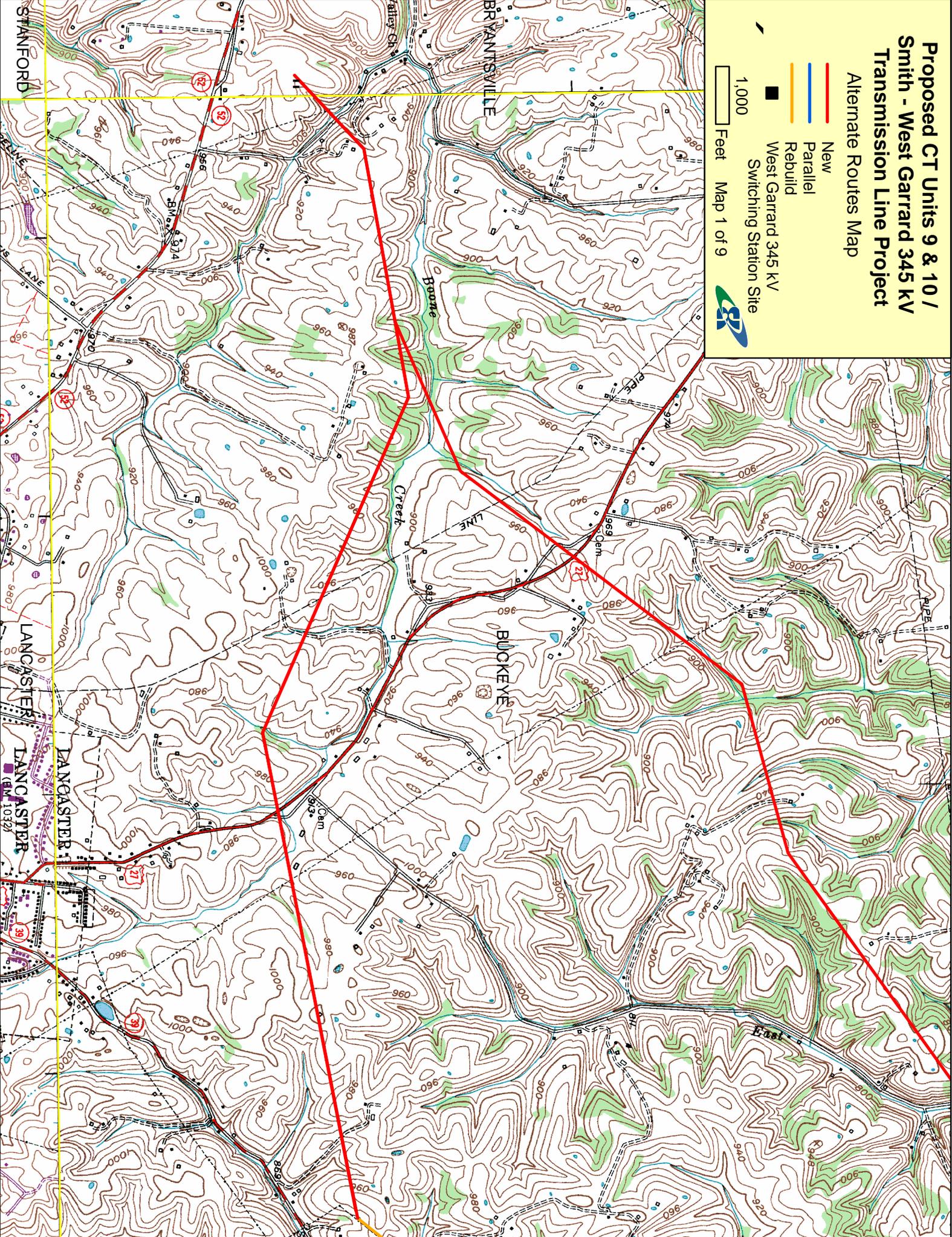
2.2.2 Generation

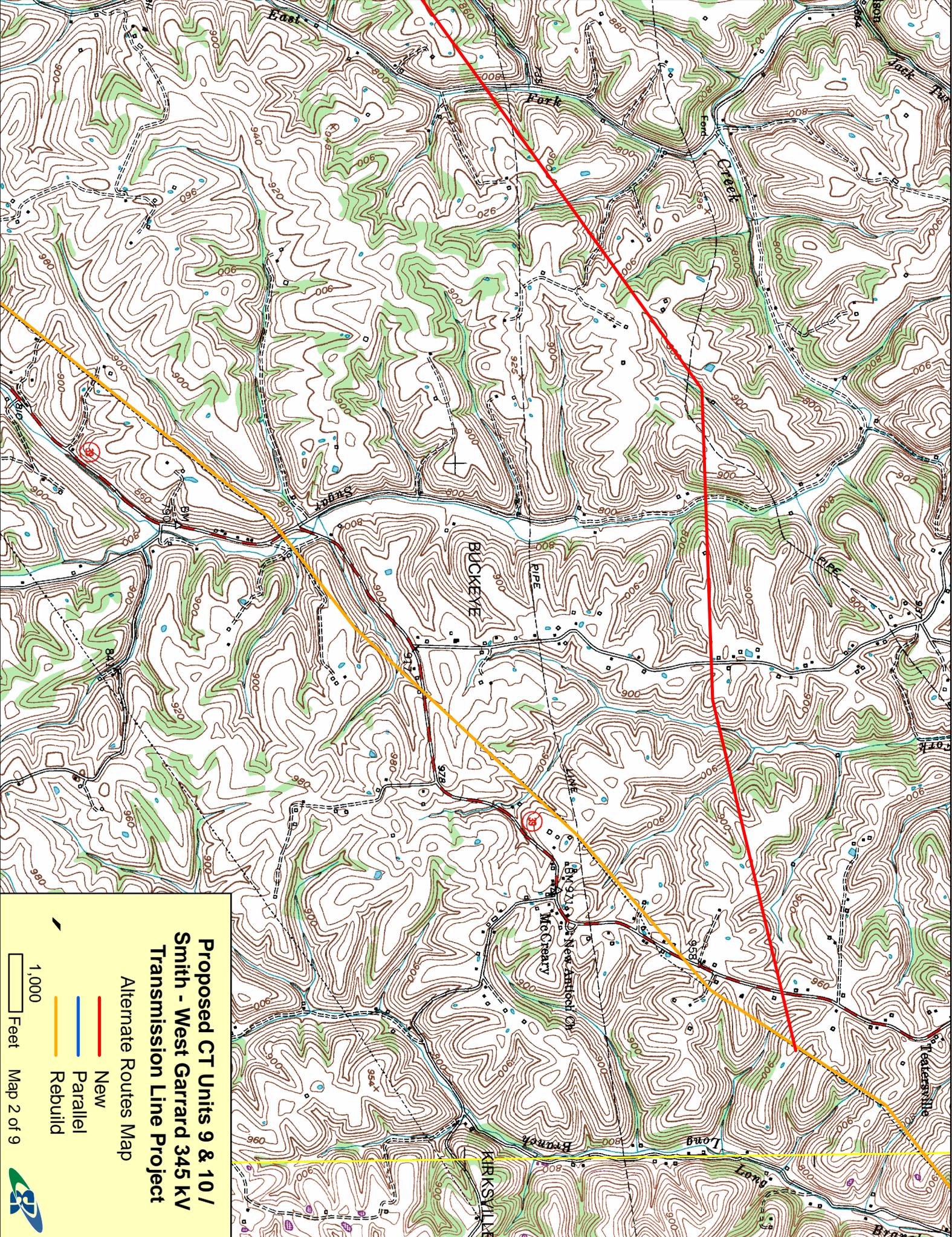
The proposed CT units would be either model 7EA or model LMS100, both manufactured by GE Energy. Each 7EA would have a net electrical output of 82.2 MW at 59 °F. Each LMS100 would have a net electrical output of 97.8 MW at 30 °F. The CTs would be operated on natural gas, approximately 2,000 hours per year. Very short electric transmission connections consisting of approximately one span of overhead line would be

Proposed CT Units 9 & 10 / Smith - West Garrard 345 kV Transmission Line Project

Alternate Routes Map

-  New
 -  Parallel
 -  Rebuild
 -  West Garrard 345 kV Switching Station Site
- 1,000 Feet Map 1 of 9
- 





**Proposed CT Units 9 & 10 /
Smith - West Garrard 345 kV
Transmission Line Project**

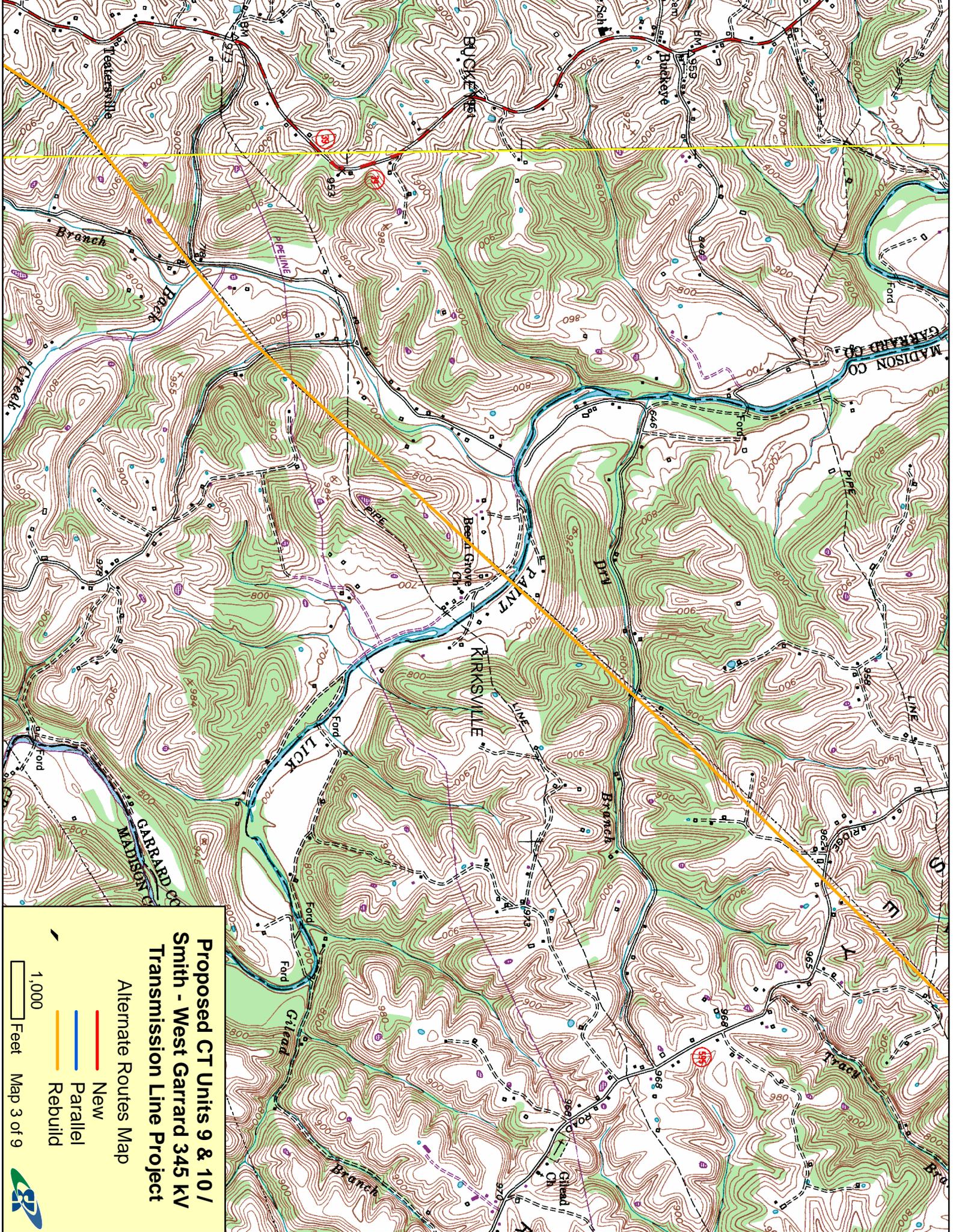
Alternate Routes Map

- New
- Parallel
- Rebuild

1,000 Feet

Map 2 of 9





**Proposed CT Units 9 & 10 /
Smith - West Garrard 345 kV
Transmission Line Project**

Alternate Routes Map

- New
- Parallel
- Rebuild

1,000 Feet Map 3 of 9



Proposed CT Units 9 & 10 / Smith - West Garrard 345 KV Transmission Line Project

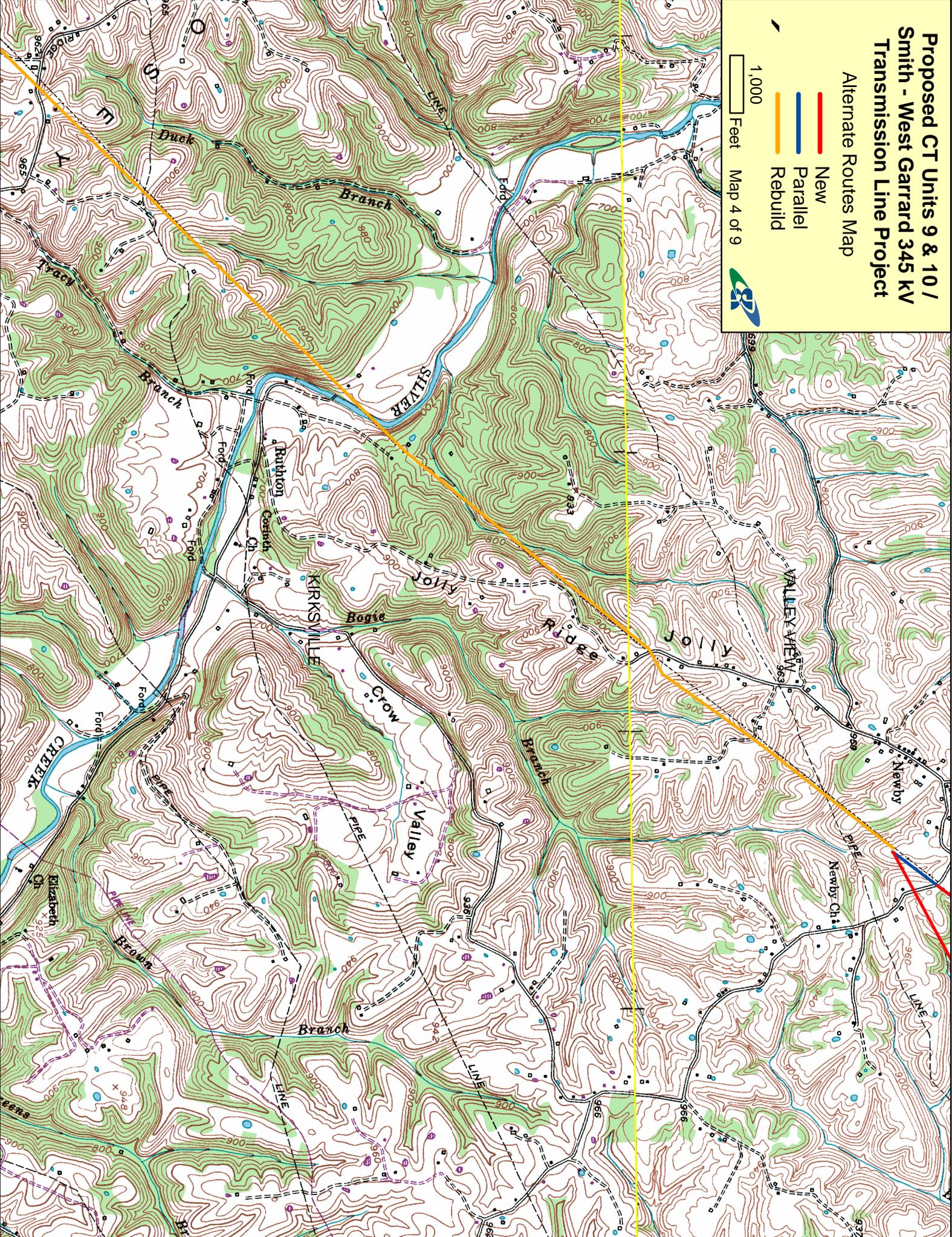
Alternate Routes Map

-  New
-  Parallel
-  Rebuild

1,000 Feet

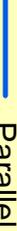


Map 4 of 9



Proposed CT Units 9 & 10 / Smith - West Garrard 345 kV Transmission Line Project

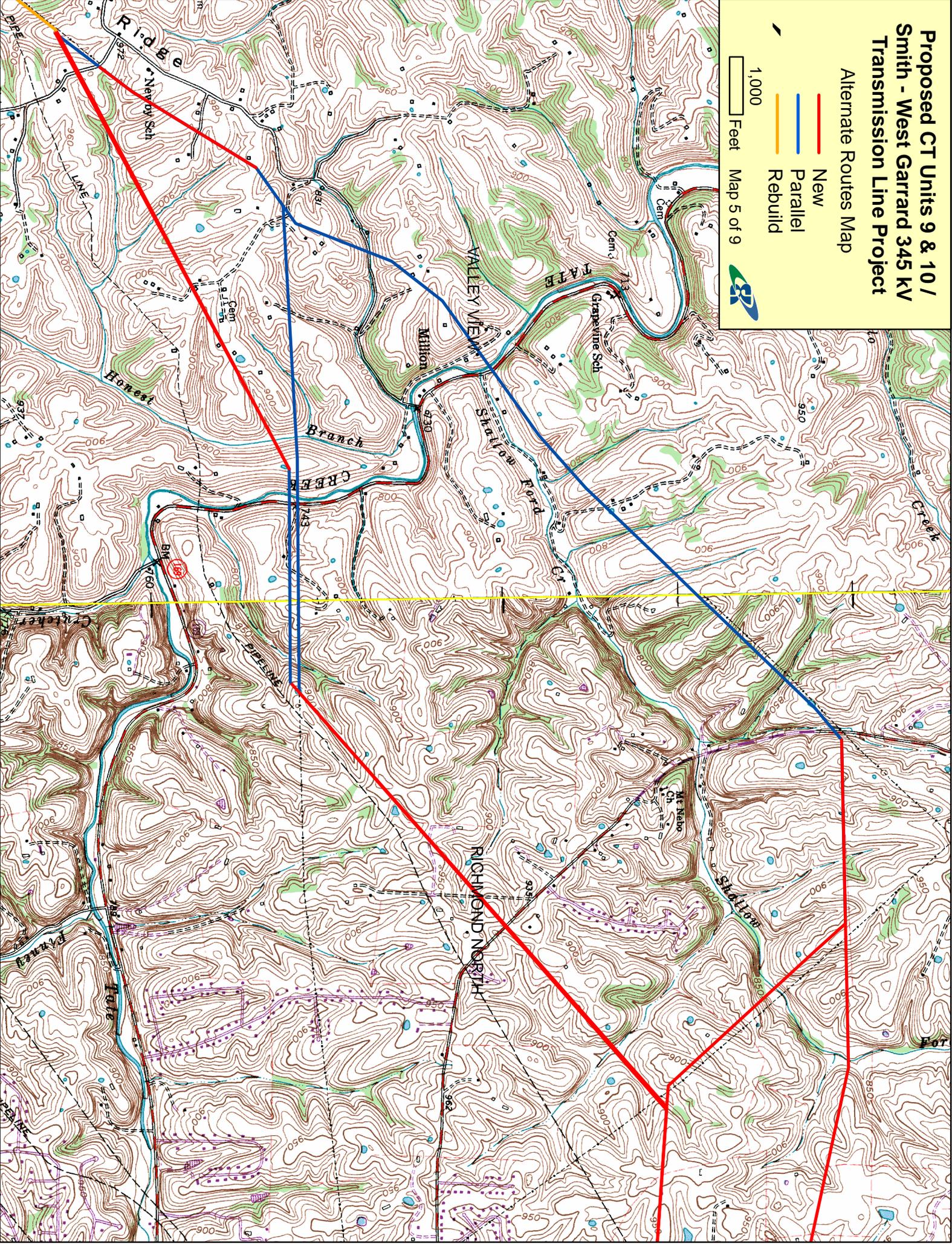
Alternate Routes Map

-  New
-  Parallel
-  Rebuild

1,000 Feet



Map 5 of 9



Proposed CT Units 9 & 10/ Smith - West Garrard 345 kV Transmission Line Project

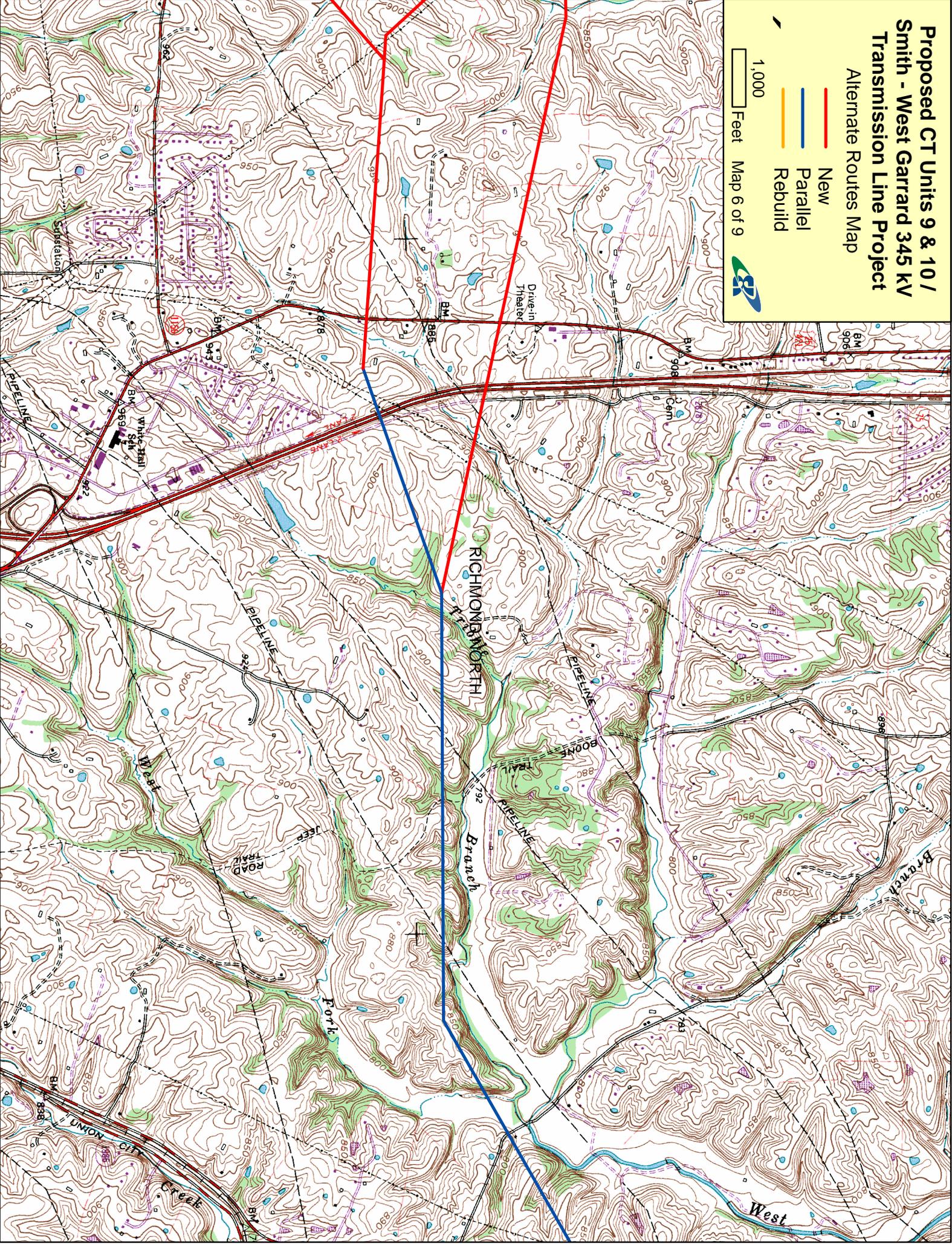
Alternate Routes Map

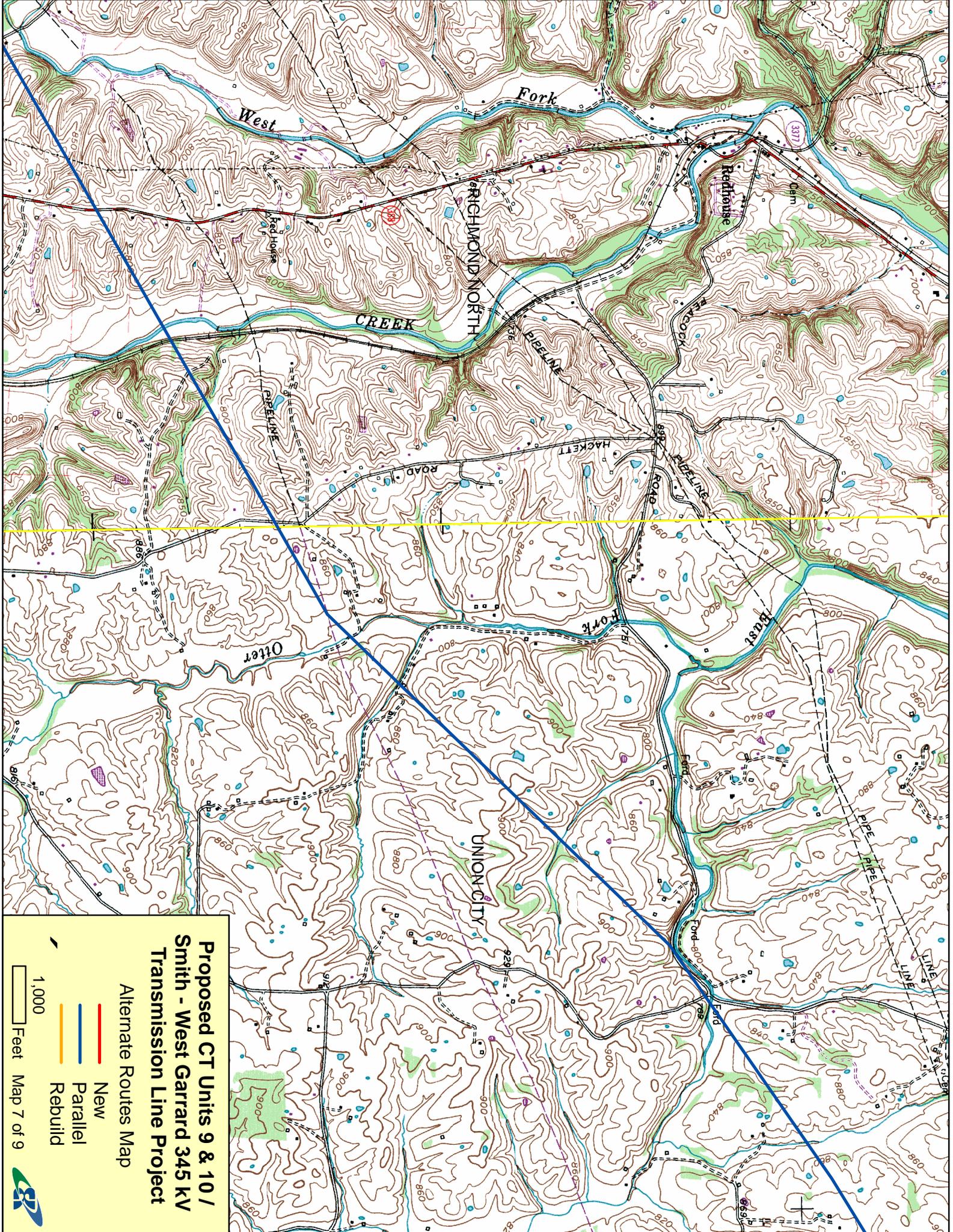
1,000 Feet

Map 6 of 9



- New
- Parallel
- Rebuild





**Proposed CT Units 9 & 10 /
Smith - West Garrard 345 kV
Transmission Line Project**

Alternate Routes Map

- New
- Parallel
- Rebuild

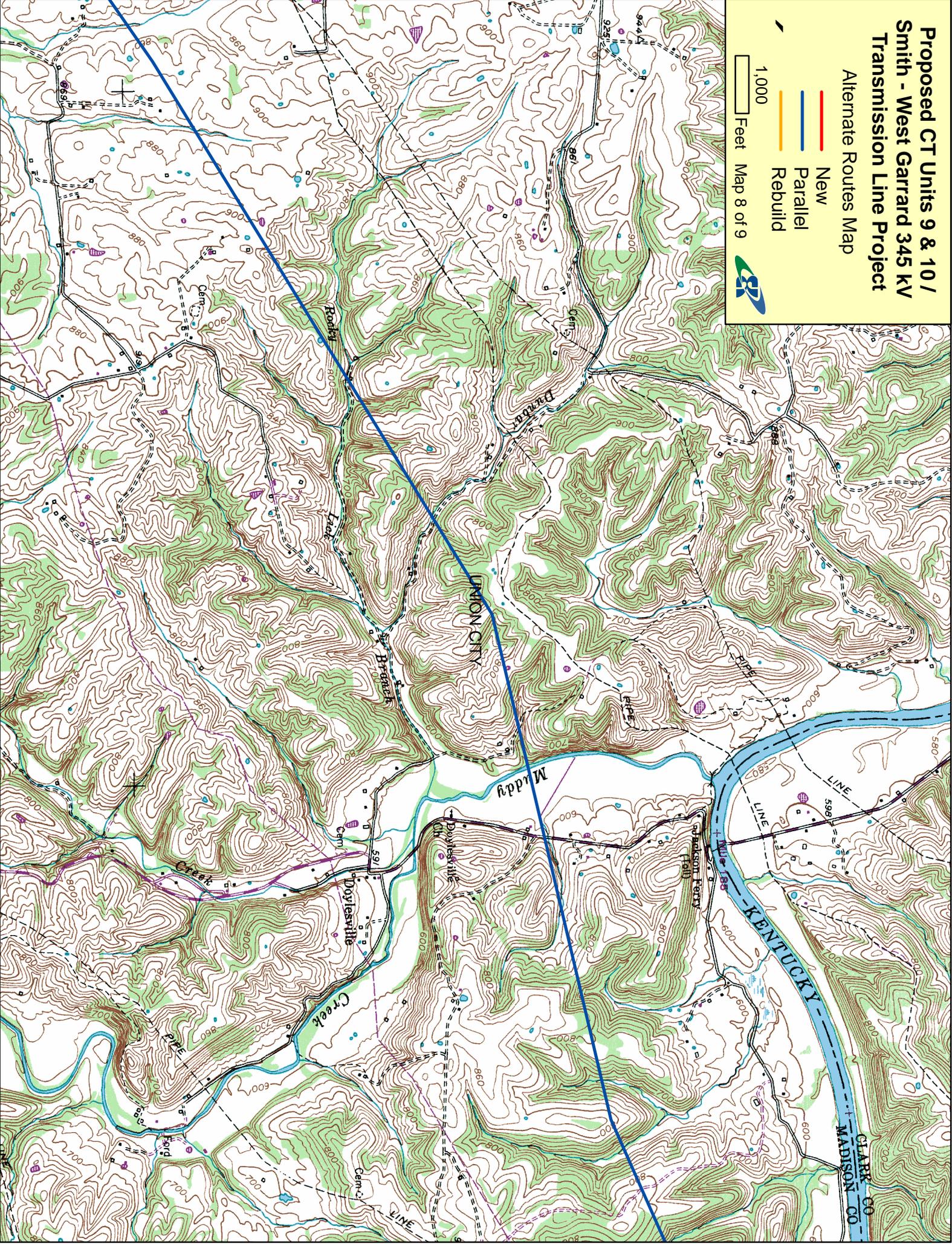
1,000 Feet Map 7 of 9

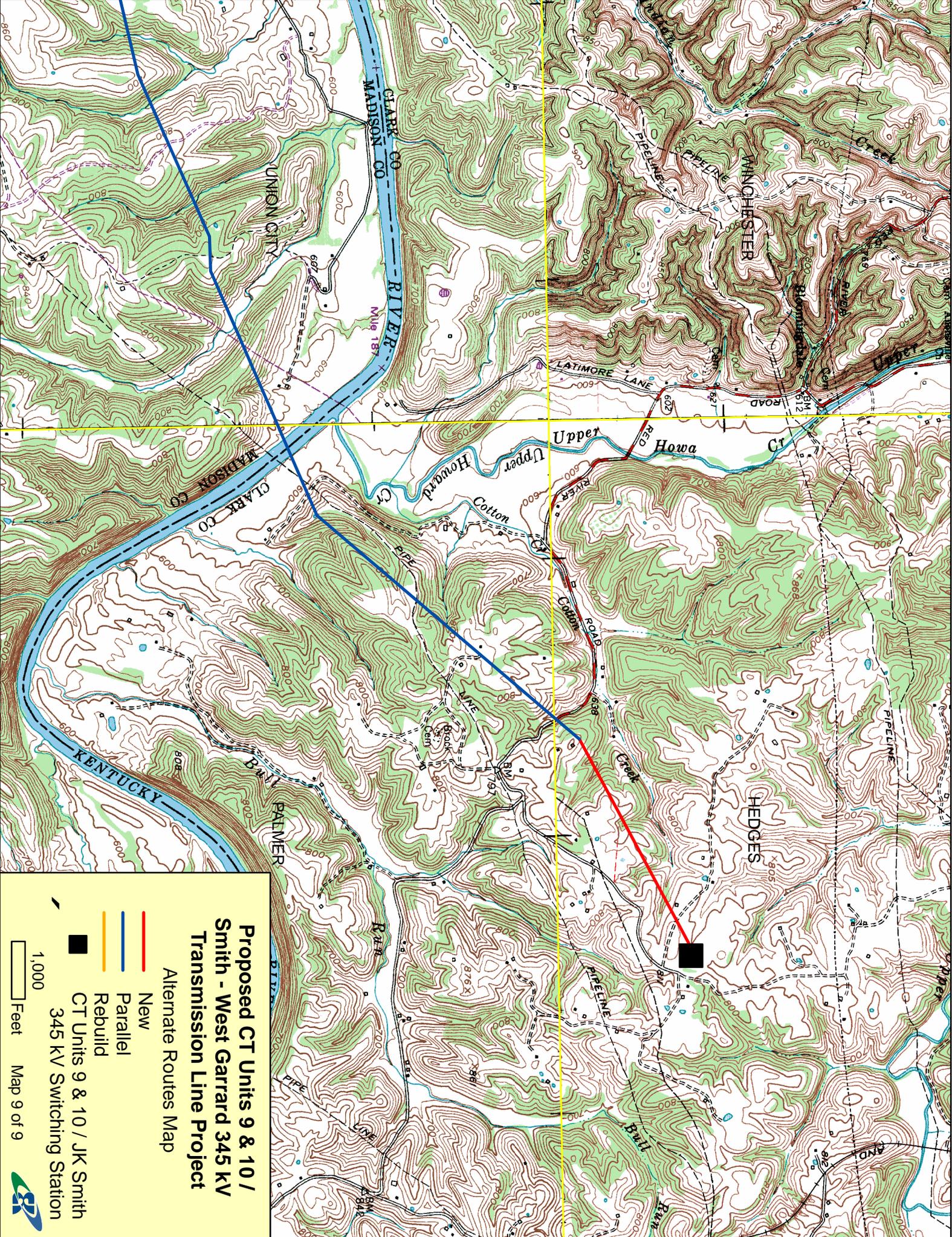
Proposed CT Units 9 & 10/ Smith - West Garrard 345 kV Transmission Line Project

Alternate Routes Map

1,000 Feet Map 8 of 9

- New
- Parallel
- Rebuild





**Proposed CT Units 9 & 10 /
Smith - West Garrard 345 kV
Transmission Line Project**

Alternate Routes Map

- New
- Parallel
- Rebuild
- CT Units 9 & 10 / JK Smith
345 kV Switching Station

1,000
Feet

Map 9 of 9



constructed on-site to connect each of the proposed new CT units to the existing electric switching station servicing the CT units currently located at the site.

The proposed construction site for the planned new CT units was graded as part of previous construction activity at the existing electric generating site in Clark County, Kentucky. The proposed site would be covered with crushed stone to a depth of approximately ten inches, and the CTs and electric generators would be installed on concrete pads approximately 20 by 100 feet, which would be placed 160 feet apart. Gas, air, and water lines would be extended from the existing CT units to the proposed site in order to service the new units. Very short electric transmission connections would be installed on-site between the proposed units and the existing electric switching station located at the generating station to enable the new units to be connected to the existing electric system.

2.2.3 Transmission

The proposed Smith to West Garrard Electric Transmission Line would be designed for 345 kilovolt (kV) operation and would be approximately 36 miles in length, involving roughly 12 miles of transmission line rebuild, 15 miles of co-location, and nine miles of new build. The new transmission line would be supported by vertical H-frame steel pole structures that would range in height from 90 to 130 feet aboveground. Small angles, or changes in direction in the transmission line, would require steel guy cables to act as a counter-force to maintain the integrity of the support structures. Larger angles and dead-end structures would require three pole structures with guy wires for added strength.

The proposed new transmission line would require a 150-foot wide right-of-way (ROW). The width of the ROW where the proposed line would be co-located with, or parallel to, existing electric transmission lines would also be 150 feet; however, a portion of

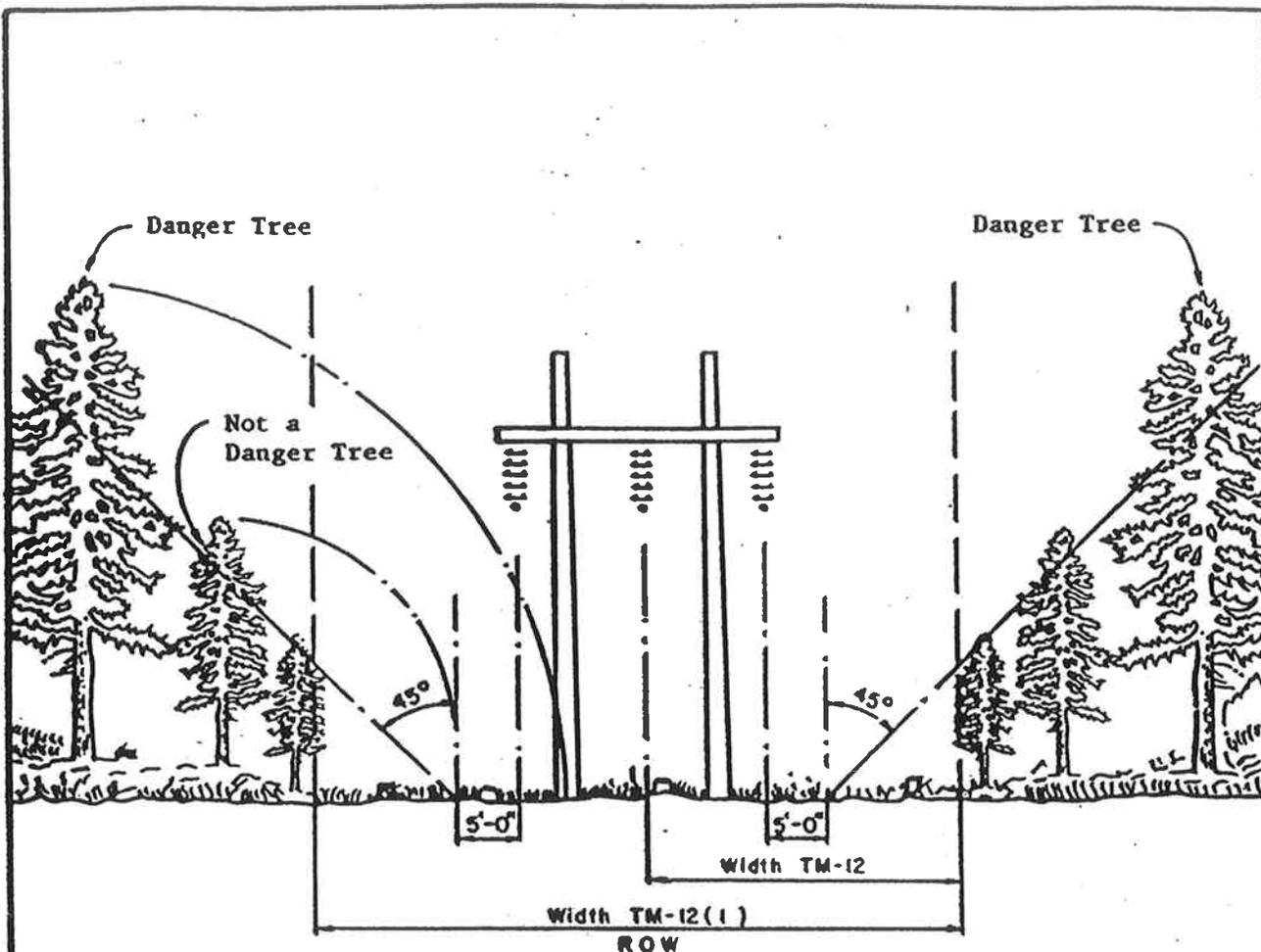
the existing ROW would be utilized by locating the proposed line as close as possible to the existing facilities. A 75-foot buffer would be maintained to each side of the centerline of the transmission line. EKPC is also proposing to rebuild a portion of an existing 69 kV transmission line as part of the proposed project. Within the proposed rebuild section, the existing electric transmission line ROW is currently 100 feet in width and would require 50 additional feet in ROW width to accommodate the proposed new line.

The majority of the proposed new transmission line would involve the construction of single circuit transmission line. However, the transmission line would also involve double circuit transmission line construction in areas where the existing transmission line is proposed to be rebuilt. The single circuit portion of the transmission line would consist of three bundled conductors of aluminum steel reinforced cables topped with an optical ground wire and alumoweld shield wire for lightning protection and remote communication with EKPC facilities, for a total of 8 cables on a typical single circuit structure. The support structures along the single-circuit sections of the proposed line would be approximately 90 to 100 feet aboveground. The double-circuit portion of the proposed line would consist of three bundled conductors of aluminum steel reinforced cables and three single conductors of aluminum steel reinforced cables topped with an optical ground wire and alumoweld shield wire for lightning protection and remote communication with EKPC facilities, for a total of 11 cables on a typical double circuit structure. The support structures along the double circuit section of the line would be approximately 120 to 130 feet aboveground. Six to seven support structures would be required per mile for both single and double circuit portions of the proposed facility, with an average span length between support structures of approximately 800 feet. Long spans would be needed for clearance over many types of topography including river, ravine

and valley crossings. Short spans may also be required where topography features limit structure locations.

The construction of the proposed electric transmission project is tentatively scheduled to begin in early 2008 and the estimated duration of construction would be 18 months. EKPC has estimated (based upon existing land use data) that between 100 and 140 acres of clearing would be required for the transmission line route, dependent upon the alternative selected for the proposal. During the clearing of the proposed route, brush, trees and other vegetation within the designated ROW would be cut to a maximum height of four inches aboveground using chainsaws, mowing equipment (such as, bushhogs, Kershaw mower, etc), or other heavy equipment. Cut stumps may be treated with a herbicide approved for such use by the U.S. Environmental Protection Agency to prevent sprouting. Merchantable trees cut from the proposed ROW may be cut into commercial lengths and piled along the ROW for the landowner to utilize or sell. Trees may also be disposed of, left where they fall, windrowed, chipped or scattered depending on the negotiated ROW agreements and local, state, or federal requirements. Vegetation within the ROW would be moved with the use of bulldozers and/or excavators. Dead or living trees outside the transmission line ROW that could fall within five feet of a point underneath the outside conductor (hazard tree) would be cut to protect the line from electrical outages caused by falling trees and branches during high wind and storm events (See *Right-Of-Way Clearing Guide*, page 52).

The holes for the transmission line support structures would be mechanically dug and the poles placed using a digger/derrick truck or a crane, as necessary. Minimal blasting may be necessary in areas where the truck cannot dig through rock that could be present; however, blasting would only be used as a last resort. The typical diameter of the augered holes would



NOTES:

1. Engineer will designate all danger trees which shall be removed or topped at option of contractor. In approximately level terrain, trees which would reach within 5 feet of a point underneath the outside conductor in falling are examples of danger trees.
2. As directed by the engineer, portions of the right-of-way (ROW) must be cut so that stumps will not prevent the passage of tractor and trucks along the ROW.
3. The unit for clearing one-half of the ROW is "WIDTH TM-12."
4. The unit for clearing the full ROW is "WIDTH TM-12(1)."
5. The unit for clearing danger trees is "TM-13."

TRANSMISSION ROW CLEARING	
RIGHT-OF-WAY CLEARING GUIDE	
REV	DATE
Aug., 1986	TM-12,-12(1),-13

be three to four feet in width and the typical depth of the holes would be 14 to 23 feet depending on the height of the poles. The holes around the poles would be backfilled with either native material, dense grade material, or concrete depending on foundation requirements for the structure. Any excess material taken from the foundation excavation would be disposed of appropriately or used for backfill. The electrical conductors would be installed using a stringing block along with a mounted conductor puller or tensioner, or a helicopter. Appropriate soil erosion and sedimentation control procedures, such as seeding and mulching, and/or the utilization of berms, staked straw bales and silt fences, would be implemented during and after the construction of the proposed transmission line in areas denuded of vegetation.

Access to and from the transmission line ROW during construction and maintenance procedures would be from public and private roads in the project area, when possible. Prior to the use of any private roads, permission would be obtained from the property owner either by EKPC or its agent. Construction of access roads to reach transmission support structure locations and off-road travel along the proposed transmission line route would be limited to the ROW, to the maximum extent practicable. The typical access road would be 12 feet in width and would be constructed with the assistance of heavy equipment, such as a bulldozer or skidder. Erosion would be controlled along the new access roads by applying seed, lime, fertilizer and/or mulch to exposed soil areas. Water bars and dips would also be installed in the roads along with silt fences and staked straw bales, when necessary, to aid in preventing erosion. Gravel or crushed stone would be applied to road surfaces, as needed, to prevent rutting. Once construction of the proposed transmission line is completed, the new access

roads would either be left open, or closed to the public by means of earthen berms or keyed gates placed at the entrance of the roads, according to the negotiated right-of-way agreements.

Once constructed, the proposed transmission line would be aerially inspected three times a year and would be ground inspected once every two to four years by walking the ROW. The minimum electrical clearances maintained from the transmission line conductors to the ground underneath the conductors would be 28 feet for the 345kV line. The minimum electrical clearance for the rebuild of the existing 69 kV line would be 25 feet. Upon completion of the ROW clearing and construction activities, the vegetation within the ROW would be permitted to grow for one to two years and subsequently treated with a herbicide approved for such use by the U.S. Environmental Protection Agency. This initial herbicide treatment would be performed using a foliar application method during the months of May through October. The foliar method of application utilizes herbicide spray that is applied directly onto the leaves of non-desirable vegetation during the growing season when the plants are in full leaf.

Following the initial foliar herbicide treatment, the woody-stemmed vegetation occurring within the ROW would be treated with an approved herbicide every four to six years, depending on the rate of vegetation growth. Vegetation may also be cut in order to bring it back to the size where it can be effectively treated with herbicides should an area be missed during the maintenance cycle or should excessive vegetation growth take place between the maintenance cycles. Dead or living trees outside the transmission line ROW that could fall within five feet of a point underneath the outside conductor (hazard tree) would also be cut to protect the line from electrical outages caused by falling trees and branches during high wind and storm events.

2.2.4 Switching Stations

2.2.4.1 J.K. Smith Switching Station

The J.K. Smith 345 kV Switching Station would be a 345 kV breaker-and-a-half configuration with step-up transformers. It would be constructed within EKPC's existing J.K. Smith Generating Station's fenced boundary near an existing electric switchyard. The proposed site for the new switching station has been previously graded in association with other construction activity at the generating station and would not require extensive grading or earth moving activities. The structure heights in the switching station would be between 80 and 90 feet aboveground. The amount of land that would be affected by the proposed construction activity associated with the new switching station would be approximately eight acres. The electrical equipment associated with the proposed new switching station would be enclosed by a seven-foot high chain linked security fence topped with three strings of barbed wire one foot in height. The area inside the fence would be covered with crushed stone to a depth of approximately six inches and the electrical equipment would be placed on concrete pads. Access for the construction and maintenance of the switching station would be accomplished by the existing entrance drive extending from State Route 89. Remote communication with the proposed new switching station would be by way of a fiber optic cable installed on the proposed new transmission line.

The electric transformers located inside the proposed new switching station would contain non-PCB insulation and cooling fluid. An impervious moat would be installed underneath and around the transformers that would have sufficient capacity to hold the fluid contained in the transformers, and would incorporate a gravity oil-water separator valve. The purpose of the oil containment structure would be to protect the natural environment

surrounding the switching station in the unlikely event of an oil spill due to the leaking of transformer oil.

Once the construction associated with the proposed J.K. Smith Switching Station is completed, the electrical equipment would be inspected and maintained at intervals of once every one to four months using existing personnel and the generating station.

2.2.4.2 West Garrard Switching Station

The West Garrard Switching Station would be a 345 kV breaker-and-a-half configuration designed to accommodate 138 kV and 69 kV step down transformers sometime in the future. The proposed construction activity would affect approximately five to ten acres of land. The fence and structure heights at the West Garrard Switching Station would be the same as at the J.K. Smith 345 kV Switching Station (seven-foot high chain linked security fence topped with three strings of barbed wire one foot in height). Like the J.K. Smith Switching Station, the area inside the fence would also be covered with crushed stone to a depth of approximately six inches and the electrical equipment would be placed on concrete pads. Initially there would be no oil-filled equipment at the West Garrard Switching Station. If step down transformers were ever installed at a future date, a transformer oil containment facility would also be installed. Remote communication with the proposed new substation would be by way of a fiber optic cable installed on the proposed new transmission line.

During the construction of the proposed West Garrard Switching Station all timber, brush, and debris would be cut from the site and disposed of. The site would be graded approximately level with a slight one to two percent slope for drainage. Access to the proposed switching station site to allow the construction and maintenance of the new facility would be by way of a permanent entrance drive from State Route 52 with an approximate

length of 900 feet. This entrance drive would have a width of approximately 16 feet and would be covered with crushed stone to allow the ingress and egress of construction and maintenance vehicles.

Once the construction associated with the proposed West Garrard Switching Station is completed, the electrical equipment would be inspected and maintained at intervals of once every one to four months. These inspections and maintenance procedures normally involve the ingress and egress to the facilities of a small truck carrying one to two persons.

2.2.5 Fuel Supply

The proposed new CT units would be operated on natural gas. An existing pipeline currently supplies natural gas to the J.K. Smith Generating Station that would have sufficient capacity to supply fuel to the proposed new units. Consequently, only small service lines would be required to connect the new units to the existing line.

2.2.6 Water Supply

Water for use by the proposed new CT units would be pumped from the Kentucky River using the existing infrastructure at the plant site. The proposed CT units would not use water for NO_x emissions control. As a result, there would be no additional water withdrawal permit requirements for the proposed new units. Water is currently stored at the existing plant site in two 2.5 million gallon tanks. No increase in water storage capacity of the existing tanks would be required by the proposed project.

2.2.7 Water Treatment

The water pumped from the Kentucky River using the existing infrastructure at the plant site is sent to an existing clarifier, where it would be treated with coagulants for clarification. Soda ash would be added for pH adjustment. Effluent from the clarifier would

flow through a dual media gravity filter. Water from the filter would be chlorinated and pumped to an existing water storage tank. Sodium hypochlorite would be used to disinfect the water. The treated water would be used as service water for fire protection, cooling purposes, etc.

2.2.8 Chemical Unloading and Storage Areas

Sulfuric acid and sodium hydroxide would also be used to regenerate demineralizer ion exchange resins in the water used on site. Both chemicals would be delivered by tanker trucks and stored in existing 5,954-gallon tanks. The sodium hydroxide storage tanks are located inside the water treatment building. The sulfuric acid would be stored in existing tanks, one outside the demineralizer building and the other inside the water treatment building

2.2.9 Oil Areas

The electric transformers located inside the proposed new switching stations would contain non-PCB insulation and cooling fluid. An impervious moat would be installed underneath and around the transformers that would have sufficient capacity to hold the fluid contained in the transformers, and would incorporate a gravity oil-water separator valve. The purpose of the oil containment structure would be to protect the natural environment surrounding the switching station in the unlikely event of an oil spill due to the leaking of transformer oil.

2.2.10 Emissions Control Systems

The following sections outline the emission control systems that would be utilized for the proposal.

2.2.10.1 Gaseous Emissions

Gaseous emissions emitted from the CT units would include carbon monoxide (CO), nitrous oxide (NO_x), sulfur dioxide (SO₂), and volatile organic compounds (VOCs). The proposed new CT units (model 7EA & LMS100) would use dry low nitrogen oxide combustion systems, which are considered the *Best Available Control Technology* (BACT) for controlling air emissions. The LMS100 units also utilize selective catalytic reduction and carbon monoxide reduction systems for NO_x and CO, respectively. Utilizing natural gas, which would result in lower SO₂ emissions, as compared to burning No. 2 fuel oil, would aid in controlling sulfur dioxide. In addition, NO_x, CO, and VOCs would be controlled through the use of optimal combustion practices and proper maintenance.

2.2.10.2 Particulate Matter (PM)

Production of particulate matter would be controlled by the use of natural gas instead of No. 2 fuel oil as the fuel source for the CTs, and through the use of optimal combustion practices and proper maintenance. Following these processes would greatly reduce any PM produced by the CT's. BACT analysis would determine the operation and maintenance issue control requirements for the facility, and these requirements would become part of the air quality permit.

2.2.10.3 Hazard Air Pollutants (HAPs)

With the exception of sulfur acid mist, HAPs emissions would be non-detectable since natural gas will be used as the fuel source for the CTs.

2.2.11 Related Minor Facility Improvements

The proposed CT units would require the following minor modifications to existing electric facilities owned by EKPC and E ON US:

- Construct 345 kV terminal facilities to connect the CT units to EKPC's existing J.K. Smith Substation;
- Purchase and install a second 345-138 kV, 450 MVA autotransformer plus associated equipment at EKPC's existing J.K. Smith Substation;
- Construct 345 kV terminal facilities at E ON US's Brown and Pineville Substations to energize the existing Brown-Pineville 345 kV circuit;
- Replace a 161 kV breaker at E ON US's existing Pineville Substation; and
- Upgrade E ON US's Alcalde-Elihu 161 kV Transmission Line involving a high temperature upgrade of the transmission line conductor.

These types of system improvements would normally involve minimal, if any, environmental impact. With the exception of the Alcalde-Elihu 161 kV line upgrade, the above minor modifications would take place within the boundaries of existing electric facilities and according to RUS's *Environmental Policies and Procedures*, 7 CFR Part 1794, would be normally categorically excluded from the environmental assessment process.

3.0 AFFECTED ENVIRONMENT

3.1 VEGETATION

The proposed project area is located within the Inner Blue Grass region of the State of Kentucky, and is characterized by rolling hills and valleys. Land use within the majority of the Blue Grass region is typically characterized by upland areas used for agricultural purposes intermixed with rural residential development and woodlands. The agricultural land is mostly used as pastureland sparsely intermixed with row crop production, such as corn and tobacco. Most of the woodlands are limited to the more deeply entrenched valleys and the dominant tree species within the wooded areas are sugar maple (*Acer saccharum*), box elder (*Acer negundo*), shellbark hickory (*Carya laciniosa*), hackberry (*Celtis occidentalis*), green ash (*Fraxinus pennsylvanica*), black walnut (*Juglans nigra*), eastern red cedar (*Juniperus virginiana*), and sycamore (*Platanus occidentalis*).

3.2 WILDLIFE

Common wildlife species in the project area include white-tailed deer, wild turkey, gray squirrel, cardinals, Carolina wrens and robins. Threatened and endangered species that could potentially occur within the project impact area include the Indiana bat (*Myotis sodalis*), the gray bat (*Myotis grisescens*), Lesquereux’s bladderpod (*Lesquerella globosa*), running buffalo clover (*Trifolium stoloniferum*), and bald eagle (*Haliaeetus leucocephalus*).

3.3 LAND USE & RECREATION

The topography along the eastern and central portions of the proposed project area is composed of very gently rolling hills, while the westernmost portion of the area is composed of more steeply sloping hills and valleys, especially along the Kentucky River and its immediate tributaries. All of the alternate routes for the proposed transmission line extend in a general northeast/southwest orientation between the proposed West Garrard Switching Station in western Garrard County, Kentucky and the proposed J.K. Smith Switching Station in southeastern Clark County, passing to the north of Lancaster and Richmond. Each of the alternate routes traverses varying amounts of wooded and agricultural lands, intermixed with rural residential development. No developed recreational facilities, such as campgrounds or recognized hiking trails, are located in the proposed project area. However, incidental recreational activities, such as hiking and hunting, could take place within the project area. The following table shows the amount of forested areas and agricultural land within each of the alternate routes, as well as the number of parcels of land that would be traversed.

Table 3.3.a – Land Use

Alternate Routes	A	B	C	D	E	F	G	H
Forested Acres	132.2	130.9	133.4	132.1	139.8	138.4	132.8	131.4
Agricultural Acres	461	464	465	468	450	453	454	457
No. of Land Parcels	144	155	146	157	132	143	132	143

Table 3.3.a – Land Use (continued)

Alternate Routes	Ar	Br	Cr	Dr	Er	Fr	Gr	Hr
Forested Acres	107.6	99.9	108.8	101.1	115.2	107.5	109.0	101.2
Agricultural Acres	463	458	467	462	452	448	456	451
No. of Land Parcels	144	155	146	157	132	143	132	143

The proposed site for the planned new CT units consists of industrial land that has been graded in association with past construction activity at the generating facility (See FIGURE 3.3.a, below). The proposed site is located adjacent to the existing CT units located at the generating facility (See Combustion Turbine Site Layout and Site Diagram, pages 35 & 36) and was previously used for agricultural production but was converted to industrial use with the construction of the existing CT units. A fairly large buffer of land that is owned by EKPC surrounds the existing generating station encompassing 3,200 acres, which serves to isolate the facility from other types of land uses. The closest school to the proposed construction site is Trapp Elementary which is located slightly over three miles from the site, and the nearest inhabited dwelling is approximately one mile away from the site.

FIGURE 3.3.a



View from within the proposed CT site looking southerly towards the existing units.

FIGURE 3.3.b



View of the proposed J.K. Smith Switching Station site looking towards the J.K. Smith Substation.

FIGURE 3.3.c



View from western edge of West Garrard Switching Station site looking easterly towards the existing electric transmission line.

Like the proposed site for the CT units, the proposed site for the J.K. Smith Switching Station is located on industrial land associated with the existing J.K. Smith Generating Station. It is located adjacent to the J.K. Smith Substation. The site has been graded in association with previous construction activity at the generating station and is currently very flat (See FIGURE 3.3.b, page 63). The proposed site for the West Garrard Switching Station is composed of open field surrounded by tree lined fence rows made up of tree species, such as black locust (*Robinia pseudoacacia*), hackberry (*Celtis occidentalis*), wild cherry (*Prunus serotina*), shagbark hickory (*Carya ovata*), northern red oak (*Quercus rubra*), and red maple (*Acer rubrum*) (See FIGURE 3.3.c, page 63). The topography of the proposed site is gently sloping and the site is currently pastureland used for cattle grazing.

3.4 WATER RESOURCES

The alternate routes investigated for the proposed Smith to West Garrard Transmission Line cross numerous streams in the project area. The following table identifies the creeks and streams traversed by each of the alternate routes.

Table 3.4.a – Stream Crossings

Alternate Routes	A/Ar	B/Br	C/Cr	D/Dr	E/Er	F/Fr	G/Gr	H/Hr
Boone Creek	✓	✓	✓	✓	✓	✓	✓	✓
East Fork Sugar Creek	✓		✓		✓		✓	
Sugar Creek	✓	✓	✓	✓	✓	✓	✓	✓
Scotch Fork	✓		✓		✓		✓	
Long Branch	✓	✓	✓	✓	✓	✓	✓	✓
Back Creek	✓	✓	✓	✓	✓	✓	✓	✓
Paint Lick Creek	✓	✓	✓	✓	✓	✓	✓	✓
Dry Branch	✓	✓	✓	✓	✓	✓	✓	✓
Silver Creek	✓	✓	✓	✓	✓	✓	✓	✓
Tate Creek	✓	✓	✓	✓	✓	✓	✓	✓
Honest Branch					✓	✓	✓	✓
Shallow Ford Creek	✓	✓	✓	✓				
Tribble Branch	✓	✓	✓	✓	✓	✓	✓	✓
West Fork Otter Creek	✓	✓	✓	✓	✓	✓	✓	✓
Otter Creek	✓	✓	✓	✓	✓	✓	✓	✓
East Fork Otter Creek	✓	✓	✓	✓	✓	✓	✓	✓
Rocky Lick Branch	✓	✓	✓	✓	✓	✓	✓	✓
Muddy Creek	✓	✓	✓	✓	✓	✓	✓	✓
Dunbar Branch	✓	✓	✓	✓	✓	✓	✓	✓

In addition to the streams identified above, all of the alternate routes traverse a number of unnamed tributaries, as well as the Kentucky River. The Kentucky River is recognized by the U.S. Army Corps of Engineers as being navigable in the proposed project area and Muddy Creek is recognized as a Reference Reach/Exceptional water by the Kentucky Department of Environmental Protection (See e-mail from Mr. Gary W. Gilpin, GILPIN GROUP to Mr. Randall Payne, Kentucky Department of Environmental Protection, January 12, 2006, and Mr. Payne's response at top of e-mail, Appendix A). None of the other watercourses in the area are designated as being navigable, Outstanding Resource Waters, Cold Water Aquatic Habitats, National, or Wild and Scenic Rivers, or special water resources (exceptional waters). No creeks, streams, or rivers are located at either of the proposed switching station sites or the CT site.

3.5 WETLANDS

A review of the *National Wetland Inventory Maps (NWI Maps)* for the proposed project area revealed that the wetlands depicted in the following table, and recognized on the maps, are traversed by the alternate routes investigated for the proposed transmission line.

Table 3.5.a – Wetland Crossings

Alternate Routes	A/Ar	B/Br	C/Cr	D/Dr	E/Er	F/Fr	G/Gr	H/Hr
R2UB - Boone Creek	✓	✓	✓	✓	✓	✓	✓	✓
R3UB - Sugar Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Long Branch	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Back Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Paint Lick Creek	✓	✓	✓	✓	✓	✓	✓	✓
R4SB - Dry Branch	✓	✓	✓	✓	✓	✓	✓	✓
R2US - Silver Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Tate Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Honest Branch					✓	✓	✓	✓
R2UB - Shallow Ford Cr.	✓	✓	✓	✓				
R4SB - West Fork Otter Cr.	✓	✓	✓	✓	✓	✓	✓	✓
R3UB - Otter Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - East Fork Otter Cr.	✓	✓	✓	✓	✓	✓	✓	✓
R2UB - Unnamed Trib. East Fork Otter Creek	✓	✓	✓	✓	✓	✓	✓	✓
R2US - Muddy Creek	✓	✓	✓	✓	✓	✓	✓	✓
L1UB - Kentucky River	✓	✓	✓	✓	✓	✓	✓	✓

KEY to Table 3.5.a: R2UB - Riverine lower perennial unconsolidated bottom
R3UB - Riverine upper perennial unconsolidated bottom
R2US - Riverine lower perennial unconsolidated shore
R4SB - Riverine intermittent streambed
L1UB - Lacustrine limnetic unconsolidated bottom

In addition, the review of the *NWI Maps* revealed that the alternate routes cross a total of ten small isolated palustrine unconsolidated bottom wetlands. The rebuild versions of each of the alternate routes would also traverse the identified wetlands. No wetlands depicted on the *NWI Maps* are located on either of the proposed switching station sites or the proposed CT site.

3.6 FLOODPLAINS

A review of *Flood Hazard Boundary Maps* developed by the Federal Emergency Management Agency (Community Panel Numbers 2100810002B, 2100810003B, 2103420075B, 2103420025B, 2103420050B, 2102780100B, and 2102780125B) revealed that each of the alternate routes investigated for the proposed transmission line crosses *Special Flood Hazard Areas* subject to 100-year floodplains associated with Paint Lick Creek, Silver, Creek, Tate Creek, Otter Creek, Muddy Creek, and the Kentucky River. The floodplains extend all along the river and creeks throughout the project area. The review of the *Flood Hazard Boundary Maps* also revealed that neither of the proposed switching station sites, or the proposed site for the CT units, is located within 100-year floodplains.

3.7 PRIME AND IMPORTANT FARMLAND SOILS

The U.S. Natural Resource Conservation Service (NRCS) was contacted regarding prime and statewide important farmland soils in relation to the proposed transmission line route. Based on this contact and information received for the NRCS, as well as *Soil Surveys* for the proposed project area, it was determined that roughly one third of the soils traversed by the alternate routes is recognized as prime and statewide important farmland, in addition to a small amount of hydric soils. The following table, *3.7.a Soils*, identifies those soils that are

crossed by the alternate routes, as well as those soils that are recognized as being prime farmland, statewide important farmland, and hydric soils.

Table 3.7.a - Soils

<i>Name of Soil</i>	<i>Prime Farmland Soil</i>	<i>Statewide Important Farmland Soil</i>	<i>Hydric Soil</i>
Beasley silt loam, 12 to 20% slopes			
Beasley silt loam, 2 to 6% slopes	✓		
Beasley silt loam, 6 to 12% slopes			
Beasley silt loam, 6 to 12% slopes		✓	
Boonesboro silt loam	✓		
Brassfield silt loam, 12 to 30% slopes			
Brassfield silt loam, 6 to 12% slopes			
Caleast silt loam, 2 to 6% slopes	✓		
Culleaoka silt loam, 12 to 20% slopes			
Culleaoka flaggy silt loam, 20 to 30% slopes			
Culleaoka flaggy silt loam, 30 to 50% slopes			
Culleaoka silt loam, 12 to 25%, eroded			
Culleaoka silt loam, 2 to 6% slopes	✓		
Culleaoka silt loam, 6 to 12% slopes		✓	
Culleaoka silt loam, 6 to 12%, eroded		✓	
Cynthiana-Faywood complex, 25 to 50% slopes, eroded, very rocky			
Cynthiana-Rock outcrop complex, 12 to 30% slopes			
Eden Culleoka association, 25 to 50% slopes eroded			
Eden flaggy clay, 20 to 30% slopes			
Eden flaggy clay, 30 to 50% slopes			
Eden flaggy silty clay loam, 8 to 25% eroded			
Eden silty clay loam, 6 to 20% slopes			
Egam silty clay loam	✓		✓
Elk silt loam, 6 to 12% slopes		✓	
Elk silt loam, 6 to 12% slopes		✓	
Fairmount-Rock outcrop complex, 30 to 60% slopes			
Faywood silt loam, 12 to 30% slopes			
Faywood silt loam, 6 to 12% slopes		✓	
Faywood-Cynthiana complex, 12 to 25% slopes, eroded, very rocky			
Faywood-Cynthiana complex, 6 to 12% slopes, eroded, rocky			
Huntington silt loam	✓		
Kickapoo fine sandy loam	✓		
Lindside silt loam	✓		
Lowell silt loam, 12 to 20% slopes			
Lowell silt loam, 2 to 6% slopes	✓		
Lowell silt loam, 6 to 12% slopes		✓	
Lowell-Faywood complex, 12 to 25% slopes, eroded, rocky			
Mercer silt loam, 0 to 2% slopes	✓		
Mercer silt loam, 2 to 6% slopes	✓		
Mercer silt loam, 6 to 12% slopes		✓	
Newark silt loam	✓		✓
Nicholson silt loam, 2 to 6% slopes	✓		
Nicholson silt loam, 6 to 12% slopes		✓	
Nolin silt loam, frequently flooded	✓		
Nolin silt loam, frequently flooded (<i>if drained</i>)	✓		
Otway silty clay, 12 to 30% slopes			
Otway silty clay, 30 to 50% slopes			
Otway silty clay, 6 to 12% slopes			
Shelby silt loam, 6 to 12% slopes		✓	
Shelbyville silt loam, 2 to 6 %	✓		
Shrouts clay, 3 to 30% slopes, severely eroded			
Woolper silty clay loam, 2 to 6% slope	✓		
Woolper silty clay loam, 6 to 12% slopes		✓	

The soils crossed by the alternate routes north of the Kentucky River cannot be considered as being prime or important farmland because these soils are located on industrial land that is associated with the J.K. Smith Generating Station, which is owned by EKPC. As a result, these soils are not available for agricultural production.

From reviewing the information received from the NRCS, along with the *Soil Surveys* for the proposed project area, it was also determined that the proposed site for the West Garrard Switching Station is composed of Nicholson silt loam, 2 to 6 percent slope, and 6 to 12 percent slope, which are recognized as prime and statewide important farmland soils, respectively. However, neither of these two soils are recognized as being hydric. The proposed sites for the J.K. Smith Switching Station and the CT units consist of industrial land that has been graded in association with past construction activity at the J.K. Smith Generating Station and is not composed of prime farmland, statewide important farmland, or hydric soils.

3.8 CULTURAL RESOURCES

EKPC had cultural resource surveys performed within the proposed project area for aboveground historic resources. The area of potential effect (APE) for the surveys were 0.25 mile on either side of the centerline for the parallel/rebuild sections of the alternative routes and 0.5 mile on either side of the center line for the new build sections. A total of 34 previously documented sites were located in the proposed project's APE as a result of searching the records maintained by the Kentucky Heritage Council; and a total of 154 previously unidentified sites were uncovered as a result of field surveys. Of all the sites identified, 22 sites appeared to be eligible for listing, and six sites are listed in the *National Register of Historic Places* (See Table 3.8.a – *Historic Sites*, below). For more detailed information regarding the sites identified as a result of the cultural resource surveys, refer to A

Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345 KV Transmission Line in Clark and Madison Counties, Kentucky prepared by Palmer Engineering and the *Cultural Historic Survey for the Proposed Smith-West Garrard Transmission Line in Madison and Garrard Counties, Kentucky* prepared by Cultural Resource Analysts, Inc. at USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.html>.

Table 3.8.a – Historic Sites

CRA Site #	Palmer Site #	KHC Site #	Building Type	NRHP Eligibility
	2	Ma-13	Log Dwelling	Eligible
	3	Ma-824	Log Dwelling	Eligible
	12	Ma-203	Igo House/Greenlan Farm	Eligible
	14	Ma-200	Log Dwelling	Eligible
	15	Ma-833	Concrete bridge	Eligible
	34	Ma-851	WPA concrete bridge	Eligible
9		Ma-460	1 ½-story, 4-bay house with log sections	Eligible
10		Ma-863	Million-Maple Grove cemetery	Eligible
21		Ma-464	1 ½ -story, 5-bay, side-gable house with multiple cross-gables	Eligible
22		Ma-463	Newby Grocery Store	Eligible
25		Ma-156	1 ½ -story, 3-bay single-pen log house with a 2-bay frame addition and log ell	Eligible
30		Ma-157	2-story, 5-bay, brick I-house	Eligible
36		Ma-882	1-story, 3-bay Minimal Traditional house	Eligible
48		Gd-469	1 ½ -story, 3-bay American Bungalow	Eligible
52		Gd-15	1-story, 5-bay, Federal brick house	Eligible
71		Gd-31	1-story, 5-bay, side-gable stone house	Listed
74		Gd-58	1 ½ -story, 3-bay, double-pen log house	Listed
75		Gd-493	1 ½ -story, 2-bay, side-gable log house	Eligible
93		Gd-399	Dry lain rock retaining wall along the northwest side of KY 39	Eligible
96		Gd-396	Anderson Cemetery	Eligible
104		Gd-517	1 ½- story, 3-bay log house	Eligible
116		Gd-393	Stone springhouse	Eligible
117		Gd-392,	1 ½ -story, 3-bay, side-gable brick house	Eligible
		also Gd-69		
121		Gd-389	Bryant Cemetery	Eligible
123		Gd-66	2-story, 4-bay, side-gable brick Italianate house	Listed
146		Gd-67	1-story, 3-bay, hip-roof, Greek Revival brick house	Listed
147		Gd-27	1 ½ -story, 5-bay, log dogtrot house	Listed
148		Gd-65	Demolished	Listed

EKPC also had a Phase I archaeological survey performed at the proposed West Garrard Switching Station site that identified one previously unrecorded site, 15GD140, based on shovel test probing of the project area. Based on the Phase I survey report (*A Phase I Archaeological Survey for the Proposed West Garrard County 345 kV Substation, Garrard*

County, Kentucky. By Matthew E. Prybyliski. AMEC CRM Report 06-017, AMEC Project No. 1-4967-3600), this site was recommended by the report authors be potentially eligible for inclusion in the *National Register of Historic Places*. The site consists of the remnant of an eighteenth century farmstead and light prehistoric lithic scatter.

Based on the results of the Phase I survey, EKPC had a Phase II archaeological survey performed on site 15GD140 that recovered a total of 249 artifacts, all of which were confined to the plow zone. No evidence of intact sub-plow zone cultural deposits was observed during the Phase II survey. The Phase II survey report (*A Phase II Archaeological Investigation of Site 15GD140 Garrard County, Kentucky.* By Melinda J. King Wetzel. AMEC CRM Report 06-026. AMEC Project No. 1-4967-3900) recommended the site 15GD140 not be considered eligible for inclusion in the *National Register of Historic Places*, due to the lack of intact sub-plow zone cultural deposits. The report for the Phase II survey was supplied to the Kentucky Heritage Council for review and they concurred with the report's findings (See Kentucky Heritage Council letter from Mr. David L. Morgan to Mr. Joe Settles, EKPC, October, 24, 2006, Appendix A).

4.0 CUMULATIVE IMPACTS

4.1 DEFINITION OF CUMULATIVE IMPACTS

The Council on Environmental Quality regulations for the implementation of the *National Environmental Policy Act* defines *cumulative impacts* as, “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such action.” The cumulative impacts of the proposal are

addressed in the resource sections of *Section 5.0 Environmental Consequences* in this document. The region of influence and other projects considered when evaluating the cumulative impacts of the project are discussed in the following sections.

4.2 REGION OF INFLUENCE

The region of influence for the majority of the resources investigated was limited to the immediate vicinity of the proposed action. However, the region of influence, or *area of potential effect*, for aboveground cultural resources related to the proposed transmission line project was 0.25 mile on either side of the alternative routes that involved paralleling or rebuilding of existing transmission lines, and 0.5 mile on either side of the centerline involving greenfield sections; the region of influence for the Kentucky River and streams in the project area, including related fisheries, was downstream and in the immediate vicinity of the proposed action; and the region of influence for socioeconomics was the three counties that the proposed action would directly affect. Additionally, an air permitting analysis was performed to assess impact on air quality related values within the following five Class I areas located within 300 km of the proposed CT site:

- Mammoth Cave National Park (185 km);
- Great Smoky Mountains National Park (246 km);
- Joyce-Kilmer-Slickrock Wilderness Area (281 km);
- Linville Gorge Wilderness Area (290 km); and
- Shining Rock Wilderness Area (293 km).

For a more detailed discussion of the air permit required for this proposal see *Section 5.1.2 Construction and Operation Impacts*.

4.3 PROJECTS AND ACTIVITIES CONSIDERED

The following section identifies reasonably foreseeable actions occurring, proposed, or planned in the general project vicinity that may be relevant in the assessment of the

potential cumulative effects of the proposed project, *i.e.*, the incremental effects of the proposed CT and electric transmission project taking into account other past, present, and reasonably foreseeable actions in the area.

4.3.1 Potential Future Expansion at the Smith Site

Space will be available at the J.K. Smith Generating Station for the future installation of three additional CT units. EKPC currently is not proposing the installation of any additional CT units at the Smith site. However, should projected electric loads continue to be realized, EKPC would investigate the potential installation of the additional CT units in 2012, 2013, and 2014.

EKPC is proposing to construct a 278 MW Circulating Fluidized Bed (CFB) coal-fired unit to provide additional electric generating capacity to allow EKPC to meet its projected base load demand by 2011. In the CFB combustion process, limestone is mixed with the crushed coal and fired in a process that resembles a boiling fluid. The limestone removes the sulfur, reducing the SO₂ emissions, while converting it into a benign powder that is removed with the coal ash. CFB are capable of burning a wide range of fuels including tires and biomass, such as wood waste. The CFB is considered a clean coal unit with minimal air emissions. Initially, one unit will be constructed at the site. As capacity needs increase there is the possibility additional units could be added; however, no additional units are either planned or proposed. The CFB will be the subject of a separate environmental investigation. RUS is currently planning to supplement the existing Final Environmental Impact Statement prepared for the U.S. Department of Energy on the Kentucky Pioneer Energy Project, which was to be built on the Smith Site, but was never constructed. Start of construction for CFB

Unit 1 is scheduled for the summer of 2008, and the commercial operation date for the unit is scheduled for the summer of 2010.

4.3.2 Other Planned Energy Projects

There are no other reasonably foreseeable energy projects occurring, proposed, or planned in the general project vicinity that may be relevant in the assessment of the potential cumulative effects of the proposed action.

4.3.3 Other Projects

The Kentucky Transportation Cabinet is proposing the expansion of U.S. Highway 27 north of Lancaster to serve the increased traffic demand associated with the area. This expansion project would involve widening U.S. Highway 27 from two to four lanes from Kentucky State Route 34 in Northern Garrard County to the Stanford Bypass in Lincoln County. The proposed transmission line would cross the proposed expansion of U.S. Highway 27 near its intersection with KY 1355.

5.0 ENVIRONMENTAL CONSEQUENCES

The following sections of the document outline the potential impacts of the proposal on air quality, water quality, wetlands floodplains, soils, land use, vegetation, fisheries and wildlife, threatened endangered or rare species, cultural resources, transportation, noise, health and safety, interference with electronics, socioeconomics, waste management, and aesthetics

5.1 AIR QUALITY

5.1.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the air quality of the project area.

5.1.2 Construction and Operation Impacts

Exhaust from the engines of the machinery used to construct the proposed electric facilities may increase emissions in the proposed project area on a short-term basis. However, the components of exhaust are volatile and would probably move out of the immediate project area within a short period of time. Additionally, it is doubtful that the exhaust from such machinery would significantly contribute to the overall concentrations of ozone, nitrogen oxides, aldehydes or other noxious substances.

The dust associated with the proposed construction activity could have a small potential for affecting the air quality of the immediate project area. This source of air quality degradation, however, would not be anticipated to have any significant effect on the area. Any dust associated with construction activities would be short-term, lasting only through the construction phase of the project. The grading and land disturbing activities associated with the construction of the West Garrard Switching Station could produce small amounts of fugitive dust. However, the area where the proposed CT units would be installed, and the proposed J.K. Smith Switching Station would be constructed, has been graded as a result of past construction activity at the existing generating station, and would require very little, if any, grading activities for the construction of these proposed new facilities. As a result, very little fugitive dust would be expected for the construction of either of these two facilities.

Additionally, within the proposed electric transmission line ROW, vegetation would be cut from the proposed ROW and the areas denuded of vegetation would be very small. Consequently, the amount of air quality degradation to the immediately surrounding area through the construction phase of the proposed facilities would be expected to be negligible and there would be an immediate return to ambient air quality conditions for vehicle exhaust and dust once the construction activities are completed.

No dust would be associated with the maintenance of the proposed facilities once the construction activities are completed. The ROW would be maintained by a foliar method of herbicide application, possibly combined with some vegetation cutting, which would not produce any dust. The CT units and the switching stations would be inspected once every one to two months via a small truck on the facilities' entrance drives, which also would not produce any dust.

The herbicides proposed for use on the proposed electric transmission line ROW would not have any affect on the air quality of the project area. The applicators would be trained and licensed for the application of herbicides, and herbicide label directions would be strictly followed. Herbicide applications would also be made in accordance with the requirements of the Kentucky Division of Pesticides, and applicators would monitor weather conditions and would postpone or suspend applications when conditions become unfavorable as outlined below:

Application Method	Temperatures Higher Than (°F)	Humidity Less Than (%)	Wind (at Target) Greater Than (MPH)
Hand (cut surface)	n/a	n/a	n/a
Hand (other)	98	20	15
Mechanical (ground)	95	30	10
Aerial	95	30	5

The proposed CT units will be subject to the *Prevention of Significant Deterioration* (PSD) requirements of Section 101 of the *Clean Air Act* because the generating units will have the potential of emitting greater than 250 tons per year of a regulated criteria pollutant (Particulate matter, carbon monoxide - CO, sulfur dioxide – SO₂, nitrous oxide – NO_x, and volatile organic compounds - VOC). EKPC has projected that each of the proposed units would run approximately 2,000 hours per year. The emission specifications for each of the proposed new units operated on natural gas at 15% oxygen would be:

- NO_x - 5ppm,
- CO - 25ppm,
- SO_x - below detectable levels,
- HAPs - 0.0306 lb/hr.,
- VOCs - 11 lb/hr., and
- PM - 5 lb/hr.

EKPC has applied for a Title V Permit from the Kentucky Department for Environmental Protection, Division for Air Quality (KDAQ), for 5 LMS100 CT units (See e-mail from Mr. Chris Wathen, July 20, 2006, Appendix A). EKPC is considering constructing model 7EA or model LMS100, both manufactured by GE Energy, and the amendment of the Title V Permit application will reflect the type of CT that is ultimately chosen.

Once the units are constructed, EKPC will test run the units, taking pollutant measurements from the stack emissions. These measurements will be sent to KDAQ to demonstrate that the units meet the PSD requirements and to secure an operating permit for the units. EKPC will not be allowed to operate the units until it has received this operating permit, and EKPC anticipates it will receive the Title V permit from KDAQ in early 2008. EKPC has received a *Certificate of Public Convenience and Necessity* (CPCN) from the Kentucky Public Service Commission for the construction and operation of two LMS 100 CT

Units. Should EKPC decide to construct model 7EA peaking units, it will be required to amend the existing CPCN to reflect that change.

In accordance with 401 KAR 51:017 (Prevention of Significant Deterioration) requirements, air quality analyses were performed to assess whether emissions from the proposed new units would cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS) or PSD Class I and Class II increments. An analysis was also performed to assess impact on air quality related values in five Class I areas located within 300 km of the site. The analysis performed that evaluates the impacts of the emissions of the units also includes emissions from 3 additional CTs as well as two CFB units, along with associated equipment. The Class I areas are:

- Mammoth Cave National Park (185 km)
- Great Smoky Mountains National Park (246 km)
- Joyce-Kilmer-Slickrock Wilderness Area (281 km)
- Linville Gorge Wilderness Area (290 km)
- Shining Rock Wilderness Area (293 km)

The modeling results indicate that emissions from the project will not cause or contribute to an exceedance of any NAAQS, any Class II increment, or any Class I increment, nor will they adversely affect any Air Quality Related Values (AQRV) at any of the Class I areas. While not a requirement of the PSD Program, an air toxics analysis was also prepared. Based upon the results, the increase in emissions due to this project is not anticipated to cause adverse impacts.

The proposed electric generating units would utilize the *Best Available Control Technology* (BACT) and the BACT requirements of the *Prevention of Significant Deterioration* (PSD) requirements are more stringent than the *New Source Performance Standards* (NSPS) as outlined in 40 CFR Part 60 for controlling NO_x and SO₂. PSD

compliance assures that any decision to permit increased air pollution by the CT's is made only after careful evaluation of all the consequences of such a decision and ensures no "significant" impact to air quality. Therefore, by complying with the appropriate BACT requirements, the proposed CT units will automatically be in compliance with the relevant NSPS, and no significant effect on air quality would be expected.

5.1.3 Cumulative Impacts

The proposed electric transmission project would not be expected to have any significant cumulative effects on air quality. As outlined above, the direct and indirect air quality impacts of the proposed electric facilities would be expected to be minimal. Additionally, based on the licensing process described above for the proposed CT units, and the relatively small amount of air borne pollutants that would be emitted during the construction and operation of the proposed new electric generating units, the new units would only be expected to minimally contribute to any incremental effects on air quality of the project area. Thus, the proposed new facilities would not be expected to contribute to any significant incremental effects on air quality in light of other actions occurring in the project vicinity.

5.2 WATER QUALITY

5.2.1 No Action

The proposed electric project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the water quality of the project area.

5.2.2 Construction and Operation Impacts

The proposed construction activity associated with the proposed electric transmission project would not have any direct effects on rivers and streams. As described in Section 3.0

AFFECTED ENVIRONMENT, all the alternate routes investigated traverse a number of creeks and streams, as well as the Kentucky River. The proposed transmission line would span all of the watercourses involved, with no support poles placed within the channels; however, the proposed transmission project could have a small potential for water quality degradation of the river and streams due to the erosion of soils in association with water runoff on the construction sites. The mechanical cutting methods of ROW clearing associated with the proposed project could also potentially increase nutrients, storm flows, and sediment loads of the streams within the project area. Generally, the amount of increase depends on the degree of disturbance, the topography of the area, and the type of soil involved. The manual cutting methods of the transmission line construction would not substantially increase storm flow volumes and peaks. Although the vegetation would be cut, plant water use would be minimally affected because the plants would still be present on the ROW and would be using water. Additionally, EKPC would only be clearing a 150-foot wide area. The manual methods would not increase nutrients or sediment loads of the streams in the project area because litter and duff would be left intact. Duff and litter help slow water flow rates by absorbing water, decrease impacts to soil from rain, and dissipate water flows along the ground. These mechanisms minimize erosion and filter water runoff.

The construction activity associated with the proposed West Garrard Switching Station could affect the water quality of the area, especially the grading activities that would be required to make the site level. However, no significant effect to water quality would be expected from the proposed construction activity because EKPC would be employing accepted erosion control practices, which would incorporate *Best Management Practices* (BMPs) to prevent nonpoint source pollution and control stormwater runoff and sediment

damage to water quality. These erosion control practices would include the utilization of silt barriers, such as siltation fences and/or staked straw bales around any disturbed areas in the vicinity of the streams to filter runoff water. To aid in protecting the water quality of the project area, EKPC also would not initiate required land-clearing activities until absolutely necessary to reduce the amount of time bare soils are exposed to wind and water erosion. Additionally, areas of soil disturbed by the proposed construction activity would be temporary, lasting only through the construction stage of the project, and all disturbed areas would be stabilized and revegetated, as soon as practicable, once construction is completed. The proposed project could further cause water quality degradation if vegetation cut from the proposed ROW during the construction phase of the project falls into the river or stream channels. To mitigate this potential form of degradation, any vegetation falling into watercourses during construction would be removed and pulled back from the channels. EKPC will also prepare and maintain a *Stormwater Pollution Prevention Plan* (SWPPP) as required by the Kentucky Division of Water (KDOW). KDOW issues a *Kentucky Pollution Discharge Elimination System* (KPDES) general permit under KPDES Regulation 401 KAR 5:002, Section 1 (285). These regulations meet the federal requirements established under the *National Pollution Discharge Elimination System* (NPDES) permit required for construction activities that disturb 1 or more acres of soil. EKPC would obtain the authorization to construct under the permit and would comply with the requirements instituted under the permit.

The construction activity associated with the proposed J.K. Smith Switching Station would not be expected to have any significant effect on water quality. The proposed construction site has been graded nearly level as a result of previous construction activity at

the generating station and no major grading activities would be required for this proposed switching station. Therefore, soil disturbance at the site will be minimal.

The proposed project could have a potential of affecting water quality within the project area from the herbicides used on the proposed ROW entering surface water during maintenance operations associated with the proposed transmission line ROW. However, herbicide applications would be made in accordance with label directions and the Kentucky Division of Pesticides to guard against the contamination of water resources within the proposed project area. Herbicides could enter rivers and creeks during treatment by direct application or drift, or within water runoff after treatment. The risk of herbicides entering surface water by direct application would be low because applicators would monitor weather conditions to aid in protecting water quality and would postpone or suspend application operations when weather conditions become unfavorable as outlined in Section 5.1 *AIR QUALITY*. Applicators would also postpone herbicide applications during occurrences of precipitation or when precipitation is predicted to protect against herbicides affecting water resources in the area through rainwater runoff. EKPC's policy prohibits herbicide applications during periods of rain or when the threat of rainfall is imminent.

In addition to surface water, groundwater could be affected by herbicide applications through the vertical seepage of herbicides into aquifers. However, the use of vegetation buffer strips is an effective mechanism to aid in guarding against herbicides in rainwater runoff from affecting water quality. Consequently, EKPC contractors would identify the following features and utilize the following buffer strips, or zones, to further aid in protecting the quality of the water resources within the proposed project area:

- no herbicide would be applied within 30 horizontal feet of lakes, ponds, wetlands, perennial or intermittent springs, seeps, or streams;

- no herbicide would be applied within 100 horizontal feet of any public or domestic water source; and
- herbicide mixing, loading, or cleaning areas would not be located within 200 feet of any open water, or public or domestic water source.

Through the implementation of these mitigation requirements, the risk to water contamination would be minimal because the buffers would reduce herbicide concentrations through mixing and dilution.

Like the proposed facilities discussed above, EKPC's proposed new CT units would not have any significant impacts on the quality of water resources in the project area. The proposed site for the new CT units is not located in close proximity to any streams and the site is currently graded for the installation of the units. The current *Kentucky Pollution Discharge Elimination System* permit for the existing generating plant would not be modified for the installation of the proposed new units because no new discharge points would be required.

The existing CT units at the generating station use a maximum of 1,495 gallons of water per minute to control NO_x emissions and the water is withdrawn from the Kentucky River. The proposed CT units would not use water for NO_x emissions control. As a result, there would be no additional water withdrawal permit requirements for the proposed new units. Water is currently stored at the existing plant site in two 2.5 million gallon tanks. No increase in water storage capacity of the existing tanks would be required by the proposed project.

5.2.3 Cumulative Impacts

Significant cumulative effects on the water resources of the area would not be expected as a result of the proposed electric facilities because of the mitigation measures that would be implemented. The sediment load of the surface water caused by the proposed

project would be negligible to nonexistent, given the mitigation measures described above, and the herbicides that would be used on the proposed transmission line ROW would not leach into the groundwater or run off into surrounding surface waters in significant amounts. Additionally, the proposed use of herbicides to aid in managing vegetation within the ROW for the proposed electric transmission line would involve infrequent herbicide applications in relatively small quantities, and as a result of the incorporation of the above-described mitigation measures, the use of herbicides to maintain the proposed electric line ROW would not have any significant incremental effects on the water resources of the project area

5.3 WETLANDS

5.3.1 No Action

The *no action* alternative would not have any effect on wetlands because the proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative.

5.3.2 Construction and Operation Impacts

As described in Section 3.0 *AFFECTED ENVIRONMENT*, the alternate routes for the proposed new transmission line traverse wetland areas associated with the Kentucky River and numerous creeks, as well as a few very small isolated wetlands. The proposed transmission line would not have any direct effects on the wetland areas in question because the transmission line would be able to span the wetlands and would not result in the placement of support structures in any of these areas. The proposed transmission line also would not have any indirect effects on the wetlands because EKPC would be implementing *Best Management Practices* to protect the wetlands from sedimentation, combined with other mitigation measures to prevent the herbicides from leaching into the wetlands (See Section

5.2 *WATER QUALITY*). Additionally, no construction equipment or vehicles would be permitted within the wetland areas.

As described in Section 3.0 *AFFECTED ENVIRONMENT*, no wetlands depicted on the NWI Maps are located at either of the proposed switching station sites, or the proposed site for the CTs, and none of the soils located at any of these sites are recognized as being hydric. As a result, the construction of the proposed switching stations or the CT units at the proposed construction sites would not have any impacts on jurisdictional wetland areas.

5.3.3 *Cumulative Impacts*

Significant cumulative effects on the identified wetland areas caused by the proposed electric transmission line project would not be expected. Sediment load of the wetlands, if any, would be negligible given the mitigation measures that would be implemented, and the herbicides would not be expected to combine with rainwater run off in significant amounts and reach the wetland areas.

5.4 *FLOODPLAINS*

5.4.1 *No Action*

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative and, therefore, the *no action* alternative would not have any effect on floodplains.

5.4.2 *Construction and Operation Impacts*

Neither of the proposed switching station sites, nor the proposed site for the new CT units are located within floodplain areas and, therefore, the construction of these facilities at their proposed sites would not have any effect on important floodplain areas.

As depicted in Section 3.0 *AFFECTED ENVIRONMENT*, all of the alternate routes for the proposed new transmission line traverse floodplain areas associated with numerous creeks and streams, including the Kentucky River. There are no practicable alternatives to crossing these floodplains should the proposed transmission line be constructed because a number of the floodplain areas in question would be crossed on either existing electric utility line ROWs or adjacent to such ROWs. Moving the alignment of the proposed new transmission line off, or away from, the existing ROW in an attempt to avoid the floodplain areas would add to construction costs and would have more of an effect on the existing land use in the project area, as compared to the proposed alignment, due to the new ROW that would be required. Moving the proposed transmission line alignment off, or away from, the existing ROW would also have more of an effect on the existing land use in the project area due to the further transection of parcels of land in the area. Additionally, the alternate routes investigated are all located generally perpendicular to the waterways identified in Section 3.0 and the floodplain areas extend all along the river and creeks. As a result, it would not be practicable to try to avoid crossing the floodplain areas by attempting to route around them, adding unreasonably to the length and construction costs of the line.

The proposed transmission line would not have any significant effect on the identified floodplain areas. Due to the fairly narrow width of the floodplains at the proposed crossings for each of the alternate routes, the transmission line would be able to span the majority of the floodplain areas, thereby avoiding the placement of support structures within these areas. However, a few of the identified floodplain areas, especially in the vicinity of the Kentucky River, may not be able to be spanned due to engineering design constraints; and the placement of support structures within the floodplains may be unavoidable. However, the

proposed transmission line support structures would be pole type structures that would have very little, if any, effect on flood flows or levels.

5.4.3 Cumulative Impacts

Due to the narrow width of the floodplains crossed, most crossings will be spanned by the line, and the pole type structures proposed for use have little, if any impacts, on the floodplain, cumulative effects from the placement of the proposed electric transmission line within the floodplain areas would not be expected.

5.5 SOILS

5.5.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the soils located within the project area.

5.5.2 Construction and Operation Impacts

During the construction of the proposed electric transmission line the soils within the proposed ROW could be affected by vehicles being driven on the ROW causing compaction and erosion of soils. The weight of the vehicles and associated machinery on the ground causes the compaction of the soil. Soil compaction increases bulk density and decreases aeration porosity. This affects the soil's ability to store and supply air, water and nutrients. Soil compaction on the proposed ROW would be minimal. To aid in mitigating soil compaction, off-road travel of construction vehicles would be kept to a minimum. However, areas affected by construction access roads and areas of sustained gentle slopes along the proposed ROW would experience soil compaction due to the use of construction equipment.

The construction of the proposed new transmission line is not expected to have any significant effect on the soils of the project area. Over one third of the proposed transmission line route would involve the rebuilding of an existing electric utility line with adequate electrical clearances between the vegetation and the existing electrical conductors. Consequently, minimal tree and vegetation removal would be required along this section of the proposed route to maintain electrical clearances. Along the new sections of the proposed transmission line, vegetation within the ROW would be cut to achieve electrical clearances, leaving roots intact to aid in holding soils in place. Soils would be exposed to wind and water erosion at support structure locations within the proposed ROW to allow for the installation of the support structures, which represents a very small amount of the land within the transmission line ROW (approximately 0.005 acre at each structure). Soils would also be exposed at construction access road locations along the proposed ROW.

The impact to the soils of the project area by the construction of the proposed new CT units would be minimal, if not nonexistent, and no significant cumulative effects to the soils of the area would be expected. The site for the proposed two new units was previously graded as a result of the construction of the CT units currently located at the generating station and access to the proposed construction site would be by way of existing access roads at the generating facility. As a result, no major soil disturbing activities would take place during the installation of the new CT units. Stormwater runoff at the existing generating site, including the proposed site for the new units, is currently being collected in sedimentation basins that were constructed for the existing CTs. These basins aid in preventing any soils eroded by rainwater runoff from leaving the site.

During the construction of the proposed switching stations, soils at the construction site would be exposed to erosion. Like the proposed CT units discussed above, the proposed construction site for the new J.K. Smith Switching Station has been graded as a result of past construction activity at the existing J.K. Smith Generating Station and access to the construction site would be achieved by existing roads at the generating facility. Access to the proposed West Garrard Switching Station site would be achieved by way of an entrance driveway from State Route 52 that would be surfaced with crushed stone to control erosion.

As outlined in Section 5.2 *WATER QUALITY*, EKPC would be implementing soil erosion practices during the construction phase of the project to guard against soils leaving the construction sites, and disturbed areas would be stabilized and revegetated, as soon as practicable, once construction activities are completed. Soil erosion on the proposed transmission line ROW during maintenance cycles would not be a problem because mechanical equipment may not be used to perform maintenance procedures, and if such equipment is used it normally only involves one or two passes to perform maintenance procedures, which would not create an erosion problem. As a result, no significant erosion problems would be anticipated from the construction of the proposed electric facilities.

5.5.3 Cumulative Impacts

As outlined above, no major erosion problems would be anticipated from the construction and maintenance of the proposed project; therefore, the proposed electric project would not have any significant cumulative effects to the soils located on the proposed ROW or the proposed construction sites.

5.5.4 Prime and Important Farmland Soils

5.5.4.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the prime and important farmland soils located within the project area.

5.5.4.2 Construction and Operation Impacts

As described in Section 3.0 *AFFECTED ENVIRONMENT*, the alternate routes investigated for the proposed new electric transmission line traverse soils that are recognized as prime and statewide important farmland soils. There would be no practicable alternatives to traversing prime and important farmland soils in the project area should the electric transmission line be constructed because these types of soils are scattered throughout the area and would be unavoidable by the electric transmission line route. The activities associated with the proposed construction of the new transmission line could have short-term effects on prime and important farmland soils depending upon the time of year that construction takes place. Some of these types of soils could be temporarily lost to production for one growing season due to the nature of the construction activity and the ingress and egress of construction equipment and vehicles. However, the following growing season, after construction is completed, the majority of these types of soils would be returned to production because EKPC has a policy of allowing agricultural practices within its ROWs as long as they do not interfere with, or jeopardize, the operation of its lines. The long-term effect of constructing the proposed transmission line on the prime and important farmland soils would be minimal. Approximately one third of the proposed route for the new line would involve the rebuilding of an electric transmission line on existing ROWs, which would not have any significant

effect on farmland soils. Additionally, due to EKPC's policy of allowing agricultural production within its ROWs, prime and important farmland soils would only be permanently lost to agricultural practices in the immediate vicinity of the transmission line support pole locations within the proposed ROW, which represents a very small amount of the total ROW.

As described in Section 3.0 *AFFECTED ENVIRONMENT*, the proposed sites for the new CT units and the J.K. Smith Switching Station are located at an industrial site associated with the J.K. Smith Generating Station and both sites were graded as a result of previous construction activity at the existing generating station. Therefore, no prime or statewide important farmland soils are located on the proposed construction site and no such farmland soils would be affected by the construction of these proposed new facilities.

The proposed site for the West Garrard Switching Station is composed of prime and important farmland soils. There are no practicable alternatives to affecting prime and statewide important soils should the proposed West Garrard Switching Station be constructed. Due to the amount of the prime and statewide important farmland soils in the area and the negotiations with the landowners, affecting these types of soils would be unavoidable. However, the construction of this proposed new switching station is not expected to have any significant effects on prime and important farmland soils because of the relatively small amount of these types of soils that would be permanently taken out of production in relation to the amount in the project area.

5.5.4.3 Cumulative Impacts

The proposed electric transmission project is not expected to have any cumulative effects on prime and important farmland soils due to the relatively small amount that would be taken out of production

5.6 LAND USE & RECREATION

5.6.1 No Action

The proposed electric project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on existing land use or recreation activities located within the project area.

5.6.2 Construction and Operation Impacts

The proposed electric transmission project would not be expected to have any significant effect on the existing land use in the project area. Approximately one third of the proposed route for the transmission line would involve the rebuilding of existing electric utility lines on existing ROWs and the existing land use along these sections of the proposed transmission line route would remain unchanged. The land use along the agricultural portions of the proposed new line sections would also remain unchanged with the exception of support structure locations because EKPC has a policy of allowing agricultural practices within its ROWs, as long as such practices do not interfere with, or jeopardize the operation of its lines. In addition, approximately 15 miles, or 42 percent, of the proposed route parallels existing electric transmission line ROWs, which would aid in mitigating potential effects that the proposed new line could have on the existing land use within this area.

The alternate routes developed for the proposed new transmission line were located in an attempt to avoid concentrated residential development, and in negotiation with the landowners that would be affected, although the proposed route does pass within the vicinity of some rural residential development (See Table 5.6.a). As a result, the alternate routes for the proposed new transmission line extend through rural areas and would have minimal impacts on existing residential development in the project area.

Table 5.6.a – House Proximity to Alternate Routes

Alternate Routes	A	B	C	D	E	F	G	H
Houses 0 to 100’ from ROW edge	3	7	4	8	4	8	4	8
Houses 101 to 300’ from ROW edge	23	30	23	30	21	28	18	25
Houses 301 to 500’ from ROW edge	37	45	36	44	34	42	30	38

Alternate Routes	Ar	Br	Cr	Dr	Er	Fr	Gr	Hr
Houses 0 to 100’ from ROW edge	2	6	3	7	3	7	3	7
Houses 101 to 300’ from ROW edge	25	33	25	33	23	31	20	28
Houses 301 to 500’ from ROW edge	36	43	35	42	33	40	29	35

Within the wooded portions of the proposed ROW, the woody-stemmed vegetation would have to be removed from the proposed ROW in order to achieve electrical clearances between the electrical conductors and vegetation. As a result, there would be a change in the land use within the wooded sections of the ROW. Approximately 15.6 percent of the proposed route for the transmission line, or roughly 101 acres, would require clearing and would result in a change in the existing land use. However, this amount of clearing is relatively small in relation to the total project area and would not constitute a significant change in land use given the relatively large amount of wooded areas in the region.

The proposed site for the West Garrard Switching Station would not have any significant adverse impacts on the existing land use of the project area. The site is removed from the highway by a distance of roughly 1,000 feet and it is surrounded by agricultural land currently used for cattle grazing. Additionally, the proposed site is not located near any concentrated residential development, although there is some rural residential development located in the surrounding areas (See Table 5.6.b). The proposed site is also located adjacent to an existing 345 kV electric transmission line, which would be a compatible use with the

proposed new switching station. As a result, the construction of the new switching station at the proposed site would not be in conflict with the surrounding land uses.

Table 5.6.b – House Proximity to West Garrard Switching Station Site

<i>Distance from Site</i>	0 - 1,000 feet	500 - 1,000 feet	1,100 - 1,500 feet	1,501 - 2,000 feet	2,001 - 2,500 feet	2,001 - 2,500 feet	Total 0 – 2,500 feet
<i>No. of Houses</i>	0	6	6	2	4	4	16

EKPC’s proposed new J.K Smith Switching Station and new CT units would be compatible with, and would not have any adverse impacts on, the existing land use in the project area. The proposed sites for these planned facilities are located at an industrial site associated with EKPC’s existing electric generating facility in Clark County, Kentucky. The J.K. Smith Generating Station is composed of 3,200 acres of land, which serves to isolate the generating station from surrounding land uses. The proposed construction sites are not located in close proximity to any residential or commercial development. The closest house is almost a mile away and the closest school is located slightly over three miles away from the sites (See Section 3.0 *AFFECTED ENVIRONMENT*). Therefore, the construction of the new CT units or switching station at the proposed site would not have any cumulative effects on the existing land use within the project area.

As described in Section 3.0 *AFFECTED ENVIRONMENT*, no developed recreational facilities, such as, campgrounds or picnic areas, exist within the project impact area and, as a result, these types of areas would not be affected by the proposed electric transmission project. Incidental hiking, and deer and small game hunting activities could occur within the project area and could be affected by the proposed project. However, such activities would take place on a case-by-case basis and any effect to these types of activities by the proposed project would be minimal, if at all.

5.6.3 Cumulative Impacts

As described above, the proposed electric transmission line project would have minimal effects on the existing land use and incidental recreational activities that may occur within the project area. As a result, no significant cumulative impacts on land use and recreational activities would be expected by the proposed project.

5.7 VEGETATION

5.7.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the vegetation within the project area.

5.7.2 Construction and Operation Impacts

The portions of the proposed transmission line that would extend across agricultural lands would have minimal impacts on vegetation because vegetation would only require removal at support pole locations involving less than 0.005 acre at each location. The portions of the proposed route located on existing electric transmission line ROWs would also have minimal effects on vegetation. Electrical clearances between the existing electric conductors and the vegetation within the existing ROWs currently exist and there would be little, if any, vegetation cutting required within these sections to achieve electrical clearances for the proposed new line.

The herbicides being proposed to manage vegetation during the maintenance of the transmission line ROW would by design kill or injure any plants coming into contact with the chemicals. EKPC is proposing the use of herbicides to control targeted woody-stemmed vegetation on the proposed ROW, but non-target plants could be injured by herbicide drip,

over spray, drift or accidental discharge. Herbicide drift should not be an issue, however, because such drift can be minimized and managed through proper application techniques under proper environmental conditions. As part of the proposal, applicators would be appropriately trained on the effects of wind and other environmental conditions on off-site herbicide movement. Weather would be monitored and herbicide applications would be suspended if temperature, humidity or wind speeds become unfavorable (See Section 5.1 *AIR QUALITY*).

The introduction of herbicide applications, as described in the proposal, would result in vegetation on the ROW becoming comprised mostly of low growing plant species including shrubs, ferns, grasses, forbs and low growing tree species, such as dogwoods. The majority of the taller growing tree species would be eliminated over time by the herbicide applications. The utilization of herbicides would also result in an increase in the diversity of the vegetation within the ROW. Through the use of herbicides, woody-stemmed species within the ROW would be reduced or eliminated, and competition for low growing species would be reduced. Many of these low growing species require open areas to thrive and with the absence of tree cover, low growing plant communities can better become established. In some instances, under the right conditions, seeds that may be present on the ROW and have a long period of viability will germinate.

The proposed switching stations would require the removal of the vegetation located on each of the proposed sites to allow for the construction of the proposed new facilities and the installation of the electrical equipment. As described in Section 3.0 *AFFECTED ENVIRONMENT*, the proposed West Garrard Switching Station site is currently composed of pastureland, which is being used for cattle grazing. The construction activity associated with

this proposed new switching station would affect a maximum of ten acres of land. The proposed site for the J.K. Smith Switching Station is located on industrial land associated with the J.K. Smith Generating Station that was previously graded in relation to construction activity at the generating station. The maximum amount of land affected by the proposed J.K. Smith Switching Station would be approximately eight acres. The proposed site for the new CT Units is currently devoid of vegetation and the installation of the CTs on the proposed site would not have any affect on vegetation.

The construction of proposed electric transmission line would involve the cutting of trees within the new sections of the proposed ROW to provide adequate electrical clearances for the proposed transmission line. However, the proposed transmission line ROW would not change the overall land use, forest types or stand conditions within the wooded portions of the project area and, as a result, fragmentation of the forested lands within the area would not be a concern. Forest fragmentation occurs when the land use of a block of forested land is changed in such a manner that one section of the forest becomes isolated from the other, such as establishment of a strip coalmine or construction of a shopping center. The proposed ROW would resemble an area that has been naturally disturbed by a strong straight-line wind and would not result in isolating sections of the forest. Vegetation in the proposed ROW would ultimately consist of shrubs, grasses and forbs, which would not present a barrier to wildlife species, and wildlife could traverse or move about within the ROW. The construction of the switching stations or the installation of the new CT units also would not result in forest fragmentation because the proposed sites for these facilities are not located in wooded areas.

5.7.3 Cumulative Impacts

The cumulative effect on the vegetation of the project area by creating the proposed ROW and maintaining it with herbicides would be a reduction of tall growing plant species and an increase in shrub, forb and herbaceous species. The indirect cumulative effect would be the establishment of a relatively stable low growing plant community requiring minimal treatment in the future. The proposed ROW would promote a more stable, lower growing plant community, resulting in increased diversity of vegetation type and decreased intensity of management in the future. Therefore, no significant cumulative effects on vegetation would be expected by the proposed project.

5.8 FISHERIES & WILDLIFE

5.8.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on the wildlife located within the project area.

5.8.2 Construction and Operation Impacts

Those portions of the proposed transmission line that would extend across agricultural land would result in minimal impacts to wildlife species because very little, if any, wildlife habitat would be lost within those portions. The construction of the proposed line across agricultural lands could have a minimal effect on deer, birds, and other wildlife species moving through the immediate area due to the noise and human activity associated with the construction; however, the disruption to such species within these areas would be temporary, only lasting through the construction phase of the project. The construction of the portions of the proposed transmission line that utilize existing electric utility line ROWs would have a

similar effect on fauna species as those portions of the proposed ROW extending across agricultural lands due to the human activity and noise associated with the construction activity.

Different wildlife species require different habitats composed of unique arrangements of food, water and cover to survive. As changes in habitats occur, the variety and abundance of wildlife species change, as well. The cutting of the vegetation from the proposed transmission line ROW in wooded areas as described in the proposed project may change the movement of wildlife through the ROW due to the cut vegetation. The proposed ROW would produce a linear opening in wooded areas where wildlife habitat would be changed from forested land to early successional type habitat. Bird species favoring this type of successional habitat, such as the eastern towhee, northern cardinal, song sparrow, eastern bluebird, white-eyed vireo, northern bobwhite quail and the prairie warbler would benefit by the proposed transmission line ROW. The proposed ROW would also provide habitat for a number of small mammal species and birds of prey, as well as provide browsing habitat for a number of wildlife species, such as deer. Wildlife species favoring forested type habitats, such as wood thrush, red-eyed vireo, eastern wood pewee and the ovenbird would not benefit from the proposed ROW. However, due to the large amounts of forested areas in the region in relation to the relatively small amount that would be affected by the proposed new electric transmission line, the wildlife species favoring the forested type habitat should not be significantly affected.

Construction of the proposed ROW would result in the development of edge habitat. Edge habitat occurs when two plant communities meet. The edge habitat established by the proposed ROW would generally be between a forested and a grass/forb plant community.

Shrubs and young trees would grow to form the edge, or transition zone from grass/forb to forestland. The proposed ROW would be 150 feet wide. The width of the edge would eventually be approximately 10 feet along either side of the ROW. The width of the ROW would provide nesting habitat for bird species, such as, the white-eyed vireo, yellow-breasted chat, northern cardinal, wild turkey and song sparrow.

The cutting blades of the mechanical equipment used to clear the proposed ROW could injure or kill individual wildlife species caught by the equipment, such as small mammalian, amphibian and reptile species, and nesting birds. The noise produced by the cutting machinery may have short-term impacts to wildlife species in and around the ROW by causing these species to avoid the immediate area. The exhaust from the engines of the machinery could result in the movement of wildlife out of the treatment area on a short-term basis. However, the components of exhaust are volatile and would probably move out of the immediate project area within a short period of time.

The proposed transmission project could potentially affect fish and other aquatic species living in, and downstream from, the project area should a large amount of sediment be eroded from the construction sites and be introduced to the surface water system and transported downstream. However, the proposed project is designed to prevent this from happening by reducing the potential of erosion runoff. As described in Section 5.2 *WATER QUALITY*, EKPC would be implementing *Best Management Practices* (BMPs), as well as other erosion protection measures, to prevent non-point source pollution and sediment damage to water quality. As a result, fish populations living in, or downstream from, the proposed project area should not be affected as a result of implementing the proposed project.

The proposed use of herbicides by EKPC to manage vegetation within the proposed transmission line ROW would not be expected to have any adverse effects on the wildlife, fish or other terrestrial or aquatic species living in and around the proposed project area. The herbicides that would be used on the ROW would be approved by EPA and would be strictly applied according to label directions by licensed applicators.

The proposed construction site for the West Garrard Switching Station is currently being used as pastureland and, as such, the construction of this facility at the proposed site would not result in the loss of high quality wildlife habitat and should not have any significant effect on wildlife species. The proposed sites for the J.K. Smith Switching Station and the CT units are composed of industrial land that was graded in association with past construction activity at the existing J.K. Smith Generating Station. The only wildlife in the vicinity of these project sites would be deer and small birds, reptiles, and mammals that are located in the outlying vegetation covered areas, outside of the immediate industrial complex. As a result, no wildlife habitat would be lost due to the construction of the proposed new switching station or CT units at the proposed sites. Therefore, other than temporary minor effects to wildlife, if any, caused by the noise and activity associated with the construction of the proposed new facilities at the J.K. Smith Generating Station, no effects to wildlife species would be caused by these proposed new facilities; and no cumulative effects would be expected.

5.8.3 Cumulative Impacts

No significant cumulative effects to the wildlife of the project area would occur should the proposed electric transmission project be constructed. As outlined above, the proposed

project would not be expected to have any adverse effects on terrestrial or aquatic wildlife species, and some species would benefit from the proposed new ROW.

5.9 THREATENED, ENDANGERED, OR RARE SPECIES

5.9.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative and, therefore, the *no action* alternative would not have any effect on the threatened, endangered or rare species.

5.9.2 Construction and Operation Impacts

EKPC conducted biological surveys, including mist-netting surveys, for the proposed electric transmission project impact area (including the proposed switching station sites), the purpose of which was to determine the possible presence/absence of any rare, threatened, or endangered species in the area. The mist netting surveys were conducted over 50 nights, during which 267 bats of seven species were captured, including 20 federally endangered gray bats (*Myotis grisescens*). The proposed project corridor was subsequently surveyed for the presence of caves and sinkholes that could serve as roosting habitat for the gray bat and none were found. The survey report concludes that the proposed transmission project is not likely to adversely affect the availability of foraging habitat for the gray bat, and the gray bat or its habitat should not be adversely affected. No federally endangered Indiana bats (*Myotis sodalis*) were captured as a result of the mist netting surveys and the survey report concludes that due to the lack of suitable habitat and the removal of a minimal number of trees, the proposed transmission project should not adversely affect this species or its summer habitat. The *Mist Netting Survey for the Proposed Smith – West Garrard Transmission Line and*

Substations, Clark, Madison, and Garrard Counties, KY can be reviewed online for further information at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

EKPC also conducted a Biological Assessment/Evaluation (BAE) of the proposed project area which included detailed analysis of those federally listed or federal candidate species that are known to exist in the area of influence for this project and which include the Indiana bat (*Myotis sodalis*), the gray bat (*Myotis grisescens*), Lesquereux's bladderpod (*Lesquerella globosa*), running buffalo clover (*Trifolium stoloniferum*), and bald eagle (*Haliaeetus leucocephalus*). The BAE report concluded that no adverse direct effects, indirect effects, or cumulative effects would be expected to any of these species as a result of constructing the proposed project. The *Biological Assessment/Evaluation for the Proposed Smith – West Garrard 345 kV Transmission Line and Switching Stations Project, Clark, Madison, and Garrard Counties, Kentucky* can be reviewed online for further information at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

The mist netting survey and BAE reports were provided to the U.S. Fish and Wildlife Service (USFWS) for review and comment. The USFWS reviewed the reports and responded that it concurred with the reports' findings and that the requirements of Section 7 of the Endangered Species Act have been fulfilled (See USFWS letter from Mr. Virgil Lee Andrews, Jr. to Mr. Gary W. Gilpin, GILPIN GROUP, January 16, 2007, Appendix A).

The proposed site for the planned new CT units is located in an industrial area that has been previously graded due to prior construction activity at the existing generating station. As a result, favorable habitat for federally listed, and proposed for listing, threatened or endangered, flora or fauna species, or rare species, does not exist on the proposed site. Therefore, threatened, endangered, or rare species would not be affected by the construction

and operation of the proposed new units, and cumulative effects to such species would not occur. The FWS was contacted pertaining to the proposed new CT units in relation to threatened and endangered species, and they concurred with this determination (See USFWS stamp signed by Mr. Leroy M. Koch and dated April 21, 2006, located on the bottom of GILPIN GROUP letter from Mr. Gary W. Gilpin to Mr. Virgil Lee Andrews, Jr., FWS, March 17, 2006, Appendix A).

The Kentucky Department of Fish & Wildlife Resources (KDFWR) was contacted regarding the proposed electric transmission project in relation to threatened and endangered species. The KDFWR responded that it was concerned regarding possible effects on the gray bat and requested that the USFWS be contacted for further guidance (See KDFWR letter from Ms. Marla Barbour Callaghan to Mr. Gary W. Gilpin, GILPIN GROUP, January 8, 2007, Appendix A). The KDFWR was also contacted regarding the proposed CT units in relation to threatened, endangered and rare species, and the KDFWR responded that it, “does not expect impacts to listed species and/or critical ecological habitats due to the nature of the project” (See KDFWR letter from Mr. Doug Dawson to Mr. Gary W. Gilpin, GILPIN GROUP, April 12, 2006, Appendix A).

5.9.3 Cumulative Impacts

The BAE report concluded that no adverse direct effects, indirect effects, or cumulative effects would be expected to any of these species as a result of constructing the proposed project. The USFWS reviewed the reports and responded that it concurred with the reports’ findings and that the requirements of Section 7 of the Endangered Species Act have been fulfilled (See USFWS letter from Mr. Virgil Lee Andrews, Jr. to Mr. Gary W. Gilpin, GILPIN GROUP, January 16, 2007, Appendix A). The KDFWR was also contacted

regarding the proposed CT units in relation to threatened, endangered and rare species, and the KDFWR responded that it, “does not expect impacts to listed species and/or critical ecological habitats due to the nature of the project” (See KDFWR letter from Mr. Doug Dawson to Mr. Gary W. Gilpin, GILPIN GROUP, April 12, 2006, Appendix A). Based upon the results of the surveys and correspondence with the USFWS and KDFWR, no significant cumulative effects are expected from this proposal

5.10 CULTURAL RESOURCES

5.10.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the no action alternative. Therefore, the no action alternative would not have any effect on cultural resources located within the project area.

5.10.2 Construction and Operation Impacts

The Section 106 regulations require the responsible federal agency (in this case, USDA Rural Development) to identify the area in which the undertaking may directly or indirectly alter the character or use of historic properties, if such properties exist, 36 CFR §§ 800.4(a)(1), 800.16(d). The area of potential effect (APE) defines the geographic scope of the agency’s subsequent identification and assessment activities. The APE was identified in consultation with the SHPO. In this case, USDA Rural Development, working through EKPC, has consulted with the State Historic Preservation Office (SHPO) and has identified the APE for the sections of the project as follows:

Aboveground Cultural Historic Resources:

The APE for aboveground cultural historic resources for the sections of the Project alternatives that involve paralleling or rebuilding an existing transmission line would occur in

an area extending one-quarter mile (0.25) on either side of the centerline for the alternative routes. The APE for aboveground cultural historic resources for the sections of the Project alternative that involve the construction of the transmission line along an alignment with no existing line (or “greenfield” routes) would extend for one-half mile on either side of the centerline for the alternative routes.

Archaeological Resources:

345 kV Switching Stations: Due to the subsurface disturbance that would occur at the proposed West Garrard Switching Station, EKPC, on behalf of USDA Rural Development, commissioned an archaeological investigation of the proposed site. The proposed switching station on the J.K. Smith Power Station did not require an archaeological investigation since archaeological investigations were conducted when J.K. Smith Power Station was sited and the site has been subsequently disturbed for construction of the existing power station at the site.

CT Units: The proposed CT Units at the J.K. Smith Power Station did not require an archaeological investigation since archaeological investigations were conducted when J.K. Smith Power Station was sited and the site has been subsequently disturbed for construction of the existing power station at the site.

Smith – West Garrard Transmission Line: In a conference call between the Kentucky Heritage Council (KHC) and EKPC on November 2, 2006, it was determined that performance of a Phase I archaeological survey should be postponed until a centerline has been established for the Project following USDA Rural Development’s completion of the remainder of the Section 106 process and its review under the *National Environmental Policy Act* (NEPA).

Once USDA Rural Development has completed those Section 106 and NEPA activities and has issued a Finding of No Significant Impact (FONSI) or other decision document confirming its selected alternative for the Project, USDA Rural Development, working through EKPC, will commission a Phase I archaeological survey within the one hundred and fifty foot wide transmission line right-of-way (seventy-five feet on each side of the centerline) of the selected alternative. The specific locations for the Phase I investigation will include the proposed locations for electric transmission line support structures (i.e., poles), as well as any other area that will require subsurface disturbance. (Pursuant to the advice of the SHPO and consistent with 36 CFR § 800.4(b)(2), USDA Rural Development may choose to defer final identification and evaluation of archaeological resources within areas of high probability until the final centerline is confirmed.)

The SHPO concurred with the APEs identified above in four letters dated May 22, October 24, November 2, and December 11, 2006. Since that time, four cultural resource reports related to the project have been prepared. The results of these reports are discussed below. The reports prepared are as follows:

A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345kV Transmission Line in Clark and Madison Counties, Kentucky. Jayne H. Fiegel, Mathia Scherer, and Carrie Naas, Authors. Kentucky Heritage Council Site Check No. FY07-0001.

Cultural Historic Survey For The Proposed Smith-West Garrard East Kentucky Power Cooperative Transmission Line In Madison And Garrard Counties, Kentucky. Jacqueline P. Horlbeck, Craig A. Potts, and Trent Spurlock, Authors. Contract Publication Series 06-187. Kentucky Heritage Council Site Check No. FY07-0002.

A Phase I Archaeological Survey for the Proposed West Garrard County 345 kV Substation, Garrard County, Kentucky. By Matthew E. Prybyliski. AMEC CRM Report 06-017, AMEC Project No. 1-4967-3600

A Phase II Archaeological Investigation of Site 15GD140 Garrard County, Kentucky. By Melinda J. King Wetzal. AMEC CRM Report 06-026. AMEC Project No. 1-4967-3900

As described in Section 3.0 *AFFECTED ENVIRONMENT*, these surveys identified a number of aboveground historic resources that appear to be eligible for inclusion in the National Register of Historic Places and six sites that are currently listed in the National Register. With a few exceptions, the survey reports concluded that the proposed electric transmission project would either have no effect or no adverse effect on the historic resources identified. The aboveground cultural resource survey reports were supplied to the SHPO for review and comment.

After reviewing the reports, the SHPO responded that it concurred with the majority of the recommendations contained in both reports. However, the SHPO did not agree with the reports' recommendation regarding the ineligibility of KHC Site #'s Ma-13, Ma-824, Ma-200 and Ma-833, responding that these sites have the potential for being listed in the *National Register of Historic Places*. The SHPO also recommended that the proposed transmission line would have *no effect* on these sites. Additionally, the SHPO disagreed with the following recommendations contained in the reports.

- *A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345 KV Transmission Line in Clark and Madison Counties, Kentucky* recommends that only Section 2 of the alternate routes investigated would have an *adverse effect* on Site 12. However, after reviewing the report, the SHPO recommended that Section 3 of the alternate routes, as well as Section 2, would have an *adverse effect* on this eligible property. Through consultation with the SHPO and consulting parties, the USDA Rural Development agreed with the SHPO's recommendations and determined that all of the alternate routes investigated (A-Hr) would have an adverse effect on this resource.
- The *Cultural Historic Survey for the Proposed Smith-West Garrard Transmission Line in Madison and Garrard Counties, Kentucky* recommends that site 104 is eligible for inclusion in the *National Register of Historic Places* under Criterion C. The SHPO reviewed the report and recommended that this site be considered eligible for

listing in the *National Register of Historic Places* as a rural historic landscape under Criterion A, as well as Criterion C. However, the SHPO made the same *no effect* recommendation regarding the alternate transmission line routes in relation to Site 104.

(See SHPO letters from Dr. David Pollock, PhD., to Mr. Joe Settles, EKPC, March 12, 15, & 30, 2007, Appendix A).

Through consultation with the SHPO, consulting parties, and EKPC, USDA Rural Development has determined twenty-eight (28) of the 188 aboveground resources identified are either eligible for listing or already listed on the NRHP. USDA Rural Development, through consultation with the SHPO, consulting parties, and EKPC, has identified potential adverse effects on two of the twenty-eight properties eligible for listing or listed on the NRHP within the APE of the Project for Alternate Route Hr. The cultural resource reports are available at the USDA Rural Development’s website: <http://usda.gov/rus/water/ees/ea.htm>, and they provide a description of the affected historic properties and include the information on the characteristics that qualify them for the National Register. An explanation of why the criteria of adverse effect were found applicable or inapplicable is included in the reports for the aboveground resources. The findings of effects for the Project on all of the resources are presented in the table below:

Table 5.10.a – Historic Effects Determinations for Alternate Routes

CRA Site #	Palmer Site #	KHC Site #	Building Type	NRHP Eligibility	Alternate Route	USDA RD Effects Determination
	2	Ma-13	Log Dwelling	Eligible	A - Hr	No Effect
	3	Ma-824	Log Dwelling	Eligible	A - Hr	No Effect
	12	Ma-203	Igo House/Greenlan Farm	Eligible	A - Hr	Adverse Effect
	14	Ma-200	Log Dwelling	Eligible	A - Hr	No Effect
	15	Ma-833	Concrete bridge	Eligible	A - Hr	No Effect
	34	Ma-851	WPA concrete bridge	Eligible	A - Hr	No Effect
9		Ma-460	1 ½-story, 4-bay house with log sections	Eligible	A - Hr	No Effect
10		Ma-863	Million-Maple Grove cemetery	Eligible	A - Hr	No Effect
21		Ma-464	1 ½ -story, 5-bay, side-gable house with multiple cross-gables	Eligible	A - Hr	No Effect
22		Ma-463	Newby Grocery Store	Eligible	A - Hr	No Effect
25		Ma-156	1 ½ -story, 3-bay single-pen log house with a 2-bay frame addition and log ell	Eligible	A - Hr	No Adverse Effect
30		Ma-157	2-story, 5-bay, brick I-house	Eligible	A - Hr	No Effect

CRA Site #	Palmer Site #	KHC Site #	Building Type	NRHP Eligibility	Alternate Route	USDA RD Effects Determination
36		Ma-882	1-story, 3-bay Minimal Traditional house	Eligible	A - Hr	No Adverse Effect
48		Gd-469	1 ½ -story, 3-bay American Bungalow	Eligible	A - Hr	No Effect
52		Gd-15	1-story, 5-bay, Federal brick house	Eligible	A - Hr	No Adverse Effect
71		Gd-31	1-story, 5-bay, side-gable stone house	Listed	B,Br,D,Dr,F,F r,H,Hr	No Effect
					A,Ar,C,Cr,E,E r,G,Gr	Adverse Effect
74		Gd-58	1 ½ -story, 3-bay, double-pen log house	Listed	A - Hr	No Effect
75		Gd-493	1 ½ -story, 2-bay, side-gable log house	Eligible	A - Hr	No Effect
93		Gd-399	Dry lain rock retaining wall along the northwest side of KY 39	Eligible	A - Hr	No Effect
96		Gd-396	Anderson Cemetery	Eligible	A - Hr	No Effect
104		Gd-517	1 ½- story, 3-bay log house	Eligible	B,Br,D,Dr,F,F r,H,Hr	No Effect
					A,Ar,C,Cr,E,E r,G,Gr	Adverse Effect
116		Gd-393	Stone springhouse	Eligible	A - Hr	No Adverse Effect
117		Gd-392, also Gd- 69	1 ½ -story, 3-bay, side-gable brick house	Eligible	A - Hr	No Adverse Effect
121		Gd-389	Bryant Cemetery	Eligible	A - Hr	No Adverse Effect
123		Gd-66	2-story, 4-bay, side-gable brick Italianate house	Listed	B,Br,D,Dr,F,F r,H,Hr	Adverse Effect
					A,Ar,C,Cr,E,E r,G,Gr	No Adverse Effect
146		Gd-67	1-story, 3-bay, hip-roof, Greek Revival brick house	Listed	A - Hr	No Adverse Effect
147		Gd-27	1 ½ -story, 5-bay, log dogtrot house	Listed	A - Hr	No Effect
148		Gd-65	Demolished	Listed	A - Hr	No Effect

EKPC is proposing Alternate Route Hr for constructing the new transmission line. Based upon this proposal, the USDA Rural Development made the determination (in a letter dated May 24, 2007 RUS has not mailed the letter) that the project as proposed (Alternate Route Hr) would adversely affect two historic properties:

1. KHC Site #Ma-203, Igo House/Greenlan Farm; and
2. KHC Site #Gd-66, 2-story, 4-bay, side-gable brick Italianate house.

Table 5.10.b – Historic Effects Determination for Proposed Route Hr

CRA Site #	Palmer Site #	KHC Site #	Building Type	NRHP Eligibility	Criterion	Effects Determination
	12	Ma-203	Igo House/Greenlan Farm	Eligible	C	Adverse Effect
123		Gd-66	2-story, 4-bay, side-gable brick Italianate house	Listed	C	Adverse Effect

Construction of the proposed new line along Alternate Routes B, Br, D, Dr, F, Fr, and H would have the same effects on historic structures as alternate Hr. Construction of Alternate

Routes A, Ar, C, Cr, E, Er, G, or Gr would have an adverse effect on three cultural historic structures:

1. KHC Site #Ma-203, Igo House/Greenlan Farm;
2. KHC Site #Gd-31, 1-story, 5-bay, side-gable stone house;
3. KHC Site #Gd-517, 1 ½- story, 3-bay log house.

As a result of the adverse effect determinations, the SHPO requested further consultation regarding the cultural historic properties affected by this proposal. USDA Rural Development will consult with the SHPO and the consulting parties to develop and evaluate alternatives or modifications that could avoid, minimize or mitigate the adverse effects. 36 CFR § 800.6. Once USDA Rural Development and the SHPO reach an agreement regarding avoidance, minimization or mitigation alternatives, a Memorandum of Agreement (MOA) will be developed.

Due to the subsurface disturbance that would occur at the proposed West Garrard Switching Station, EKPC on behalf of USDA Rural Development, commissioned an archaeological investigation of the proposed site. The archaeological investigation identified one unknown historic/prehistoric site. Through consultation with the SHPO, consulting parties, and EKPC, USDA Rural Development has determined the site was not eligible for listing on the NRHP. The proposed switching station on the J.K. Smith Power Station and the CT Units did not require an archaeological investigation since archaeological investigations were conducted when J.K. Smith Power Station was sited and the site has been subsequently disturbed for construction of the existing power station at the site (See Section 3.0 *AFFECTED ENVIRONMENT*). As a result, no archaeological resources or historic architectural structures would be affected by construction of these facilities.

In a conference call between the KHC and EKPC on November 2, 2006, it was determined that performance of a Phase I archaeological survey should be postponed until a centerline has been established for the Project following USDA Rural Development's completion of the remainder of the Section 106 process and its review under the National Environmental Policy Act (NEPA). The foregoing approach will allow USDA Rural Development to focus its intensive archaeological identification activities in those subsurface areas that actually are anticipated to be disturbed. If the Phase I investigation reveals evidence of any eligible archaeological resources in those areas, USDA Rural Development, working through EKPC, will consult with the SHPO at that time to identify measures to avoid, minimize, or mitigate any potential adverse effect on such resources. Such measures may include, but may not necessarily be limited to, moving the locations of the transmission line support structure(s) in order to avoid any impact to the identified archaeological resources. USDA Rural Development and EKPC are confident that appropriate modifications in the location of support structures can be made, if necessary, to avoid or minimize any adverse effects on archaeological resources.

As outlined above, the majority of the proposed transmission line route would not have an effect on important aboveground historic resources. Only two of the 188 aboveground resources (1.06%) identified will be adversely affected by the proposal. These adverse effects are visual and do not result in physical modifications or removal of the structures. As requested by the SHPO and in accordance with Section 106 of the NRHP, USDA Rural Development, working through EKPC, will consult with the SHPO to identify measures to avoid, minimize, or mitigate any potential adverse effect on such resources. Once USDA Rural Development and the SHPO reach an agreement regarding avoidance,

minimization or mitigation alternatives, a Memorandum of Agreement (MOA) will be developed. This agreement should serve to eliminate or reduce adverse effects on these two historic sites of concern.

Due to the lack of eligible or listed sites at the proposed site for the West Garrard Switching Station, previous disturbance at the proposed sites for the J.K. Smith Switching Station and CT Units, and the anticipated development of an MOA between the SHPO and USDA Rural Development, no significant effects to cultural resources are expected from this project.

5.10.3 Cumulative Impacts

Due to the lack of eligible or listed sites at the proposed site for the West Garrard Switching Station, previous disturbance at the proposed sites for the J.K. Smith Switching Station and CT Units, and the anticipated development of an MOA between the SHPO and USDA Rural Development, no significant cumulative effects are expected upon cultural resources as a result of this proposal.

NOTE: For the purposes of project review, the consultation process under the Section 106 of the *Historic Preservation Act* and the NEPA review process have been combined, and will proceed concurrently for the proposed electric facilities proposed for construction in this document.

5.11 TRANSPORTATION

5.11.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on transportation.

5.11.2 Construction and Operation Impacts

The construction of the proposed new electric facilities included with this proposed project would not have any significant effect on transportation taking place within the project area. The construction of the proposed electric transmission line could minimally increase traffic within the project area through the movement of construction vehicles along the proposed route. However, this increase in traffic would be temporary and there would be a return to normal conditions upon completion of construction activities. Maintenance of the proposed transmission line would not be expected to have any impact on traffic flows or patterns within the project area.

The construction of the proposed transmission line could also have a temporary effect on transportation in the project area through temporary road closures. During the construction of the proposed line, the electrical conductors would be strung on the support structures using a pulley system and helicopter, or with a tensioner mounted on the back of a digger/derrick truck. At the proposed transmission line crossings some of the roads may have to be temporarily closed for safety purposes during the stringing of the electrical conductor onto the support structures. These road closures could range in duration from the halting of traffic for minutes to temporary closing of the road for up to four hours based on the width of the road and the complexity of the crossing. These temporary road closings would not be expected to have any significant impacts on transportation in the area because once the aerial crossing is completed the road would be reopened, and traffic flows and patterns would return to normal. EKPC would coordinate the proposed transmission line construction with the Kentucky Transportation Cabinet and would secure all the required permits for the road and highway crossings prior to construction.

Construction of the electric transmission line would not have any affect on the proposed widening of U.S. Highway 27. The transmission line support structures would be located in agreement with the Kentucky Transmission Cabinet and would the line would span the area proposed for widening. Additionally, the proposed new transmission line did not influence the proposed highway widening project.

As outlined in Section 7.0 *EXISTING ENVIRONMENT*, the Kentucky River is recognized by the U.S. Army Corps of Engineers as being navigable in the proposed project area; however, the crossing of this river by the proposed transmission line is not expected to have any significant impact on river transportation. Should river traffic, if any, need to be halted during construction, it would most likely only involve small pleasure craft. Additionally, the halting of river traffic would be temporary and would resume once the stringing of the conductor over the river crossing is completed. EKPC would also secure the necessary river crossing permits for the proposed crossing of this river from the U.S. Army Corps of Engineers for the crossing of navigable waters under the authority of the *Rivers and Harbors Act of 1899*.

The construction of the proposed new CT units and J.K. Smith Switching Station could minimally increase traffic on Red River Road through the ingress and egress of construction vehicles and personnel at the proposed substation site. However, these facilities are being proposed for construction at an existing industrial site and the increase in traffic caused by the construction of the facilities would be minimal and probably would not be noticeable. Regardless, traffic flows would return to normal once the construction of the new units is completed. Maintenance inspections of the new facilities once construction activities

are completed would be accomplished by existing personnel at the generating station, and would not have any effect on traffic in the area.

The construction of the proposed new West Garrard Switching Station could slightly increase traffic along State Route 52 through the ingress and egress of construction vehicles and personnel at the proposed switching station site. This increase in traffic would be minimal and traffic flows would return to normal once the construction of the substations is completed. Maintenance inspections of the new switching station, once construction activities are completed, would not have any effect on traffic flows. These inspections and maintenance procedures would normally involve the ingress and egress to the substations of a small truck carrying one to two persons once every one to two months.

Construction of the proposed facilities described in this report would not require notification to the Federal Aviation Administration (FAA), nor would they have any adverse impacts on navigable airspace. No structures associated with these proposed facilities would exceed the FAA height notification requirement of 200 feet aboveground and none of the proposed facilities are located in close proximity to any airports, nor are they located within the instrument approach paths to any airports.

5.11.3 Cumulative Impacts

As described above, the proposed electric facilities included with this project would have only minimal temporary effects on transportation within the project area and, as result, would not have any cumulative effects on transportation.

5.12 NOISE

5.12.1 No Action

The proposed electric transmission project would not be constructed as a result of choosing the *no action* alternative. Therefore, the *no action* alternative would not have any effect on noise within the project area.

5.12.2 Construction and Operation Impacts

Noise from the construction activity associated with the proposed transmission line and West Garrard Switching Station would have minor impacts on noise levels in the immediate project impact area. Noise would emanate from chainsaws and machinery used during ROW clearing activities, and from vehicles, machinery and equipment used during the physical construction of the proposed project. As described in Section 5.6 *LAND USE & RECREATION*, there are 70 houses within 500 feet of the edge of the ROW along the proposed transmission line route and 18 houses within 2,500 feet of the proposed construction site for the new West Garrard Switching Station. These residences could experience increased noise levels during the construction of the proposed project. However, this increase in noise levels would be short-term and there would be an immediate return to ambient noise levels upon completion of construction activities. Therefore, no significant impacts on the noise levels in the proposed project area would be expected.

Noise from the construction activity associated with the J.K. Smith Switching Station and CT units should not have any impact on the noise levels in the area because the proposed site for this facility is located in the middle of a large industrial area associated with EKPC's existing J.K. Smith Electric Generating Station and there are no houses or public roads located within the vicinity. EKPC has also collected data regarding noise emanating from the

existing generating facility since 1992 and there have been no complaints from residents located in the outlying areas surrounding the existing facility which could be contributed to the noise emanating from the operation of the existing CT units. Additionally, the average near field sound pressure level contribution for the GE 7EA units is guaranteed not to exceed 95 dBA at a one-meter distance from the units at base load according to contract specifications. The GE LMS100 units have contract performance guarantees of 85 dBA at 3 feet horizontal, 5 feet vertical and 65 dBA at 400 feet. Therefore, the proposed new units would not be expected to have any substantial noise impact on the outlying area surrounding the existing electric generating facility site, and neither of the facilities proposed for construction at the J.K. Smith Generating Station would have any significant impacts on the ambient noise level in the project area.

5.12.3 Cumulative Impacts

As described above, the construction activity associated with the proposed project would have a very minor impact on noise levels in the immediate project impact area. However, this increase in noise levels would be short-term and there would be an immediate return to ambient noise levels upon completion of construction activities. The proposed new units would not be expected to have any substantial noise impact on the outlying area surrounding the existing electric generating facility site, and neither of the facilities proposed for construction at the J.K. Smith Generating Station would have any significant cumulative impacts on the ambient noise level in the project area. Since the proposed project would have only short-term minor impact on the noise levels within the project area, no cumulative impacts on noise levels would occur.

5.13 HEALTH & SAFETY

5.13.1 No Action

Choosing the *no action* alternative would not have any effect on health and safety of construction crewmembers because the proposed project would not be constructed. However, *no action* could have an adverse affect on the health and safety of the public by contributing to potential electric power shortages for electric consumers living within EKPC's service area. Interruptions in electric service caused by choosing the *no action* alternative could interrupt the operation of traffic signals, elevators, emergency lighting, medical life support equipment and healthcare operations, possibly resulting in injury or death. Potential electrical brownouts caused by choosing this alternative could cause ill effects, such as pneumonia, to individuals living in the project area, or potentially death in the event of an extended power outage during periods of freezing weather. The public could also be affected in times of severe heat during episodes of electric power brownouts and outages. Very small children, the elderly and those individuals sensitive to heat could suffer from the effects of heatstroke or even death should outages occur during periods of extreme heat.

5.13.2 Construction and Operation Impacts

The clearing of vegetation associated with the proposed electric transmission line could have an effect on the health and safety of construction crewmembers, as well as the public in general. One common tool used for manually cutting and clearing vegetation in the electric utility industry is the chainsaw. The chainsaw can be one of the most dangerous hand cutting tools used by ROW management crews and cuts caused by these tools can be encountered by crewmembers. Other hazards associated with chainsaw use include flying wood chips, sawdust and bar oil causing eye problems for workers. Another hazard

associated with chain saw use could be hearing loss if proper ear protection is not used. However, if the chainsaws are operated in a safe manner adhering to EKPC's safety rules with protective clothing, eye ware, and ear protection, injuries from chainsaws should not present a problem.

Mechanical types of equipment used during construction activities, such as bulldozers used to prepare the West Garrard Switching Station site, could also pose a hazard to construction workers. This type of equipment could rollover when operated improperly on steep grades injuring the operator and any nearby crewmembers who happen to be in the way. Fire can also potentially be a hazard to ROW crewmembers attempting to refuel hot engines or when leaked oil or flammable debris comes into contact with hot engines. However, if the equipment is used by individuals properly trained in the operation of such equipment, these types of issues should not present a problem.

Emissions from the exhaust of chainsaws and mechanical equipment could result in exposing operators to a number of carcinogens known to be present in the exhaust of internal combustion engines, such as benzene, 1,3-butadiene and numerous polyaromatic hydrocarbons. Exhaust from the engines also expose equipment operators to carbon monoxide and neurotoxic hydrocarbons, as well as irritants, such as, formaldehyde, acrolein and nitrogen oxides. However, the components of exhaust are volatile and would probably move out of the immediate project area within a short period of time.

Hazards to the general public could occur during vegetation clearing activities if individuals were to enter work areas while machinery is operating and the vegetation is being cut. Individuals of the public present on or near the work sites when the cutting operations are occurring could be struck by falling vegetation, flying wood chips, sawdust, etc. Stubble

left on the ROW after cutting operations are completed can also present a hazard to the public by individuals tripping over or falling onto cut stumps and stubble causing injury. Since no formal recreational activities take place within the project area (See Section 5.6 *LAND USE AND RECREATION*) and the transmission line route is located in rural areas, the risk to the general public from ROW cutting operations would be negligible. This risk would not be present during the maintenance of the proposed ROW because only minimal, if any, cutting of vegetation on the ROW would be required during each maintenance cycle.

The construction and operation of the proposed switching stations and CT units should not create a threat to the health or safety of the general public. Shortly after the project sites are prepared for the installation of the new electric equipment, the sites would be enclosed with seven-foot high security fence topped with three strings of barbed wire one foot in height that would restrict public access to the new facilities. The proposed sites for the CT units and the J.K. Smith Switching Station are also located at the existing J.K. Smith Electric Generating Station, which has controlled, gated access.

Extremely low-frequency electric and magnetic fields (EMFs) surround high-voltage electric transmission lines, transformers, and other electrical equipment, and a good deal of attention has been focused on the possible health effects of EMFs since the 1970's. However, evidence of health effects from EMFs is inconclusive and the available information is not sufficient to establish a cause-effect relationship. Regardless, EMFs surrounding the proposed electric facilities should not be an issue. The strength of EMFs quickly decreases with distance from the source and overhead electric transmission lines produce a magnetic field that peak underneath the electric conductors and falls off rapidly with distance on either side. As a result, no occupied structures would be located close enough to the proposed

transmission line to experience increased EMF levels. Additionally, to protect fences and metal buildings from accumulating an electrical charge from the proposed new transmission line, EKPC would ground any fence that crosses, or is located adjacent to the proposed ROW, and would ground any metal buildings located adjacent to the ROW.

The proposed switching stations and CT units would not increase EMF levels very far from these sources because, as explained above, the strength of EMFs from electrical equipment decreases rapidly with distance. Typically, the EMFs produced by the equipment within a switching station or substation are indistinguishable from background levels beyond the facility's fenced boundary. Personnel working within close proximity to the electrical equipment would be exposed to increased concentrations; however, such exposure would only be for short periods of time.

The proposed new transmission line would not be expected to have any effect on pacemakers. There are two general types of pacemakers: asynchronous and synchronous. The asynchronous pacemaker pulses at a predetermined rate. It is practically immune to interference because it has no sensing circuitry and is not exceptionally complex. The synchronous pacemaker, on the other hand, pulses only when its sensing circuitry determines that pacing is necessary. The concern is that interference could result from electric or magnetic fields, and cause problems to the pacemaker's sensing circuitry.

There have been a number of studies concerning the effects electromagnetic fields on cardiac pacemakers. These studies are in general agreement that intense electromagnetic fields found in certain industrial and special environments can indeed affect the proper operation of these devices. Some examples would be smelting furnaces, television transmitters, radio transmitters, arc welding units, and power generators. These studies also

recommend caution be exercised by individuals with cardiac pacemakers when operating certain appliances and equipment found around the home. Some examples of these would be gasoline powered lawn mowers, gasoline powered saws, power saws, hand-held electric drills, battery powered cordless tools, electric razors, and cell phones, to name a few. However, the electrical conductors on high voltage transmission lines are suspended well above the ground and, as described above, the strength of EMFs quickly decreases with distance from the source. As a result, the magnetic field produced by an electric transmission line is at a relatively low level at ground level and therefore, it is unlikely that pacemakers would be affected by the proposed new line.

Existing gas pipelines in the project area being crossed by the proposed transmission line crossing would not require cathodic protection measures to prevent induced voltage and would not present any public health problems. Gas pipelines only require cathodic protection when they are paralleled by, and share ROWs with, electric transmission lines. Merely crossing an existing pipeline with an overhead electric transmission line does not cause induced volt on the pipeline. The proposed transmission line would not parallel any existing gas pipelines and, as a result, would not require such protection measures.

The proposed use of herbicides for the management of vegetation within the proposed ROW would involve the utilization of herbicides approved for such use by the U.S. Environmental Protection Agency. Such chemicals would also be applied according to strict label directions by licensed applicators. Therefore, the proposed use of herbicides would not be expected to pose any significant risk to workers or the general public.

5.13.3 Cumulative Impacts

The proposed transmission project would not have any cumulative effects on the health and safety of the general public and construction crew workers because the risk to such individuals as a result of constructing the proposed project would be minimal.

5.14 RADIO, TELEVISION, & CELLULAR PHONE INTERFERENCE

5.14.1 No Action

The *no action* alternative would not have any effect on noise within the project area because the proposed electric transmission project would not be constructed as a result of choosing this alternative.

5.14.2 Construction and Operation Impacts

The proposed electric transmission line should not have any effect on radio or television reception because electric transmission line equipment by design does not cause radio or television reception interference. However, faulty insulators or loose hardware on a transmission line can cause such interference. Should EKPC receive a reception interference complaint, it has a policy of investigating the source of the interference and taking steps to remedy the situation, such as replacing insulators, tightening hardware, etc., should the source of the problem be determined to be electric equipment associated with one of its electric facilities. Additionally, the proposed electric transmission line would not be expected to cause radio or television reception interference because the proposed route extends through rural areas and because of the distance between the occupied structures and the proposed transmission line ROW.

Mobile and automobile radios could lose signal strength directly underneath the proposed electric transmission line, such as a loss of signal strength when traveling

underneath the transmission line at a road or highway crossing. Cellular telephones could also lose signal strength directly underneath electric transmission line when located in a fringe area of the cellular service companies. However, these would be temporary, or momentary, losses of signal strength that would not significantly affect the use of mobile or automobile radio, or cellular telephone equipment.

Mobile and automobile radios, as well as cellular phones, could lose signal strength within the boundary of the proposed electric switching stations due to the metal structures present and the concentration of EMFs. Outside of the switching station boundaries', however, signal strength would be normal and such devices would operate without interference. Radio and television reception also should not present a problem outside of the fenced boundaries for the switching station. Additionally, the proposed site for the new CT units, as well as the West Garrard Switching Station, are located within secured areas associated with the existing J.K. Smith Generating Station and interference with communication devices should not present a problem.

5.14.3 Cumulative Impacts

As described above, the construction and operation activity associated with the proposed project would have a very minor impact on radio, television, and cell phone reception in the immediate project impact area. Therefore, no cumulative effects to communication equipment would be expected as a result of the proposed action.

5.15 SOCIOECONOMICS & ENVIRONMENTAL JUSTICE

5.15.1 No Action

The *no action* alternative would not have any impact on, or be influenced by, the civil rights, ethnic origin, sex or social status of people living within the proposed project area

because should the *no action* alternative be chosen, the proposed project would not be constructed. However, as described in Section 5.1.3 *HEALTH & SAFETY*, the *no action* alternative could contribute to shortages of electric power, potentially leading to electrical brownouts and outages as electrical load within EKPC's system grows. This could have an adverse affect on the use and enjoyment of the land by property owners in the project area due to the interrupted electrical service.

5.15.2 Construction and Operation Impacts

The proposed project would not have any effect on the population or the economy of the area. The proposed transmission line may have a minor impact on the value of the property the new line would cross. However, EKPC would be compensating the property owners for the encumbrance of the easement across their property. In addition, electric consumers in the project area would continue to experience continuous reliable electric service as a result of constructing the proposed project.

The proposed project would not create new jobs or affect the unemployment rate for the area involved. The proposed electric facilities also are not disproportionately located in, or through, minority or low-income areas and, as a result, would not have any disproportionate effects on populations located in such areas. Additionally, the proposed project would not have any impact on, or be influenced by, the civil rights, ethnic origin, sex or social status of people living within the proposed project area.

5.15.3 Cumulative Impacts

As described above, the construction and operation activity associated with the proposed project would have a very minor impact on the socioeconomics in the immediate project impact area. In addition, the proposed electric facilities also are not disproportionately

located in, or through, minority or low-income areas and, as a result, would not have any disproportionate effects on populations located in such areas. Additionally, the proposed project would not have any impact on, or be influenced by, the civil rights, ethnic origin, sex or social status of people living within the proposed project area. Therefore, no cumulative effects to socioeconomics and environmental justice would be expected as a result of the proposed action.

5.16 VISUAL RESOURCES

5.16.1 No Action

The *no action* alternative would not have any changes on the aesthetics of the project area because no construction or vegetation clearing activities would take place as a result of choosing this alternative.

5.16.2 Construction and Operation Impacts

The construction of the proposed electric transmission line would not be expected to have significant impacts on the aesthetics of the project area. The proposed new line would not be visible from any recreational areas since none of these types of areas exist within the project area (See Section 3.0 *AFFECTED ENVIRONMENT*). The proposed new transmission line would also be supported by Corten tubular steel structures that would give the appearance of redwood and which would aid in blending the proposed line into the surrounding background. In addition, approximately one third of the proposed route would be located on an existing electric transmission line ROW and would involve rebuilding and replacement of the existing electric transmission line. The existing transmission line that would be replaced is supported by wood pole H-frame structures and the proposed line would be supported by Corten steel structures that would give the appearance of wood. Therefore, the proposed new

line would be similar in appearance to the existing line and would not result in any significant additional aesthetic impact within these areas. The potential aesthetic impact of the sections of the proposed new transmission line that would parallel existing electric transmission lines would also be somewhat mitigated by the aesthetic impact which the existing lines currently have on the area. Additionally, the proposed new line would extend through rural areas and would not be located in the immediate vicinity of any concentrated residential development. As a result, the proposed new line would not be readily visible from such development. The proposed new line would be visible from various road crossings, but due to the topography and vegetation in many of the areas involved, the line would not be visible for extended distances and the Corten steel structures would aid in blending the line into the surrounding landscape.

As described in Section 5.10 *CULTURAL RESOURCES*, the proposed route, as well as the other alternate routes investigated for the new transmission line, could have visual intrusions on cultural sites that are listed, and eligible for listing, in the *National Register of Historic Places*. However, EKPC is committed to further consultation with the SHPO, through the USDA Rural Development, to implement mitigation measures to eliminate or reduce visual effects on these cultural resources.

The proposed new West Garrard Switching Station site is removed from the roads in the area and, as such, the new facility would not be readily visible from any roads. The proposed site for this new facility is also located in a rural area and would not be visible from any concentrated residential development. Additionally, the proposed site is located immediately adjacent to an existing electric transmission line, which would aid in decreasing

the significance of the visual impact of the new switching station on the surrounding area due to the existing visual impact of the transmission line on the immediate area.

The proposed new J.K. Smith Switching Station, as well as the CT units, would not have any aesthetic impact on the project area because the proposed sites for these planned new facilities are located on a 3,200 acre industrial site associated with the existing J.K. Smith Generating Station. It would not be visible from public roads or any residential development since the closest house is located almost a mile from the proposed construction site.

5.16.3 Cumulative Impacts

As described above, the construction and operation activity associated with the proposed project would have a very minor impact on the aesthetics in the immediate project impact area. Therefore, no cumulative effects to aesthetics would be expected as a result of the proposed action.

6.0 MITIGATION

As described in the previous section *5.0 ENVIRONMENTAL CONSEQUENCES*, EKPC would be implementing numerous mitigation measures to aid in minimizing potential environmental impacts that could be caused during the construction and operation of the proposed electric transmission project. The following is a summary of the mitigation measures that EKPC would implement:

- EKPC would incorporate *Best Management Practices* that would employ accepted erosion control practices to aid in preventing non-point source pollution and control stormwater runoff and sedimentation, such as the utilization of silt barriers.

- All disturbed areas would be stabilized and revegetated, as soon as practicable, once construction is completed.
- EKPC would not initiate any required land-clearing activities until absolutely necessary to reduce the amount of time bare soils are exposed to erosion.
- No transmission line support poles would be placed within streams or river channels, and no construction equipment or vehicles would be permitted within wetland areas.
- Vegetation removed from the proposed ROW would be cut from the ROW, leaving roots intact to aid in holding soils in place and control erosion.
- Any cut vegetation falling into river or stream channels would be removed and pulled back from the channels to aid in protecting water quality.
- Herbicides would be applied by trained and licensed applicators, and would be applied in accordance with strict label directions and the requirements of the Kentucky Division of Pesticides, using EPA approved herbicides.
- Applicators would monitor weather conditions and would postpone or suspend applications when conditions become unfavorable, as outlined in Section 5.1 *AIR QUALITY*.
- No herbicide would be applied within 30 horizontal feet of lakes, ponds, wetlands, perennial or intermittent springs, seeps, or streams.
- No herbicide would be applied within 100 horizontal feet of any public or domestic water source.
- Herbicide mixing, loading, or cleaning areas would not be located within 200 feet of any open water, or public or domestic water source.
- Herbicide applications would be prohibited when the threat of rainfall is imminent, and no sooner than 30 minutes after a rainfall.
- USDA Rural Development will consult with the SHPO and the consulting parties to develop and evaluate alternatives or modifications that could avoid, minimize or mitigate the adverse effects. Once USDA Rural Development and the SHPO reach an agreement regarding avoidance, minimization or mitigation alternatives, a Memorandum of Agreement (MOA) will be developed.
- Once USDA Rural Development has issued a Finding of No Significant Impact (FONSI) or other decision document confirming its selected alternative for the transmission line project, USDA Rural Development, working through EKPC, will commission a Phase I archaeological survey within the one hundred and fifty foot wide transmission line right-of-way (seventy-five feet on each side of the centerline)

of the selected alternative. The Phase I survey report will be submitted to the SHPO for review and comment. Should an adverse effect be discovered during this investigation, USDA Rural Development will consult with the SHPO and the consulting parties to develop and evaluate alternatives or modifications that could avoid, minimize or mitigate the adverse effects.

7.0 CONSULTATION AND COORDINATION

This section describes the consultation and coordination USDA Rural Development and EKPC have had with the public, public officials, Native American Tribes, and government agencies during the preparation of the environmental assessment. This section will detail the steps taken to inform these groups of the project, summarize the comments received, and outline further coordination and consultation with the public and these organizations.

7.1 SCOPING PROCESS

The Council on Environmental Quality's (CEQ) regulations for implementing the *National Environmental Policy Act* (NEPA) define "Scoping" as "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." CEQ's NEPA regulations address the need for scoping for projects requiring an Environmental Impact Statement (EIS). USDA Rural Development regulations (7 CFR 1794) also require the use of a scoping procedure for certain proposed actions in the development of the environmental assessment. USDA Rural Development also has the authority under their regulations to modify or waive the requirements listed in §1794.52 for a proposed action in this category.

USDA Rural Development and EKPC initiated scoping through a number of processes including newspaper notices; mailings to land owners, public officials, Native American tribes, and responsible agencies; a public scoping meeting; and public meetings.

USDA Rural Development hosted a public scoping meeting for the proposal on July 11, 2006 at the Best Western-Holiday Plaza in Richmond, Kentucky. The purpose of the meeting was to provide information regarding the proposed transmission project to the public and to solicit comments from the public for the preparation of the EA. The public was notified of the meeting through a June 29, 2006 *Federal Register* notice placed by the USDA Rural Development, as well as a series of notices placed by EKPC in the following newspapers:

- Jessamine Journal, June 29, 2006;
- The Garrard Central Record, June 29, 2006;
- Lexington Heard-Leader, June 30, 2006;
- Richmond Register, June 30, 2006; and
- The Winchester Sun, July 10, 2006.

The *Federal Register* notice and newspaper ads informed the public that comments for the proposal should be received by August 10, 2006 to ensure they are considered in the environmental impact determination.

In addition to the public scoping meeting described above, EKPC hosted two voluntary public open houses to provide updated information to affected property owners and address their concerns regarding the proposed project. One of the open houses was held on August 29, 2006, from noon to 7 p.m., at the Hyattsville Baptist church in Lancaster, Kentucky and the other was held on August 31, 2006, from noon to 7 p.m., at the Best Western-Holiday Plaza in Richmond, Kentucky. An EKPC representative was present to greet the public and direct them through different stations at the scoping meeting and open houses. The stations EKPC made available were Communications, Engineering, Construction, Right-of-Way, Natural Resources, and Electro-magnetic Fields (EMFs). Approximately 150 people attended the open houses provided by EKPC.

A meeting requested by members of the public was also held on August 3, 2006 at the First Southern National Bank in Lancaster, Kentucky, for which EKPC representatives were available to answer questions and address the concerns of the public attendees. Approximately 30 members of the public attended the meeting and most of the comments/questions received related to the need for the project. The participants also raised concerns regarding the potential impacts to health as well as concerns regarding the proposed location. The notes from this public meeting are included in the scoping report referenced above.

Public scoping meetings were not held for the proposed new CT Units. The Rural Utilities Service's *Environmental Policies and Procedures*, 7 CFR Part 1794, categorizes this type of project as *normally* requiring an Environmental Assessment with scoping; however, the regulation affords the agency discretion to modify or waive requirements based on the particulars of proposed actions. The USDA Rural Development determined that the proposed new CT units would not require scoping because, as documented in Section 1.2.2 *Classification*, the proposed site for the new units has been extensively studied in recent years and holding scoping meetings for the proposed new units would not substantially add to the environmental investigation process.

In the early planning stages of project development, the CT Units and the transmission line were initiated as two separate projects. The electric transmission line project proceeded as an EA with scoping; however, under the discretion afforded by 7 CFR Part 1794, the USDA Rural Development decided that the proposed new CT units at the J.K. Generating Station would not require scoping. As planning for the proposed projects progressed, the USDA Rural Development determined that since the proposed electric transmission project

would be necessary to support the added generation that would be produced by the new CT units at the existing J.K. Smith Generating Station, the projects should be treated as one and addressed in a single EA.

7.1.1 Agency Scoping

An interagency meeting was also held July 11, 2006 at the Best Western-Holiday Plaza in Richmond, Kentucky to introduce the proposed project to various local, state, and federal agencies, and obtain information about potential impacts that could be caused by the proposed project. The agencies and individuals notified and invited by letter to attend the agency scoping meeting are located in table on the following page. Representatives from the Kentucky Heritage Council, Madison County Natural Resource Conservation Service, USDA Rural Development and EKPC attended the meeting.

7.1.2 Summary of Comments by Category

The following section provides a summary of the comments received during the scoping process.

7.1.2.1 Location of Transmission Line

A total of 51 comments were received concerning the location of the transmission line. The majority of the comments were about property owners' preferences on where the line should be placed on their property. Other comments expressed concern about the line crossing fields or other valuable farmland and that the transmission line should follow fence lines and property lines. Comments were also received in which property owners do not want the line to cross their property at all or that the line should not be built. Other concerns in the comments were related to limiting tree cutting and how the line would affect an existing gas pipeline.

Table 7.1.1.a - Scoping Contact List

<u>Title</u>	<u>First</u>	<u>Last</u>	<u>Title/Tribe/Agency</u>	<u>Address</u>	<u>Address2</u>	<u>City</u>	<u>State</u>	<u>Zip</u>
Judge	Kent	Clark	County Judge Executive	101 West Main Street	County Courthouse	Richmond	KY	40475
Mayor	Connie	Lawson	City of Richmond	239 West Main St.		Richmond	KY	40475
Judge	E.J.	Hasty	County Judge Executive	Courthouse	15 Public Square	Lancaster	KY	40444
Judge	John	Meyers	County Judge Executive	34 S. Main Street	County Courthouse	Winchester	KY	40391
Mayor	Dodd	Dixon	City of Winchester	City Hall	32 Wall Street	Winchester	KY	40391
Mayor	Billy Carter	Moss	City of Lancaster	101 Stanford St		Lancaster	KY	40444
Mr.	David	Morgan	Kentucky Heritage Council	300 Washington Street		Frankfort	KY	40601
Mr.	Lee	Andrews	U.S. Fish and Wildlife Service	Frankfort Field Office	3761 Georgetown Rd.	Frankfort	KY	40601
Mr.	Brian	Smith	Non-Game Coordinator	KY Dept. of Fish and Wildlife Resources	#1 Game Farm Road	Frankfort	KY	40601
Mr.	Don	Dott	KY State Nature Preserves Commission	801 Schenkel Lane		Frankfort	KY	40601
Mr.	William	Lacy	District Conservationist	30 Taylor Ave. Suite A		Winchester	KY	40391-1323
Mr.	John	Byrd	District Conservationist	108 Pleasant Retreat Plaza		Lancaster	KY	40444-9561
Mr.	Samuel	Miller	District Conservationist	2150 Lexington Road Ste B		Richmond	KY	40475-9101
Dr.	Richard	Allen	Tribal Historic Preservation Officer	Cherokee Nation	P.O. Box 948	Tahlequah	OK	74465
Mr.	Russell	Townsend	Tribal Historic Preservation Officer	Eastern Band of Cherokee Indians	P.O. Box 455	Cherokee	NC	28719
Ms.	Lisa	Stopp	Historic Preservation Coordinator	United Keetoowah Band of Cherokee Indians	P.O. Box 746	Tahlequah	OK	74465
Ms.	Rebecca	Hawkins	Tribal Administrator	The Shawnee Tribe	P.O. Box 189	Miami	OK	74355
Ms.	Karen	Kaniatobe	Tribal Historic Preservation Officer	Absentee Shawnee Tribe of Oklahoma	2025 S. Gordon Cooper Drive	Shawnee	OK	74801
Ms.	Roxanne	Weldon	Director	Eastern Shawnee Tribe of Oklahoma	P.O. Box 350	Seneca	MO	64865
Ms.	Julie	Olds	Cultural Preservationist	Miami Tribe of Oklahoma	P.O. Box 1326	Miami	OK	74355
Mr.	John	Froman	Chief	Peoria Indian Tribe of Oklahoma	P.O. Box 1527	Miami	OK	74355
Ms.	Virginia	Nail	Tribal Historic Preservation Officer	Chickasaw Nation	P.O. Box 1548	Ada	OK	74821
Honorable	Don	Pasley	State Representative	5805 Ecton Road		Winchester	KY	40391
Honorable	R.J.	Palmer	State Senator	1391 McLure Road		Winchester	KY	40391
Honorable	Ed	Worley	State Senator	1391 McLure Road		Winchester	KY	40391
Honorable	Tom	Buford	State Senator	PO Box 659		Richmond	KY	40475
Honorable	Harry	Moberly	State Representative	409 W. Maple St.		Nicholasville	KY	40356-1039
Honorable	Lonnie	Napier	State Representative	PO Box 721		Richmond	KY	40475
Honorable	Ben	Chandler	Congressman	1117 Longworth HOB		Washington	DC	20515
Honorable	Jim	Bunning	U.S. Senator	United States Senate	818 Senate Hart Building	Washington	DC	20510
Honorable	Mitch	McConnell	U.S. Senator	United States Senate	361-A Russell Senate Bldg.	Washington	DC	20510-1702

7.1.2.2 Electro-Magnetic Fields (EMFs)

Fifteen (15) comments about EMFs generated by the transmission line were received. Most comments related to health issues, such as EMFs causing cancer, affecting livestock, and interfering with pacemakers. Other concerns included static caused by EMFs collecting on fences and metal roofs, grounding barns and fences, interference with hand-held wireless devices, and whether or not EMFs could be shielded by a tractor cab.

7.1.2.3 Construction

A total of fourteen (14) comments were obtained about how the line should be constructed. Nearly all the comments said that the existing line should be rebuilt or made into double circuit line to avoid building a new transmission line. The comments stated that if rebuild was not possible, paralleling the existing line would be the next best alternative. One comment suggested building the transmission line underground.

7.1.2.4 Herbicides

Six (6) comments expressing concerns about the use of herbicides in the right-of-way were received. Several of the concerns were about herbicides affecting the health of livestock and causing blind calves. Comments about damage caused by the herbicide applicators and a preference for using non-restricted herbicides were also collected.

7.1.2.5 Damage During Construction

There were six (6) comments received relating to damage that may be caused during construction of the transmission line. Comments addressed damage caused to property while the line was being accessed, damage to wet fields from heavy machinery, and tearing up fences. Also, property owners that had dealt previously with EKPC and

have an existing line on their property stated that damage had occurred when the existing lines were built. They were worried damage would occur again as a result of the new transmission line.

7.1.2.6 Visual Resources

A total of six (6) comments about the visual impacts of the transmission line were obtained. The comments expressed how the line would mar the natural beauty of the area and that property owners do not want the line to be visible from their homes. Other comments said that brown, steel poles would be preferred and that old poles should be removed.

7.1.2.7 Easements

Five (5) comments were collected about the easements that EKPC will need to obtain for the transmission line. Comments included concerns about the amount of easement needed, how the property owner will be compensated for the easement, and if the easement can be leased to EKPC. One comment stated that the property owner would not sell the easement to EKPC. Another comment was received from a property owner that had dealt with EKPC before and was displeased with the amount he received for his previous easement.

7.1.2.8 Environmental

Environmental concerns were the focus of four (4) of the comments. General effects of the construction on streams, trees, and erosion were addressed, as well as the possibility of vultures roosting in the poles.

7.1.2.9 Property Values

Three (3) comments were received about how the transmission line would devalue the affected properties.

7.1.2.10 Development

A total of two (2) comments were obtained regarding the inability of the property owner to develop their property once the transmission line is built.

7.1.2.11 Historic Sites

Two (2) comments about possible damage to two historic home sites by the transmission line were received.

7.1.2.12 Safety

A comment (1) was collected concerning the use of cherry pickers and other large machinery under the transmission line.

7.1.2.13 Noise

One (1) comment about noise generated by the transmission line was obtained.

7.1.3 Responses to Scoping

A total of 117 comments were received from USDA Rural Development's scoping meeting and EKPC's open houses. As noted in Section *7.1.2 Summary of Comments by Category*, the majority of the comments received were from landowners wanting to know the location of the proposed electric transmission line. However, comments were received covering numerous concerns including: how the proposed transmission line should be constructed; electro-magnetic fields generated by the transmission line; the use of herbicides on the proposed transmission ROW; damage that could be caused by the construction of the proposed line; aesthetic impacts associated

with the transmission line; ROW easements; property values devalued in association with the line; inability to develop property once the line is constructed; safety associated with the construction of the line; and general environmental concerns.

The concerns raised during the scoping process are addressed in the construction, alternatives, and environmental impact sections of this document. More detailed information regarding the scoping process undertaken for this proposed project can be reviewed by referring to the *Public Scoping Report for the Smith-West Garrard 345 kV Transmission Line Project* available at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

7.2 ADDITIONAL PUBLIC INVOLVEMENT

This environmental assessment will be made available to the public for a 30-day public review and comment period. Availability of the document for review and comment will be noticed in the Federal Register and local newspapers. All comments from reviewers should be addressed to:

Stephanie Strength
USDA, Rural Utilities Service
Engineering and Environmental Staff
1400 Independence Ave. SW
Mail Stop 1571, Room 2244
Washington, DC 20250-1570

Once USDA Rural Development has reviewed the comments, it will issue its decision related to the project. Should USDA Rural Development choose to issue a Finding of No Significant Impact (FONSI) for the project, EKPC shall have a notice published which informs the public of the USDA Rural Development finding and the

availability of the EA and FONSI. The notice shall be prepared in accordance with USDA Rural Development guidance.

7.3 ADDITIONAL AGENCY CONSULTATION AND GUIDANCE

Once USDA Rural Development has completed its NEPA activities and has issued a Finding of No Significant Impact (FONSI) or other decision document confirming its selected alternative for the Project, USDA Rural Development, working through EKPC, will commission a Phase I archaeological survey within the one hundred and fifty foot wide transmission line right-of-way (seventy-five feet on each side of the centerline) of the selected alternative. The specific locations for the Phase I investigation will include the proposed locations for electric transmission line support structures (i.e., poles), as well as any other area that will require subsurface disturbance. (Pursuant to the advice of the SHPO and consistent with 36 C.F.R. § 800.4(b)(2), USDA Rural Development may choose to defer final identification and evaluation of archaeological resources within areas of high probability until the final centerline is confirmed.)

The foregoing approach will allow USDA Rural Development to focus its intensive archaeological identification activities in those subsurface areas that actually are anticipated to be disturbed. If the Phase I investigation reveals evidence of any eligible archaeological resources in those areas, USDA Rural Development, working through EKPC, will consult with the SHPO at that time to identify measures to avoid, minimize, or mitigate any potential adverse effect on such resources. Such measures may include, but may not necessarily be limited to, moving the locations of the transmission line support structure(s) in order to avoid any impact to the identified archaeological resources. USDA Rural Development and EKPC are confident that appropriate

modifications in the location of support structures can be made, if necessary, to avoid or minimize any adverse effects on archaeological resources. The SHPO concurred with the APE's identified above in a December 11, 2006.

Construction of the proposed new line along Alternate Routes B, Br, D, Dr, F, Fr, and H would have the same effects on historic structures as alternate Hr. Construction of Alternate Routes A, Ar, C, Cr, E, Er, G, or Gr would have an adverse effect on three cultural historic structures:

4. KHC Site #Ma-203, Igo House/Greenlan Farm;
5. KHC Site #Gd-31, 1-story, 5-bay, side-gable stone house;
6. KHC Site #Gd-517, 1 ½- story, 3-bay log house.

As a result of the adverse effect determinations, the SHPO requested further consultation regarding the cultural historic properties affected by this proposal. USDA Rural Development will consult with the SHPO and the consulting parties to develop and evaluate alternatives or modifications that could avoid, minimize or mitigate the adverse effects 36 C.F.R. § 800.6. Once USDA Rural Development and the SHPO reach an agreement regarding avoidance, minimization or mitigation alternatives, a Memorandum of Agreement (MOA) will be developed.

7.4 FUTURE PUBLIC AND AGENCY INVOLVEMENT

Copies of the EA will be made available for public review at USDA Rural Development, Utilities Programs, 1400 Independence Avenue, SW., Washington, DC 20250-1571; at the USDA Rural Development's Web site, <http://www.usda.gov/rus/water/ees/ea.htm>; at EKPC's headquarters office 4775 Lexington Road, Winchester, Kentucky 40391; and at the following Public Library locations:

Clark County Library
370 South Burns Avenue

Winchester, KY 40391
859) 744-5661
Julie Maruskin, Director

Madison County Public Library
507 West Main St.
Richmond, KY 40475
(859) 623-6704
Sue Hays, Director

Garrard County Public Library
101 Lexington St
Lancaster, KY 40444
(859) 792-3424
Joan Tussey

8.0 CONCLUSION

EKPC is proposing Alternate Route Hr for the location of the proposed new electric transmission line, J.K. Smith Power Station as the location of the CT Units and J.K. Smith 345 kV Switching Station, and Alternate Site B for the location of the West Garrard 345 kV Switching Station. The environmental investigation undertaken for EKPC's proposed new line, as well as the balance of the proposed facilities included as part of the CT Units/Smith to West Garrard Electric Transmission Project, did not uncover any significant environmental impacts that would result from the construction of the proposed project. EKPC is also aware of the environmental commitments expressed in this document and is dedicated to following these commitments during the construction and operation of the proposed facilities. Therefore, the construction of EKPC's proposed project would not have any significant effects on the quality of the natural or human environment in the project area.

APPENDIX A
AGENCY CORRESPONDENCE



July 17, 2006

Mr. Lee Andrews
U.S. Fish and Wildlife Service
Frankfort Field Office
3761 Georgetown Rd.
Frankfort, KY 40601

Dear Lee,

Enclosed is information concerning the Indiana bat (*Myotis sodalis*) mist-netting survey plan for the following project being considered by East Kentucky Power Cooperative (EKPC):

Smith – West Garrard 345 kV Transmission Line and Substation

Currently, there is a Study Area for the proposed project that includes parts of Clark, Madison, and Garrard Counties. On July 11, 2006 the Rural Utility Service (RUS) and EKPC held a scoping meeting concerning this project to help identify sensitive areas within this Study Area, and begin determining alternative routes for the project. EKPC engineers are now in the process of determining alternate routes for this project, and they have provided a Study Corridor for this project, which encompasses the most likely alternate routes to be chosen. This step has been taken to help ensure that bat mist netting can be completed for this project before the end of the 2006-netting season. The corridor would begin at EKPC's J. K. Smith Power Station located in southern Clark County and travel approximately 35 miles to the southwest where a proposed 345 kV substation would be built along US 27 just north of Lancaster, Kentucky (See enclosed maps). Project engineers plan to collocate the new powerline with existing power lines wherever possible to help lessen the impact on the natural environment and the private landowners in the area. You can also refer to the Macro-Corridor Study that was sent to your office on June 29, 2006 for more detailed information on the routing of this Study Corridor.

The proposed transmission line will require a 150-ft. wide right-of-way (ROW) and trees will need to be cleared within the project area. The clearing of trees during the summer months raises questions and concerns for the welfare of the federally endangered Indiana bat and its summer habitat. Therefore, a mist-netting survey plan is being created to address this issue.

EKPC biologists conducted a preliminary field survey of the Study Corridor to determine the habitat types in the area. The proposed Smith – West Garrard Substation and Transmission Line project is located in the Inner Blue Grass region of the state, and is

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.com>

characterized by rolling hills and sloping valleys. Land use in the Blue Grass region is typically characterized by the majority of upland areas being used for agricultural purposes, with wooded habitats limited to the more deeply entrenched valleys. Within the Study Corridor for this project this characterization of the region holds true. The majority of the area, approximately 75%, is being used for agricultural and private purposes. An estimated 3074 acres of trees are located within the Study Corridor; this number was estimated from aerial photos of the project area (See enclosed maps). The forested areas are also where mist netting efforts will be focused as they contain the most likely bat habitat within the Smith-West Garrard Project area. Only a small percentage of the total forested area would actually be classified as wooded habitat, with the majority of the trees located in riparian zones, small disjunct clusters, and along fencerows. Dominant tree species within the wooded areas are silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), box elder (*Acer negundo*), shagbark hickory (*Carya ovata*), hackberry (*Celtis occidentalis*), green ash (*Fraxinus pennsylvanica*), black walnut (*Juglans nigra*), eastern red cedar (*Juniperus virginiana*), and sycamore (*Platanus occidentalis*).

Based on the field survey, we propose 25 mist-netting sites within the Study Corridor. Exact mist netting locations are still being determined and property owner permission obtained, but general areas for proposed mist-netting sites include:

Clark County:

- Brock Cemetery Road
- Cotton Creek
- Upper Howard Creek
- J. K. Smith Power Station Property

Madison County:

- Muddy Creek
- Dunbar Branch
- Rocky Lick Branch
- Peacock Road
- Campbell Branch Road
- Otter Creek
- Tate Creek
- Haden Heights Road
- Silver Creek
- Tracy Branch
- Paint Lick Creek

Garrard County:

- Long Branch
- Jack Black Road
- East Fork
- Boone Creek

Because some of these areas have been highly disturbed, some sites may be altered or moved if no bats are captured or observed during the first night of mist netting. Additional sites may also be added to ensure a thorough survey of the study area.

Please review this proposal of a mist netting survey for the Indiana bat. After surveying the project area, we feel this proposal is adequate to determine the presence/probable absence of this species in the project area. Once the survey has been completed, a detailed report of our results will be submitted to your office.

I would appreciate your comments on this mist-netting proposal as soon as possible. If you have any questions concerning this or any of our projects, please feel free to contact me at your convenience. Thank you for taking the time to address our concerns.

Sincerely,



Joe Settles

Supervisor

Natural Resources and Environmental Communications

Joe Settles

From: Mindi_Lawson@fws.gov
Sent: Tuesday, July 25, 2006 4:17 PM
To: Joe Settles
Subject: Smith - West Garrard 345 kV Transmission Line and Substation Project

Joe,

We have reviewed the mist netting survey plan regarding the Smith-West Garrard 345 Transmission Line and Substation Project. We believe the survey plan is adequate and a sufficient number of sites are proposed for mist netting. We look forward to reviewing the final report.

Thank you for the opportunity to provide input on this project,

Mindi Lawson
Fish & Wildlife Biologist

US Fish & Wildlife Service
Kentucky Field Office
3761 Georgetown Rd.
Frankfort, KY 40601
502/695-0468 ext. 229
502/695-1024 fax
Mindi_Lawson@fws.gov
<http://frankfort.fws.gov>



March 17, 2006

Virgil Lee A. Andrews, Jr., Field Supervisor
U.S. Fish and Wildlife Service
3761 Georgetown Road
Frankfort, Kentucky 40601

2087 Ketchner Road
Wellsville, New York 14895
Phone: (585) 593-5696
E-mail: Gilpin@eznet.net

Dear Mr. Andrews:

RECEIVED

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed installation of five new 100 megawatt combustion turbine electric generating units (CTs) at its existing J.K. Smith Electric Generating Station in Clark County, Kentucky. The construction site for the proposed new CTs was filled and graded as part of previous construction activity at the generating station. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC's plans, we are soliciting your advice and comments pertaining to the proposed new CTs as they relate to threatened and endangered species, wildlife, wildlife refuges, wetlands and other important natural resource concerns. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed CTs and a copy of a portion of USGS topographic map locating the proposed new facility are enclosed for your agency's review, along with a *Project Area Location Map* and a *Proposal Drawing*.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address, e-mail address or telephone number given above.

Sincerely,

Gary W. Gilpin
Environmental Scientist/Owner

cc: Robert Hughes, EKPC
Enclosures

No significant adverse impacts to wetlands or federally listed endangered or threatened species are anticipated from this proposal.

1983-2006

23

YEARS OF SERVICE

for Robert M. Koch April 21, 2006
Field Supervisor Date
U. S. Fish and Wildlife Service
Frankfort, KY 40601

December 14, 2006

6 Jordans Way
Oswego, New York 13126
(315) 342-3456

XXXXXXXXXXXXXXXXXXXX
2087 Ketcher Road
Weisville, New York 14894
Phone: (607) 921-6876
XXXXXXXXXXXXXXXXXXXX

Virgil Lee A. Andrews, Jr., Field Supervisor
U.S. Fish and Wildlife Service
J.C. Watts Federal Bldg., Rm. 266
330 West Broadway
Frankfort, Kentucky 40601

Dear Mr. Andrews:

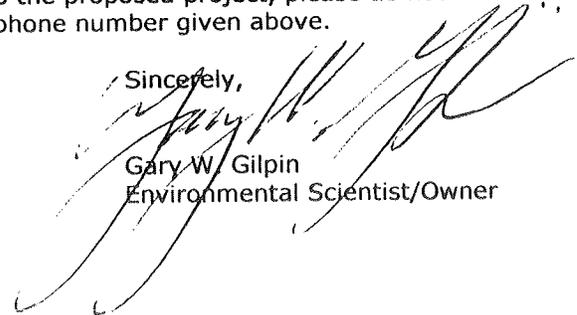
GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed new electric transmission project in Clark, Garrard, and Madison Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC’s plans, we are soliciting your advice and comments pertaining to the proposed new transmission project as it relates to threatened and endangered species. A mist netting survey was completed for the proposed project, the report for which is enclosed for your review, along with *Biological Assessment/Evaluation*. A copy of the *Public Scoping Report* for the proposed project is also available online at the USDA Rural Development’s website: <http://usda.gov/rus/water/ees/ea.htm>.

Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed project and copies of portions of USGS topographic maps locating the proposed new facilities are enclosed for your agency’s review.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address or telephone number given above.

Sincerely,



Gary W. Gilpin
Environmental Scientist/Owner

cc: Joe Settles, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE



United States Department of the Interior

FISH AND WILDLIFE SERVICE

3761 Georgetown Road
Frankfort, Kentucky 40601

January 16, 2007

Mr. Gary Gilpin
Gilpin Group
6 Jordans Way
Oswego, New York 13126

Subject: FWS # 2007-B-0341; Biological Assessment/Evaluation for the Proposed Smith-West Garrard 345 kV Transmission Line and Switching Station Project Clark, Madison, and Garrard Counties, Kentucky

Dear Mr. Gilpin:

Thank you for your letter and enclosures of December 14, 2006, transmitting a biological assessment/evaluation (BAE) that addresses the proposed Smith – West Garrard 345 kV transmission line and switching station project in Clark, Madison, and Garrard Counties, Kentucky. The proposed transmission line would be approximately 35 to 37 miles in length and would require a 150-foot right-of-way (ROW). A large percentage of the proposed transmission line would be collocated with existing transmission lines wherever possible in an attempt to lessen the impact on the natural environment and the private landowners in the area. Fish and Wildlife Service (Service) biologists have reviewed the document and we offer the following comments.

Several federally listed species and one federal candidate species, which are known to occur or have suitable habitat near the area of influence for the proposed project, were evaluated in the BAE. These species are listed below:

Lesquereux's bladderpod	running buffalo clover
Bald eagle	gray bat
Indiana bat	

According to the BAE, the project is not likely to adversely affect these species based on discussions below.

Lesquereux's bladderpod and Running buffalo clover

Lesquereux's bladderpod and running buffalo clover have not been documented from the project area. However, project biologists surveyed all of the alternative routes considered for the proposed project, and no running buffalo clover or Lesquereux's bladderpod were found.

**TAKE PRIDE
IN AMERICA** 

Indiana bat

Summer mist-net surveys for Indiana bats were accomplished from May 2006 through August 2006. No Indiana bats were captured during mist-netting efforts. Also, surveys indicated that no Indiana bat hibernacula or other potential wintering habitat were within the area of influence.

Bald eagle

The bald eagle is not known within the project area, but could be present during the winter migration making it possible for the species to fly into the proposed overhead electric line. However, the electric line would be below the forest canopy, thus potentially reducing the chance of collisions. Deaths of bald eagles attributed to electric lines such as the proposed electric line are extremely rare in the eastern United States.

Gray bat

Field surveys failed to locate any suitable summer and/or winter roosting habitat for gray bats. However, summer mist-netting efforts led to the capture of twenty gray bats. In order to avoid and minimize direct effects to gray bats and their foraging habitat, East Kentucky Power Cooperative would utilize the following measures:

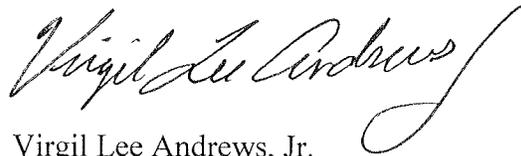
1. The majority of construction activities would occur only during daylight hours and cease prior to those times of day when the gray bats are utilizing stream corridors for foraging.
2. The ROW crossings would span streams with no poles placed in stream corridors. Additionally, there would be no alteration or realignment of stream channels.
3. No equipment would be allowed within or operate in natural stream channels (i.e., being placed upon the natural substrate of the stream) and no excavation of stream channels would occur.
4. Equipment cleaning/staging areas would be located such that runoff from these areas would not enter any streams.
5. A Storm Water Pollution Prevention Plan would be developed for this project, and erosion and sediment control best management practices would be formulated and made a part of the final contract.
6. Erosion and sediment controls would include, but are not necessarily limited to, silt fences, straw bales, sediment basins, and rock check dams. These measures would be used singly or in combination to provide the maximum level of erosion control and protection.
7. Temporary seeding and mulching of all disturbed areas would be conducted immediately upon work being completed in those areas, especially when there are time delays between construction activities due to factors such as the weather, scheduling, etc.
8. Water quality standards would be maintained throughout the entire stream corridors in accordance with federal or state agency required permits. The resident foreman would monitor stream crossings on a weekly basis during the appropriate construction phase, and inform the environmental coordinator regarding necessary erosion control measure maintenance.

Based on the above discussion the Service concurs with the determination that the project should “not adversely affect” running buffalo clover, Indiana bat, bald eagle, and gray bat. In view of this, we believe that the requirements of section 7 have been fulfilled. Obligations under section

7 must be reconsidered, however, if: (1) new information reveals that the proposed project may affect listed species in a manner or to an extent not previously considered, (2) the proposed project is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the proposed project. We also do not believe that impacts to Lesquereux's bladderpod will occur.

Thank you for the opportunity to comment on this proposed action. If you have any questions regarding the information which we have provided, please contact Mindi Lawson at (502)/695-0468.

Sincerely,

A handwritten signature in black ink that reads "Virgil Lee Andrews, Jr." The signature is written in a cursive style with a large, sweeping flourish at the end.

Virgil Lee Andrews, Jr.
Field Supervisor



EAST KENTUCKY POWER COOPERATIVE

June 29, 2006

Mr. Lee Andrews
U.S. Fish and Wildlife Service
Frankfort Field Office
3761 Georgetown Rd.
Frankfort, KY 40601

Dear Mr. Andrews,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, Richmond, KY 40475 from 1 p.m. until 2 p.m. on Tuesday, July 11, 2006. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391
P.O. Box 707, Winchester,
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
<http://www.ekpc.coop>

March 17, 2006

2087 Ketchner Road
Wellsville, New York 14895
Phone: (585) 593-5696
E-mail: Gilpin@eznet.net

Doug Dawson, Wildlife Biologist III
Kentucky Department of Fish & Wildlife Resources
Arnold L. Mitchell Building
#1 Game Farm Road
Frankfort, Kentucky 40601

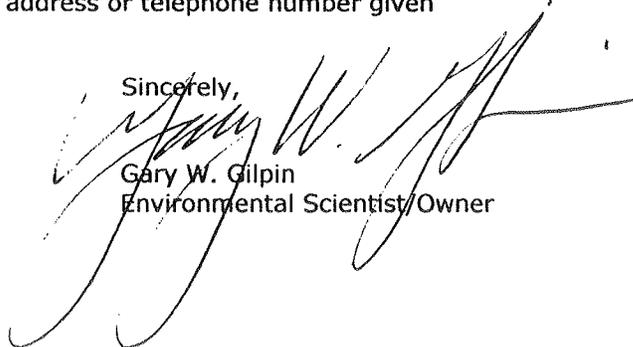
Dear Mr. Dawson:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed installation of five new 100 megawatt combustion turbine electric generating units (CTs) at its existing J.K. Smith Electric Generating Station in Clark County, Kentucky. The construction site for the proposed new CTs was filled and graded as part of previous construction activity at the generating station. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC's plans, we are soliciting your advice and comments pertaining to the proposed new CTs as they relate to threatened and endangered species. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed CTs and a copy of a portion of USGS topographic map locating the proposed new facility are enclosed for your agency's review, along with a *Project Area Location Map* and a *Proposal Drawing*.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address, e-mail address or telephone number given above.

Sincerely,



Gary W. Gilpin
Environmental Scientist/Owner

cc: Robert Hughes, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE



KENTUCKY COMMERCE CABINET
KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES

Ernie Fletcher
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

George Ward
Secretary

Dr. Jonathan W. Gassett
Commissioner

April 12, 2006

Gary W. Gilpin
Gilpin Group
Environmental Consulting and Planning
2087 Ketchner Road
Wellsville, New York 14895

RE: Threatened/endangered species, critical habitat review, and potential environmental impacts associated with the proposed installation of five new 100 megawatt combustion turbine electric generating units at its existing J. K. Smith Electric Generating Station Clark County, KY.

Dear Mr. Gilpin:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System (KFWIS) indicate that state and federal threatened and endangered species are known to occur within a 10 mile radius of the project. The KDFWR does not expect impacts to listed species and/or critical ecological habitats due to the nature of the project. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (502) 564-7109 Extension 366.

Sincerely,

A handwritten signature in cursive script that reads "Doug Dawson".

Doug Dawson
Wildlife Biologist III

Cc: Environmental Section File

June 29, 2006

Mr. Brian Smith
Non-Game Coordinator
KY Dept. of Fish and Wildlife Resources
#1 Game Farm Road
Frankfort, KY 40601

Dear Mr. Smith,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond, KY 40475** from 1 p.m. until 2 p.m. on **Tuesday, July 11, 2006**. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

December 14, 2006

6 Jordans Way
Oswego, New York 13126
(315) 342-3456

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

Doug Dawson, Wildlife Biologist
Kentucky Department of Fish & Wildlife
Arnold L. Mitchell Building
#1 Game Farm Road
Frankfort, Kentucky 40601

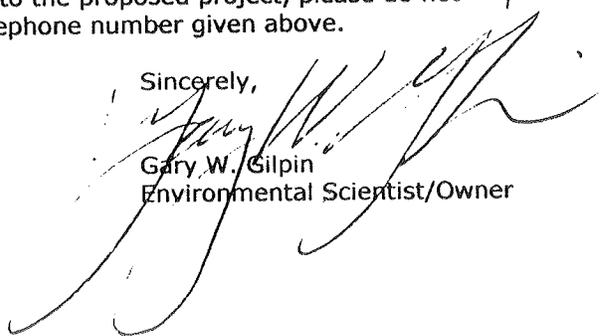
Dear Mr. Dawson:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed new electric transmission project in Clark, Garrard, and Madison Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Development, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC's plans, we are soliciting your advice and comments pertaining to the proposed new transmission project as it relates to threatened and endangered species. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed project and copies of portions of USGS topographic maps locating the proposed new facilities are enclosed for your agency's review. A copy of the *Public Scoping Report* for the proposed project is also available online at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address or telephone number given above.

Sincerely,


Gary W. Gilpin
Environmental Scientist/Owner

cc: Joe Settles, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE



**KENTUCKY COMMERCE CABINET
KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES**

Ernie Fletcher
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

George Ward
Secretary

Dr. Jonathan W. Gassett
Commissioner

January 8, 2007

Gary W. Gilpin
Environmental Scientist/Owner
Gilpin Group
6 Jordans Way
Oswego, New York 13126

Re: Threatened/Endangered species review; East Kentucky Power Cooperative proposed new electric transmission line in Clark, Garrard, and Madison Counties, Kentucky.

Dear Mr. Gilpin:

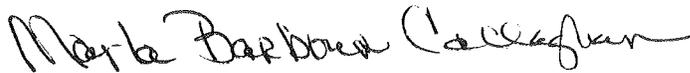
The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above referenced information. The Kentucky Fish and Wildlife Information System (KFWIS) indicate that no federally threatened/endangered species were found in the Buckeye, Hedges, Kirksville, Richmond North, and Union City USGS quadrangles. The gray bat is known to inhabit the Valley View 7.5-minute USGS quadrangle. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

In quadrangles in which gray bats are known to occur, any cave entrances that exist within the project area (i.e. the right-of-way and regeneration sites) should be surveyed for potential use by gray bats. Because gray bats are cave residents year-round and maternity colonies are generally found in close proximity to rivers, streams and lakes, any caves within the project area could offer potentially valuable habitat to resident gray bats. If a bat survey is necessary, please contact the US Fish and Wildlife Service office at (502) 695-0468 for information on how to proceed.

Page Two
Gary Gilpin
January 8, 2007

I hope this information will be helpful to you. Should you require additional information, please contact me at (502) 564-7109, ext. 366.

Sincerely,

A handwritten signature in black ink that reads "Marla Barbour Callaghan". The signature is written in a cursive style with a large initial "M".

Marla Barbour Callaghan
Fisheries Biologist III

cc: Environmental Section File



June 29, 2006

Mr. Don Dott
KY State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601

Dear Mr. Dott,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the Best Western-Holiday Plaza located at 100 Eastern Bypass, Richmond, KY 40475 from 1 p.m. until 2 p.m. on Tuesday, July 11, 2006. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m. at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Settles", is written over a horizontal line.

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

A Touchstone Energy Cooperative The logo for Touchstone Energy Cooperative, featuring a stylized sun or star symbol.

Joe Settles

From: Devine, Lee Anne LRL [Lee.Anne.Devine@lrl02.usace.army.mil]
Sent: Friday, January 05, 2007 7:50 AM
To: Joe Settles
Subject: RE: KY River Crossing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Joe
The project will not qualify for a categorical exclusion. I think you will qualify for a Nationwide Permit 12 or if not that then we'll process your request as a letter of permission. Either of these authorizations should be a simple process for us because our jurisdiction is limited to the crossing. I hope this helps.
Lee Anne

-----Original Message-----

From: Joe Settles [mailto:joe.settles@ekpc.coop]
Sent: Thursday, January 04, 2007 4:17 PM
To: Devine, Lee Anne LRL
Subject: RE: KY River Crossing

Lee Anne,
Could you send me the Categorical Exclusion regs/permits the utility line will fall under? I would really appreciate it. I need it for my files.
You have been very helpful.
Thanks,
Joe

> -----Original Message-----

> **From:** Joe Settles
> **Sent:** Wednesday, January 03, 2007 3:41 PM
> **To:** Lee Anne Devine (E-mail)
> **Subject:** KY River Crossing

>
> Lee Anne,
> Thank you for taking my call this afternoon regarding EKPC's Smith - West Garrard Project. This project will require a Section 10 Permit from your office for a KY River crossing on the Clark/Madison County line. It was my understanding that the USACE does not want to be a cooperating agency in the NEPA and Section 106 Processes currently underway by USDA Rural Development. Based upon our conversation you feel this overhead utility crossing will fall under a categorical exclusion under USACE regulations. Therefore, you will not be conducting any additional NEPA or Section 106 review for this permit. You requested we provide the sag height of the conductor, span width of the crossing, etc as normal with our permit application. We will proceed in this manner with our permit application

unless I hear otherwise from you.

>

> I want to thank you again for taking the time to talk with me today. We will be submitting our Section 10 Permit application in the near future.

It

has been a pleasure working with you. Please do not hesitate to contact me if you have any questions regarding this or any of our projects.

>

> Sincerely,

> Joe

>

> Joe Settles

> Supervisor, Natural Resources

> and Environmental Communications

> East KY Power Cooperative

> 4775 Lexington Road

> Winchester, KY 40391

> Work: 859-745-9256

> Mobile: 859-771-3303

> Fax: 859-744-6008

> Email: joe.settles@ekpc.coop

>

Classification: UNCLASSIFIED

Caveats: NONE

Gary W. Gilpin

From: "Joe Settles" <joe.settles@ekpc.coop>
To: "Stephanie Strength (E-mail)" <Stephanie.Strength@wdc.usda.gov>
Sent: Wednesday, January 03, 2007 3:20 PM
Subject: Smith - West Garrard USACE Section 10 Permit

Stephanie,

I spoke with Lee Ann Devine from the Louisville Army Corps of Engineers District Office today regarding the Smith - West Garrard Project. I informed Ms. Devine EKPC will need a Section 10 Permit from the USACE for our KY River Crossing. I asked Lee Ann what documentation we would need to provide from a NEPA standpoint for the project. Lee Ann stated that they did not wish to be a cooperating agency for the project. She stated the USACE will not be preparing any NEPA documentation for the crossing because it will fall under categorical exclusion due to the nature of the activity. She requested we provide the sag information, span length, and other normal information we supply for a Section 10 Permit, and the USACE will be satisfied.

If you have any questions regarding my conversation with Lee Ann, please do not hesitate to contact me.

If you need to speak with Lee Ann Devine she can be reached at 502-315-6692 or Lee.Anne.Devine@lrl02.usace.army.mil

Thanks,
Joe

Joe Settles
Supervisor, Natural Resources
and Environmental Communications
East KY Power Cooperative
4775 Lexington Road
Winchester, KY 40391
Work: 859-745-9256
Mobile: 859-771-3303
Fax: 859-744-6008
Email: joe.settles@ekpc.coop



June 29, 2006

Mr. John Byrd
District Conservationist
108 Pleasant Retreat Plaza
Lancaster, KY 40444-9561

Dear Mr. Byrd,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the Best Western-Holiday Plaza located at 100 Eastern Bypass, Richmond, KY 40475 from 1 p.m. until 2 p.m. on Tuesday, July 11, 2006. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m. at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Settles", is written over a horizontal line.

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

A Touchstone Energy Cooperative The logo for Touchstone Energy Cooperative, featuring a stylized sun or star symbol.

December 14, 2006

6 Jordans Way
Oswego, New York 13126
(315) 342-3456

XXXXXXXXXXXXXXXXXXXX
2007 New Year's Eve
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

John Bryd
District Conservationist
U.S. Natural Conservation Service
108 Pleasant Retreat Drive
Lancaster, Kentucky 40444

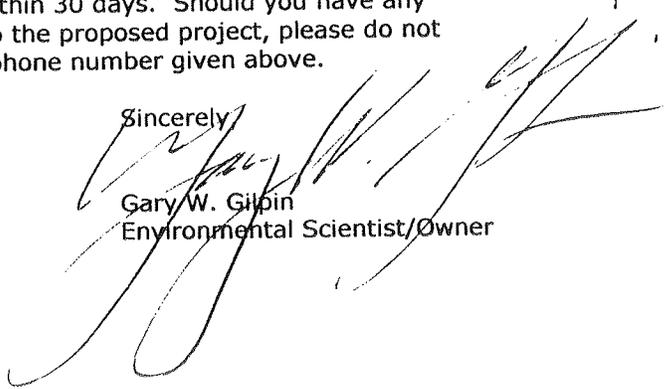
Dear Mr. Bryd:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed new electric transmission project in Clark, Garrard, and Madison Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC's plans, we are soliciting your advice and comments pertaining to the Garrard County portion of the proposed new transmission project as it relates to prime and important farmland soils. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed project and copies of portions of USGS topographic maps locating the proposed new facilities are enclosed for your agency's review. A copy of the *Public Scoping Report* for the proposed project is also available online at the USDA Rural Development's website: <http://usda.gov/rus/water/ees/ea.htm>.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address or telephone number given above.

Sincerely,



Gary W. Gilpin
Environmental Scientist/Owner

cc: Joe Settles, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE

United States Department of Agriculture



NRCS

Natural
Resources
Conservation
Service

Lancaster Service Center
108 Pleasant Retreat Dr.
Lancaster, KY 40444

Telephone No.: (859) 792-2620
Fax No.: (859) 792-4451

January 4, 2007

Gary Gilpin
Gilpin Group
6 Jordans Way.
Oswego, NY. 13126

Dear Mr. Gilpin,

This letter is regarding the environmental investigation your group is conducting on the East Kentucky Power Cooperative (EKPC) proposed electric transmission project in Garrard County. I appreciate you informing NRCS (and providing maps) on EKPC proposed plans to build new electric transmission lines and requesting my comments concerning prime and state important farmland soils.

We all like to see progress being made in our local communities. However, we do not like it at the expense of losing our prime agricultural farmland. Garrard County has a small amount of prime farmland acres in comparison to other counties nation wide. So, it is very important that we minimize the impact to prime farmland soils as much as possible in this county. It would be my recommendation that EKPC stay within the existing transmission line area with the new proposed project.

I am enclosing a list of prime and state important soils for Garrard County I will also send you a web address with instructions on how to access a soil map (for your project area) to determine how many acres of prime and state important farmland acres will be affected by your project. NRCS can make this determination for you but I will need an USDA - A D 1006 form titled Farmland Conversion Impact Rating with your proposed project information on the form.

If NRCS can be of further assistance, feel free to contact us at the above address.

Sincerely,

JOHN BYRD
District Conservationist
Lancaster Field Office

Prime and other Important Farmlands

Garrard and Lincoln Counties, Kentucky

Map symbol	Map unit name	Farmland classification
AIB	Allegheny loam, 2 to 6 percent slopes, rarely flooded	All areas are prime farmland
BaB	Beasley silt loam, 2 to 6 percent slopes	All areas are prime farmland
BeB	Berea silt loam, 2 to 6 percent slopes	All areas are prime farmland
CeB	Carpenter gravelly silt loam, 2 to 6 percent slopes	All areas are prime farmland
ChB	Chenault gravelly silt loam, 2 to 6 percent slopes	All areas are prime farmland
CmB	Christian silt loam, 2 to 6 percent slopes	All areas are prime farmland
CrB	Crider silt loam, 2 to 6 percent slopes	All areas are prime farmland
CuB	Culleoka silt loam, 2 to 6 percent slopes	All areas are prime farmland
DoB	Donerail silt loam, 2 to 6 percent slopes	All areas are prime farmland
EkB	Elk silt loam, 2 to 6 percent slopes	All areas are prime farmland
EmB	Elk silt loam, 2 to 6 percent slopes, rarely flooded	All areas are prime farmland
FrB	Frankstown gravelly silt loam, 2 to 6 percent slopes	All areas are prime farmland
GnB	Gilpin silt loam, 2 to 6 percent slopes	All areas are prime farmland
GrB	Greenbriar silt loam, 2 to 6 percent slopes	All areas are prime farmland
JeB	Jessietown silt loam, 2 to 6 percent slopes	All areas are prime farmland
LIB	Lily loam, 2 to 6 percent slopes	All areas are prime farmland
LoB	Lowell silt loam, 2 to 6 percent slopes	All areas are prime farmland
LsB	Lowell silt loam, phosphatic, 2 to 6 percent slopes	All areas are prime farmland
MoB	Monongahela loam, 2 to 6 percent slopes	All areas are prime farmland
NhB	Nicholson silt loam, 2 to 6 percent slopes	All areas are prime farmland
OtB	Otwell silt loam, 2 to 6 percent slopes	All areas are prime farmland
OwB	Otwell silt loam, 2 to 6 percent slopes, rarely flooded	All areas are prime farmland
PrB	Pricetown silt loam, 2 to 6 percent slopes	All areas are prime farmland
SaB	Sandview silt loam, 2 to 6 percent slopes	All areas are prime farmland
SdB	Sandview silt loam, phosphatic, 2 to 6 percent slopes	All areas are prime farmland
TeB	Teddy silt loam, 2 to 6 percent slopes	All areas are prime farmland
TIB	Tilsit silt loam, 2 to 6 percent slopes	All areas are prime farmland
TpB	Trappist silt loam, 2 to 6 percent slopes	All areas are prime farmland
AIC2	Allegheny loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
BbC2	Beasley silty clay loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
CeC	Carpenter gravelly silt loam, 6 to 12 percent slopes	Farmland of statewide importance
ChC	Chenault gravelly silt loam, 6 to 12 percent slopes	Farmland of statewide importance
CmC2	Christian silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
CrC	Crider silt loam, 6 to 12 percent slopes	Farmland of statewide importance
CuC2	Culleoka silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
EkC	Elk silt loam, 6 to 12 percent slopes	Farmland of statewide importance
FrC	Frankstown gravelly silt loam, 6 to 12 percent slopes	Farmland of statewide importance
GnC2	Gilpin silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
HgC	Hagerstown silt loam, 6 to 12 percent slopes	Farmland of statewide importance
JeC	Jessietown silt loam, 6 to 12 percent slopes	Farmland of statewide importance
LgC2	Lenberg silty clay loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
LIC	Lily loam, 6 to 12 percent slopes	Farmland of statewide importance
LoC2	Lowell silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
LsC2	Lowell silt loam, phosphatic, 6 to 12 percent slopes, eroded	Farmland of statewide importance
NhC2	Nicholson silt loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
PrC	Pricetown silt loam, 6 to 12 percent slopes	Farmland of statewide importance
SaC	Sandview silt loam, 6 to 12 percent slopes	Farmland of statewide importance
SdC	Sandview silt loam, phosphatic, 6 to 12 percent slopes	Farmland of statewide importance
TIC	Tilsit silt loam, 6 to 12 percent slopes	Farmland of statewide importance

Prime and other Important Farmlands

Garrard and Lincoln Counties, Kentucky

Map symbol	Map unit name	Farmland classification
TpC2	Trappist silty clay loam, 6 to 12 percent slopes, eroded	Farmland of statewide importance
Jm	Johnsburg-Mullins complex	Prime farmland if drained
Jr	Johnsburg-Robertsville complex	Prime farmland if drained
La	Lawrence silt loam, terrace, rarely flooded	Prime farmland if drained
Le	Lawrence-Robertsville complex	Prime farmland if drained
Rb	Robertsville silt loam, terrace, rarely flooded	Prime farmland if drained
Me	Melvin silt loam, frequently flooded	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Ne	Newark silt loam, frequently flooded	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Bo	Boonesboro silt loam, frequently flooded	Prime farmland if protected from flooding or not frequently flooded during the growing season
No	Nolin silt loam, frequently flooded	Prime farmland if protected from flooding or not frequently flooded during the growing season

June 29, 2006

Mr. William Lacy
District Conservationist
30 Taylor Ave. Suite A
Winchester, KY 40391-1323

Dear Mr. Lacy,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the Best Western-Holiday Plaza located at 100 Eastern Bypass, Richmond, KY 40475 from 1 p.m. until 2 p.m. on Tuesday, July 11, 2006. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m. at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

December 14, 2006

6 Jordans Way
Oswego, New York 13126
(315) 342-3456

XXXXXXXXXXXXXXXXXXXX
2087 Kerchner Road
Winchester, New York 14898
Phone: (607) 693-6900
XXXXXXXXXXXXXXXXXXXX

Will Lacy
District Conservationist
U.S. Natural Conservation Service
30 Taylor Avenue, Suite A
Winchester, Kentucky 40391

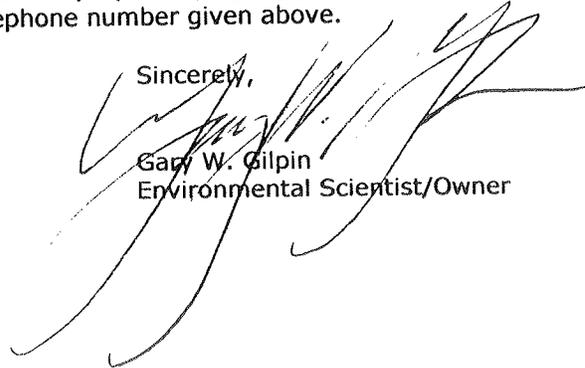
Dear Mr. Lacy:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed new electric transmission project in Clark, Garrard, and Madison Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC’s plans, we are soliciting your advice and comments pertaining to the Clark County portion of the proposed new transmission project as it relates to prime and important farmland soils. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed project and copies of portions of USGS topographic maps locating the proposed new facilities are enclosed for your agency’s review. A copy of the *Public Scoping Report* for the proposed project is also available online at the USDA Rural Development’s website: <http://usda.gov/rus/water/ees/ea.htm>.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address or telephone number given above.

Sincerely,



Gary W. Gilpin
Environmental Scientist/Owner

cc: Joe Settles, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE



Natural Resources Conservation Service
30 Taylor Avenue, Suite A
Winchester, KY. 40391
Phone: (859) 744-8989 Fax: (859) 744-9714

Gary Gilpin
Gilpin Group Environmental Consulting and Planning
6 Jordans Way
Oswego, New York 13126

January 10, 2007

Mr. Gilpin:

I have reviewed your request dated December 14, 2006 regarding the impacts to prime and important farmland soils as they relate to the Clark County segment of the proposed Smith-West Garrard Electric Transmission Project for the East Kentucky Power Cooperative.

The proposed corridor does, in fact, transect some small areas of prime or important farmland soils that lie north of the Kentucky River in Clark County.

Considering the nature of construction and the corresponding corridor rights-of-way, however, it is the opinion of this office that construction and maintenance of the facilities will have no adverse long-term impacts regarding the productivity or use of these soils. Please keep in mind that construction activities may have somewhat of a short-term negative impact depending on the time of year that they are carried out and the particular land use at that time. Overall, there is generally very favorable compatibility of such projects with regard to agricultural uses if coordinated timing and communication is exercised among all parties involved.

Please feel free to contact me if you have any questions or require additional information regarding this matter.

A handwritten signature in cursive script that reads "Will Lacy".

Will Lacy
USDA-NRCS District Conservationist
Winchester, Clark County, Kentucky

Cc: File

December 14, 2006

6 Jordans Way
Oswego, New York 13126
(315) 342-3456

XXXXXXXXXXXXXXXXXXXX
2007 Ketterer Road
Winchester, New York 14890
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

Sam Miller
District Conservationist
U.S. Natural Conservation Service
2150 Lexington Road, Suite B
Richmond, Kentucky 40475

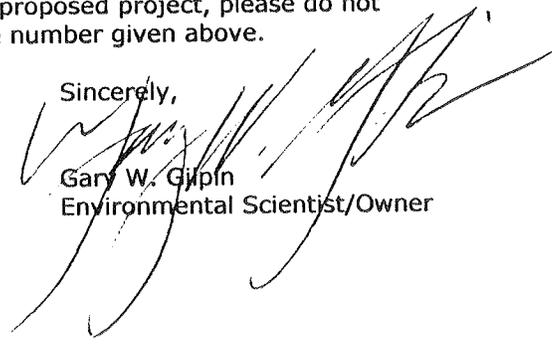
Dear Mr. Miller:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed new electric transmission project in Clark, Garrard, and Madison Counties, Kentucky. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC’s plans, we are soliciting your advice and comments pertaining to the Madison County portion of the proposed new transmission project as it relates to prime and important farmland soils. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed project and copies of portions of USGS topographic maps locating the proposed new facilities are enclosed for your agency’s review. A copy of the *Public Scoping Report* for the proposed project is also available online at the USDA Rural Development’s website: <http://usda.gov/rus/water/ees/ea.htm>.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address or telephone number given above.

Sincerely,



Gary W. Gilpin
Environmental Scientist/Owner

cc: Joe Settles, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE

United States Department of Agriculture



Natural Resources Conservation Service
2150 Lexington Road, Suite B
Richmond, KY. 40475
859/624-1981 ext. 3

December 26, 2006

Gary W. Gilpin
Gilpin Group
6 Jordans Way
Oswego, New York 13126

Dear Mr. Gilpin,

I have reviewed the proposal by East Kentucky Power Cooperative for constructing a new electric transmission line through Madison County, Kentucky. Your letter, dated December 14, 2006, requested comments concerning prime and important farmland soils within the project area.

This project will most certainly impact prime and important farmland soils. The exact acreage of prime and important farmland soils can be requested on form AD-1006. Where feasible, please consider constructing any new transmission lines parallel to existing lines. Parallel construction should reduce the total number of farms that are encumbered.

If you have any questions concerning my comments, please contact me at 859-624-1981.

Sincerely,

A handwritten signature in cursive script that reads "Samuel K. Miller".

Samuel K. Miller
District Conservationist



June 29, 2006

Mr. Samuel Miller
District Conservationist
2150 Lexington Road Ste B
Richmond, KY 40475-9101

Dear Mr. Miller,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, Richmond, KY 40475 from 1 p.m. until 2 p.m. on Tuesday, July 11, 2006. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Settles', is written over a horizontal line.

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391 Tel. (859) 744-4812
P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

A Thrivent Energy Cooperative The logo for Thrivent Energy Cooperative, featuring a stylized 'E' and 'K' intertwined within a circular emblem.

Joe Settles

From: Miller, Sam - Richmond, KY [sam.miller@ky.usda.gov]
Sent: Monday, July 24, 2006 11:50 AM
To: Joe Settles
Subject: RE: GIS Soils information

Joe,

I just mailed you a list of prime farmland and hydric soils for Madison County. Let me know if you have any questions.

Sam

-----Original Message-----

From: Joe Settles [mailto:joe.settles@ekpc.coop]
Sent: Friday, July 21, 2006 3:22 PM
To: Miller, Sam - Richmond, KY
Subject: RE: GIS Soils information

Thanks Sam. I will forward the information to our GIS person. I would appreciate that list of soils.

Thanks,
Joe

-----Original Message-----

From: Miller, Sam - Richmond, KY [mailto:sam.miller@ky.usda.gov]
Sent: Friday, July 21, 2006 3:16 PM
To: Joe Settles
Subject: FW: GIS Soils information

Joe,

Please see the message below concerning websites to access soils information. Let me know if you have problems using these sites.

Please keep in mind that I was not requesting that you include soils data in your evaluation, just making sure you knew it was available. Thanks.

I can mail you a list of prime farmland and hydric soils for Madison County, if needed. Just let me know.

Sam Miller, D.C.
Richmond F.O.

-----Original Message-----

From: Jones, TK - Frankfort, KY
Sent: Friday, July 21, 2006 8:11 AM
To: Miller, Sam - Richmond, KY
Subject: RE: GIS Soils information

He can use the Web Soil Survey at <http://soils.usda.gov> and he should be

able to define the area of interest for downloading into GIS. Or he can go to <http://geodata.gov> and find the necessary data.

T.K. Jones
Resource Conservationist
USDA-NRCS
103 Lakeview Drive
Frankfort, KY 40601
Voice: 502.695.5203 x112
Fax: 502.695.7996
Cell: 859.338.6562

> -----
>Confidentiality Notice: This e-mail message, including any attachment, is for the sole use of the intended recipients and may contain confidential information. Any unauthorized review, use, disclosure or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender, by e-mail, and destroy all copies of the original message.
>

-----Original Message-----
From: Miller, Sam - Richmond, KY
Sent: Thursday, July 20, 2006 11:20 AM
To: Jones, TK - Frankfort, KY
Subject: FW: GIS Soils information

TK,

East Kentucky Power is working with USDA-Rural Utilities Service on a new transmission line across Madison County. See Mr. Settles email below. Could we provide them with digital soils data for the project? If so, how? Thanks.

Sam

-----Original Message-----
From: Joe Settles [mailto:joe.settles@ekpc.coop]
Sent: Wednesday, July 19, 2006 10:33 AM
To: Miller, Sam - Richmond, KY
Cc: Strength, Stephanie - Washington, DC; Ronnie Terrill
Subject: GIS Soils information

Mr. Miller,
Thank you for attending our agency meeting last Tuesday. At the meeting, you requested EKPC gather soils information for our GIS database. Our GIS person has attempted to get that information, but the information he downloaded does not correlate with prime farmland soils, hydric soils, etc. We would like further guidance to obtain that information. I look forward to hearing from you.
Thanks,
Joe

Joe Settles

Supervisor, Natural Resources
and Environmental Communications
East KY Power Cooperative
4775 Lexington Road
Winchester, KY 40391
Work: 859-745-9256
Mobile: 859-771-3303
Fax: 859-744-6008
Email: joe.settles@ekpc.coop

OK WNC 2/13/88

AGRICULTURAL LAND EVALUATION WORKSHEET #1

List of Soil Series and Evaluations

County and State MADISON KY MLRA _____
 Indicator Crop(s) _____ Climatic "C" factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc. Ind. Soil Potent.		Acres		Agric. Value Group
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
E1A	Elk silt loam	0-2	I	P 130	96		510	.20	1
ShA	Shelbyville silt loam	0-2	I	P 130	96		1160	.40	1
BaB	Beasley silt loam	2-6	IIe	P 95	70		2080	.70	4
BeB	Berea silt loam	2-6	IIe	P 100	74		3120	1.10	4
CaB	Caleast silt loam	2-6	IIe	P 115	85		4830	1.70	4
CnB	Captina silt loam	2-6	IIe	P 110	82		1980	.70	4
CuB	Culleoka silt loam	2-6	IIe	P 115	85		1130	.40	4
E1B	Elk silt loam	2-6	IIe	P 125	93		1820	.60	2
HaB	Hagerstown silt loam	2-6	IIe	P 125	93		720	.30	2
LwB	Lowell silt loam	2-6	IIe	P 115	85		1970	.70	4
MuB	Mercer silt loam	2-6	IIe	P 105	78		10130	3.60	4
MwB	Monongahela fine sandy loam	2-6	IIe	P 100	74		690	.20	4
NhB	Nicholson silt loam	2-6	IIe	P 115	85		2930	1.00	4
ShB	Shelbyville silt loam	2-6	IIe	P 125	93		7270	2.50	2
TaB	Tate fine sandy loam	2-6	IIe	P 100	74		230	.10	4
TrB	Trappist silt loam	2-6	IIe	P 95	70		920	.30	2

JUN-23-03 MON 10:52 AM

P. 2

P = Prime Farmland
 S = Statewide Important

AGRICULTURAL LAND EVALUATION WORKSHEET #1

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____ Climatic "C" factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc. Ind. Soil Potent.		Acres		Agric Value Group
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
WhB	Whitley silt loam	2-6	IIe	P 110	82		550	.20	4
WoB	Woolper silty clay loam	2-6	IIe	P 115	85		490	.20	4
BeA	Berea silt loam	0-2	IIw	P 100	74		440	.20	5
CnA	Captina silt loam	0-2	IIw	P 105	78		1030	.40	5
Eg	Egam silty clay loam	--	IIw	P 130	96		480	.20	1
Hu	Huntington silt loam	--	IIw	P 135	100		4470	1.60	1
Kp	Kickapoo fine sandy loam	--	IIw	P 120	89		300	.10	1
Ld	Lindside silt loam	--	IIw	P 125	93		2850	1.0	1
MuA	Mercer silt loam	0-2	IIw	P 100	74		1510	.50	5
MwA	Monogahela fine sandy loam	0-2	IIw	P 95	70		360	.10	5
Ne	Newark silt loam	--	IIw	P 110	82		3630	1.30	5
Bo	Boonesboro silt loam	--	IIs	P 100	74		1000	.40	5
BaC	Beasley silt loam	6-12	IIIe	S 80	59		6480	2.30	6
BeC	Berea silt loam	6-12	IIIe	S 85	63		760	.30	6
CaC	Caleast silt loam	6-12	IIIe	S 110	82		6020	2.10	6

JUN-23-03 MON 10:53 AM

P. 3

AGRICULTURAL LAND EVALUATION WORKSHEET #1

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____ Climatic "C" Factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc. Ind. Soil Potent.		Acres		Agric Value Group
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
CnC	Captina silt loam	6-12	IIIe	S 95	70		1690	.60	6
CuC	Culleoka silt loam	6-12	IIIe	S 110	82		2930	1.00	3
ElC	Elk silt loam	6-12	IIIe	S 115	85		1600	.60	3
FdC	Faywood silt loam	6-12	IIIe	S 85	63		3720	1.30	6
HaC	Hagerstown silt loam	6-12	IIIe	S 110	82		1160	.40	3
LwC	Lowell silt loam	6-12	IIIe	S 110	82		15030	5.30	3
MnC	McAfee silt loam	6-12	IIIe	S 95	70		730	.30	6
MuC	Mercer silt loam	6-12	IIIe	S 95	70		6940	2.40	6
MwC	Monogahela fine sandy loam	6-12	IIIe	S 80	59		700	.20	6
NhC	Nicholson silt loam	6-12	IIIe	S 100	74		2580	.90	6
ShC	Shelbyville silt loam	6-12	IIIe	S 115	85		4160	1.50	3
TaC	Tate fine sandy	6-12	IIIe	S 95	70		1160	.40	6
TrC	Trappist silt loam	6-12	IIIe	S 85	63		1710	.60	6
WhC	Whitley silt loam	6-12	IIIe	S 95	70		1110	.40	6
WoC	Woolper silty clay loam	6-12	IIIe	S 110	82		880	.30	3
Bg	Blago silt loam	--	IIIw	P 95	70		630	.20	7
Du	Dunning silt loam	--	IIIw	P 110	82		1260	.40	5

JUN-23-03 MON 10:54 AM

P. 4

AGRICULTURAL LAND EVALUATION WORKSHEET #1

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____ Climatic "C" factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc. Ind. Soil Potent.		Acres		Agric Value Group
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
Lc	Lawrence silt loam	--	IIIw	P	80	59	11700	4.10	7
Mt	Melvin silt loam	--	IIIw	P	95	70	560	.20	5
BaD	Beasley silt loam	12-20	IVe	NI	65	48	2020	.70	10
BcC3	Beasley silty clay loam, severely eroded	6-12	IVe	NI	60	44	2060	.70	10
BrC	Brassfield silt loam	6-12	IVe	NI	45	33	1520	.50	10
CnC3	Captina silt loam severely eroded	6-12	IVe	NI	45	33	330	.10	10
CuD	Culleoka silt loam	12-20	IVe	NI	85	63	1600	.60	8
Edd2	Eden silty clay loam, eroded	6-20	IVe	NI	75	56	2130	.70	8
E1D	Elk silt loam	12-20	IVe	NI	85	63	350	.10	8
LwD	Lowell silt loam	12-20	IVe	NI	75	56	6590	2.30	8
MnD	McAfee silt loam	12-20	IVe	NI	60	44	1700	.60	10
MuC3	Mercer silty clay loam, severely eroded	6-12	IVe	NI	60	44	310	.10	10
OtC	Otway silty clay	6-12	IVe	NI	50	37	1440	.50	10
RaC	Rarden silt loam	6-12	IVe	NI	60	44	310	.10	10
RcC	Rockcastle silt loam	6-12	IVe	NI	40	30	170	.10	10

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____
 Minimum required ARC without irrigation _____
 Minimum required ARC with irrigation _____
 Irrigation water available: Yes _____ No _____
 Climatic "C" factor _____
 Temperature regime _____
 Moisture regime _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Product. ind. Soil Potent.		Acres		Agri Val. Grou
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
S1D	Shelockta gravelly silt loam	12-25	IVe	NI	70	52	1660	.60	8
SrC	Shrouds silty clay loam	6-12	IVe	NI	50	37	210	.10	10
TaD2	Tate fine sandy loam, eroded	12-20	IVe	NI	65	48	2690	.90	10
TrD	Trappist silt loam	12-20	IVe	NI	70	52	300	.10	8
TrC3	Trappist silty clay loam, severely eroded	6-12	IVe	NI	60	44	390	.10	10
WhD	Whitley silt loam	12-20	IVe	NI	74	55	210	.10	8
Rb	Robertsville silt loam	---	IVw	NI	70	52	3410	1.20	9
AlF	Alluvial land	Steep	VIe	NI	---	---	190	.10	11
BcD3	Beasley silty clay loam, severely eroded	12-20	VIe	NI	---	---	1500	.50	11
BrE	Brassfield silt loam	12-30	VIe	NI	---	---	10500	3.70	11
CwE	Culleoka flaggy silt loam	20-30	VIe	NI	---	---	7760	2.70	11
EeE2	Eden flaggy clay, eroded	20-30	VIe	NI	---	---	7050	2.50	11
FdE	Faywood silt loam	12-30	VIe	NI	---	---	13580	4.80	11

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____ Climatic "C" Factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc. Ind. Soil Potent.		Acres		Agr. Value Group
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
LyE3	Lowell silty clay loam, severely eroded	12-30	VIe	NI	---	---	1500	.50	11
OtE	Otway silty clay	12-30	VIe	NI	---	---	6330	2.20	11
RaD2	Rarden silty loam, eroded	12-20	VIe	NI	---	---	440	.20	11
RcD	Rockcastle silt loam	12-20	VIe	NI	---	---	300	.10	11
RcE	Rockcastle silt loam	20-30	VIe	NI	---	---	2200	.80	11
SrE	Shrouts silty clay loam	12-30	VIe	NI	---	---	3890	1.40	11
WpE	Woolper very stony, silty clay loam	12-30	VIe	NI	---	---	380	.10	1
BrF	Brassfield silt loam	30-50	VIIe	NI	---	---	2330	.80	1
CwF	Culleoka flaggy silt loam	30-50	VIIe	NI	---	---	8060	2.80	1
EeF2	Eden flaggy clay, eroded	30-50	VIIe	NI	---	---	7020	2.50	1
Gu	Gullied land	---	VIIe	NI	---	---	370	.10	1
OtF	Otway silty clay	30-50	VIIe	NI	---	---	2990	1.00	1
SuE3	Shrouts clay, severely eroded	6-30	VIIe	NI	---	---	2990	1.00	1
WeG	Weikert channery silt loam	40-80	VIIe	NI	---	---	6860	2.40	1

List of Soil Series and Evaluations

County and State MADISON MLRA _____
 Indicator Crop(s) _____ Clim "C" factor _____
 Minimum required AWC without irrigation _____ Temperature regime _____
 Minimum required AWC with irrigation _____ Moisture regime _____
 Irrigation water available: Yes _____ No _____

Map Symbol	Soil Series	Slope	Land Cap. Class & Subclass	Important Farmland Determination	Produc Ind. Soil Potent.		Acres		Agr. Val. Gro
					Local	SCS-5	No.	%	
1	2	3	4	5	6	7	8	9	10
CeF	Caneyville very stony silt loam	35-60	VIIIs	NI	--	--	2630	.90	13
CoF	Colyer shaly silt loam	12-50	VIIIs	NI	--	--	3730	1.30	13
CsF3	Colyer shaly silt clay loam, severely eroded	12-50	VIIIs	NI	--	--	4540	1.60	13
CyE	Cynthiana-Rock outcrop complex	12-30	VIIIs	NI	--	--	16370	5.70	13
FaF	Fairmont - Rock outcrop complex	30-60	VIIIs	NI	--	--	9220	3.20	13
RoE	Rock outcrop - opequon complex	12-30	VIIIIs	NI	--	--	950	.30	13
Rs	Rock outcrop, shale	--	VIIIIs	NI	--	--	250	.10	13

HYDRIC SOILS
MADISON COUNTY
KENTUCKY

January 1, 1990

Hydric Soil Map Units (Where not drained and/or not protected from flooding)

<u>Symbol</u>	<u>Name</u>	<u>Hydric part if not whole map unit</u>
Bg	Blago silt loam <u>1/</u>	
Du	Dunning silty clay loam <u>1/</u>	
Mt	Melvin silt loam <u>1/</u>	
Rb	Robertsville silt loam <u>1/</u>	

- 1/ Hydric due to saturation
- 2/ Hydric due to seasonal flooding (None Identified)
- 3/ Hydric due to seasonal ponding (None Identified)

Map Units That May Have Inclusions of Hydric Soils

<u>Symbol</u>	<u>Name</u>	<u>Probable landscape position of Hydric Inclusions</u>
Lc	Lawrence silt loam	Robertsville soils in low spots
Ne	Newark silt loam	Melvin soils in low spots

All hydric soils in this county support or would have supported woody vegetation under natural conditions except those identified as swamp or ponded phases.

March 17, 2006

2087 Ketchner Road
Wellsville, New York 14895
Phone: (585) 593-5696
E-mail: Gilpin@eznet.net

David L. Morgan
Director and State Historic Preservation Officer
Kentucky Heritage Council
The Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601

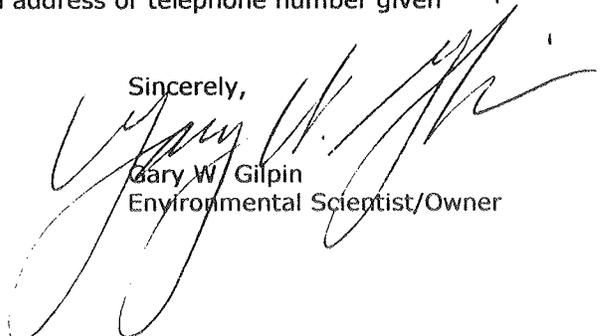
Dear Mr. Morgan:

GILPIN GROUP – Environmental Consulting & Planning is in the process of conducting an environmental investigation and preparing an environmental report for East Kentucky Power Cooperative (EKPC) of Winchester, Kentucky to assess the environmental impacts associated with a proposed installation of five new 100 megawatt combustion turbine electric generating units (CTs) at its existing J.K. Smith Electric Generating Station in Clark County, Kentucky. The construction site for the proposed new CTs was filled and graded as part of previous construction activity at the generating station. The environmental report will be submitted to the USDA, Rural Utilities Service for its independent review and evaluation.

In addition to informing your agency of EKPC's plans, we are soliciting your advice and comments pertaining to the proposed new CTs as they relate to properties of historic and archaeological significance currently listed in, or eligible for inclusion in the *National Register of Historic Places*; and any other areas of specific cultural resource concern. Any written comments received by your agency will be incorporated into the subject environmental investigation and report. A concise description of the proposed CTs and a copy of a portion of USGS topographic map locating the proposed new facility are enclosed for your agency's review, along with a *Project Area Location Map* and a *Proposal Drawing*.

To avoid unnecessary delays in the planning and construction of the proposed project, we would appreciate receiving your written comments within 30 days. Should you have any questions or need additional information pertaining to the proposed project, please do not hesitate to contact me at the mailing address, e-mail address or telephone number given above.

Sincerely,


Gary W. Gilpin
Environmental Scientist/Owner

cc: Robert Hughes, EKPC
Enclosures

1983-2006

23

YEARS OF SERVICE



COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL

The State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601
Phone (502) 564-7005
Fax (502) 564-5820
www.kentucky.gov

Ernie Fletcher
Governor

George Ward
~~XXXXXXXXXXXX~~
James Hoot
Secretary

David L. Morgan
Executive Director and
State Historic Preservation Officer

May 22, 2006

Mr. Gary Gilpin
Gilpin Group
2087 Ketchner Road
Wellsville, NY 14895

Re: Combustion Turbine Electric Generating Units (Clark County)

Dear Mr. Gilpin:

Thank you for your letter concerning the above referenced project. Our review indicates that the proposed project will take place in areas that have been previously disturbed. As such the proposed project will not impact any National Register properties or sites. In accordance with 36CFR Part 800.4 (d) of the Advisory Council's revised regulations our finding is that there are No Historic Properties Present within the undertaking's area of potential impact. Therefore, we have no further comments and the Agency Official's responsibility to consult with the Kentucky State Historic Preservation Officer under the Section 106 review process is fulfilled.

Should you have any questions, feel free to contact Sarah Miller of my staff at (502) 564-7005, extension 118.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer



June 29, 2006

Mr. David Morgan
Kentucky Heritage Council
300 Washington Street
Frankfort, KY 40601

Dear Mr. Morgan,

RE: Agency Scoping Meeting for the Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station.

The agency meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond, KY 40475** from **1 p.m. until 2 p.m. on Tuesday, July 11, 2006**. A public scoping meeting will be held in an open house format from 3 p.m. until 7 p.m at the same location.

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,


Joe Settles
Supervisor, Natural Resources
And Environmental Communications

4775 Lexington Road 40391
P.O. Box 707, Winchester,
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
<http://www.ekpc.coop>

A Touchstone Energy Cooperative 



JUN 20 2006

KY HERITAGE COUNCIL

16 June 2006

Mr. David Morgan, Director
Kentucky Heritage Council and State Historic Preservation Office
300 Washington Street
Frankfort, KY, 40601

Re: Reports of Findings:
A Phase I Archaeological Survey for the Proposed West Garrard County 345kv
Substation, Garrard County, Kentucky. By Matthew E. Frybylski
AMEC CRM Report 06-017
AMEC Project No. 1-4967-3600

Dear Mr. Morgan:

Enclosed for your review are two bound copies of the report listed above. This report details the findings of a survey conducted in Garrard County, Kentucky. This report is submitted to you per the request of Mr. Joe Settles of the East Kentucky Power Cooperative. The survey resulted in the discovery of one previously unrecorded archaeological site, 15GD140. Site 15GD140 consists of a late eighteenth to early nineteenth century historic component and a light prehistoric lithic scatter. Based on the survey findings the historic component at site 15GD140 could be potentially eligible for inclusion on the NRHP under Criterion D. It is recommended that the site be avoided or subjected to a Phase II archaeological investigation to further evaluate its NRHP eligibility.

If you have any questions or concerns, please contact Matthew Prybylski or Richard Stallings at (502) 267-0700.

Sincerely,

[Signature of Matthew Prybylski]
Matthew Prybylski
Staff Archaeologist

[Signature of Richard J. Stallings]
Richard J. Stallings, RPA
Senior Archaeologist

Enclosures

cc: Joe Settles, EKPC

/cf

AMEC Earth & Environmental, Inc.
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, KY 40289
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*** TOTAL PAGE.02 ***

Joe Settles

From: Pollack, David (EAHKHC) [David.Pollack@ky.gov]
Sent: Wednesday, July 12, 2006 11:15 AM
To: McKelway, Henry S (Hank)
Cc: Joe Settles; Stahlgren, Lori (EAHKHC)
Subject: RE: EKPC Phase II

Hank

I have no objections to you initiating the Phase II fieldwork, provided you let me know if the geophysical work is going to cover the entire site and when you send in the two copies of the survey report you address the concerns I outlined below.

If you will be in the field next week, Lori Stahlgren may stop by on Tuesday, as she will be in Lincoln County that day on another project.

David

From: McKelway, Henry S (Hank) [mailto:henry.mckelway@amec.com]
Sent: Wednesday, July 12, 2006 9:44 AM
To: Pollack, David (EAHKHC)
Subject: Re: EKPC Phase II

Thanks loads david - can we begin the work and report on prehistoric findings to you at conclusion to see if you agree that there s no prehistoric?. I see no problem in stripping if we find nothing in the unitsm can't talk more on this blakberry -- ill call PM

Hank

----- Original Message -----

From: Pollack, David (EAHKHC) <David.Pollack@ky.gov>
To: McKelway, Henry S (Hank)
Sent: Wed Jul 12 09:37:04 2006
Subject: RE: EKPC Phase II

Hank

Since you are going to do more work at this site, I am not prepared to write-off the prehistoric component at this time.

After looking over the report and you proposal, I had a couple of questions concerning the proposed fieldwork. 1) Is the geophysical work going to cover the entire site. 2) If you do not find any features in your units are you going to do any mechanical removal of the plowzone?

A few comments on the report.

4/13/2007

- 1) If you are going to provide shovel probe provenience (Tables 5.1, 5.3, and 5.4) information in the materials recovered section, which you do not need to as this information is also provided in the site description section, then you should provide a map in this section showing where the probes are located.
- 2) On Figure 6.3 in addition to the positive probes, it would be helpful if you included the negative probes within the site area as well as those that you used to define the site boundaries. Otherwise the reader gets the impression that all of your probes were positive.
- 3) Reminder - You are supposed to include site specific testing recommendations in the report.

David

From: McKelway, Henry S (Hank) [<mailto:henry.mckelway@amec.com>]
Sent: Tuesday, July 11, 2006 5:23 PM
To: Pollack, David (EAHKHC)
Subject: EKPC Phase II

Hey Dave -

Have you had an opportunity to make a decision on the Phase II testing at the West Garrard substation for EKPC ?

I would appreciate some feedback so that I can make crew arrangements.

Thanks

Hank

The information contained in this e-mail is intended only for the individual or entity to whom it is addressed.

Its contents (including any attachments) may contain confidential and/or privileged information.

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August 7, 2006

Mr. David Morgan
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Re: Report of Findings:
A Phase 1 Archaeological Survey for the Proposed West Garrard County 345 kV
Substation, Garrard County, Kentucky. By Matthew E. Prybyliski
AMEC CRM Report 06-017
AMEC project No. 1-4967-3600

Dear Mr. Morgan,

Enclosed for your review are 2 copies of the revised report listed above. This report details the findings of a survey conducted in Garrard County, KY. The survey resulted in the discovery of one previously unrecorded archaeological site, 15GD140. Site GD140 consists of a late eighteenth to early 19th century historic component and a light prehistoric lithic scatter.

AMEC Earth and Environmental, Inc. recommended a Phase II investigation of the site. That work is currently being conducted after receiving concurrence for the investigation from your office. The results of that investigation will be provided for your review upon completion. If you need any further information or wish to discuss the project, please feel free to contact me at (859)-745-9256. EKPC appreciates your efforts in these matters.

Sincerely,

Joe Settles
Supervisor, Natural Resources
And Environmental Communications



August 7, 2006

Dr. George M. Crothers
W.S. Webb Museum
of Anthropology and
Office of State Archaeology
1020A Export St.
Lexington, KY 40506-9854

Re: Report of Findings:
A Phase 1 Archaeological Survey for the Proposed West Garrard County 345 kV
Substation, Garrard County, Kentucky. By Matthew E. Prybyliski
AMEC CRM Report 06-017
AMEC project No. 1-4967-3600

Dear Dr. Crothers,

Please accept these 2 copies of the revised report listed above for submission into the repository. This report details the findings of a survey conducted in Garrard County, KY. EKPC appreciates your efforts in these matters.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Settles', is written over a horizontal line.

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

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P.O. Box 707, Winchester, Fax: (859) 744-6008
Kentucky 40392-0707 <http://www.ekpc.coop>

A Touchstone Energy Cooperative The logo for Touchstone Energy Cooperative, featuring a stylized 'T' and 'E' intertwined within a circular emblem.

September 14, 2006

Mr. David Morgan
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Re: Report of Findings:
A Phase II Archaeological Investigation of Site 15GD140 Garrard County,
Kentucky. By Melinda J. King Wetzel.
AMEC CRM Report 06-026
AMEC project No. 1-4967-3900

Dear Mr. Morgan,

Enclosed for your review are 4 copies of the report listed above. This report details the findings of a Phase II archaeological investigation of site 15GD140. Site 15GD140 consists of a late eighteenth to early nineteenth century historic component and a light prehistoric lithic scatter.

AMEC Earth and Environmental, Inc. conducted the Phase II investigation of the site. Upon completion of the investigation, AMEC states that no intact sub-plowzone cultural deposits were observed at the site and no further archaeological investigations are recommended.

I look forward to receiving your comments regarding this investigation. If you need any further information or wish to discuss the project, please feel free to contact me at (859)-745-9256. EKPC appreciates your efforts in these matters.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



September 27, 2006

Mr. David L. Morgan
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, KY 40601

RE: Area of Potential Effect for the Proposed Smith-West Garrard Transmission Line Clark, Madison, and Garrard Counties, Kentucky

Dear Mr. Morgan,

East Kentucky Power Cooperative (EKPC) is in the process of preparing an environmental report for the Rural Utilities Service (RUS) in order that it may assess the environmental impacts of the above-referenced electric transmission line project. EKPC on behalf of RUS has commenced a review for the Project pursuant to Section 106 of the National Historic Preservation Act.

A meeting was held on September 20, 2006 at the Kentucky Heritage Council office in Frankfort to discuss the potential APE for the Project. CRAI, Inc and Palmer Engineering with AMEC have been selected to complete the Cultural Historic investigation for the proposal. CRAI will conduct the investigation on the western/southern half of the proposal and Palmer Engineering/AMEC will conduct the investigation on the eastern/northern half of the proposal. A report for each half of the proposal will be prepared by the responsible parties.

The following individuals attended the meeting:

Janie-Rice Brother, Kentucky Heritage Council
Mathia Scherer, AMEC Earth and Environmental
Craig Potts, Cultural Resource Analysts, Inc.
Jayne Fiegel, Palmer Engineering
Joe Settles, East Kentucky Power Cooperative
Chris Carpenter, East Kentucky Power Cooperative

Much of the proposed project will involve paralleling or rebuilding existing transmission lines. The existing lines are supported by wood poles approximately 80 feet in height (between 60 and 100+ feet) and it is estimated the existing structures have an average span length of approximately 300 feet. The Project will be supported by rusticated steel poles that will average 100 foot in height (structure heights may vary from approximately

75 feet to 130 feet in height). The average span length between structures is estimated to be approximately 700 feet.

During our meeting it was determined the APE for the aboveground cultural historic resources for the parallel/rebuild alternative route sections of the Project would occur in an area extending one-quarter mile (0.25) on either side of the centerline for the alternative routes. The APE for the aboveground cultural historic resources for the alternative route sections that are considered new build sections (or greenfield routes) would extend for one-half mile on either side of the centerline for the alternative routes.

If during the field investigations the Principal Investigators encounter conditions they feel may warrant alteration to the APE, the Principal Investigators will consult with the State Historic Preservation Officer (SHPO) and EKPC (acting on behalf of RUS). EKPC will notice modification of the APE in writing to the SHPO and Principal Investigators.

I have enclosed a map of the alternative routes for your review. EKPC requests your office provide comment regarding the possible impacts created by the proposed project on archaeological resources in the project area. Please provide any recommendations you may have to mitigate or avoid these impacts. EKPC also requests written concurrence of the APE established for the aboveground cultural historic resources for the Project. We would appreciate a response within thirty (30) days. If you need any further information or wish to discuss any of the listed projects, please contact Joe Settles at (859)-745-9256. EKPC appreciates your efforts in these matters.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications

Cc: Craig Potts, CRAI
Jayne Fiegel, Palmer Engineering
Mathia Scherer, AMEC
Gary Gilpin, Gilpin Group
Stephanie Strength, USDA Rural Development



EAST KENTUCKY POWER COOPERATIVE

September 28, 2006

Mr. David Morgan
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Morgan,

Here is a copy of the maps that depict the boundaries of the APE for aboveground cultural historic survey for the Smith - West Garrard Transmission line project. Thank you for your time and efforts in this matter.

Sincerely,

Joe Settles MCT

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

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Governor

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October 24, 2006

George Ward
~~XXXXXXXXXX~~
Secretary

David L. Morgan
Executive Director and
State Historic Preservation Officer

Mr. Joe Settles
East Kentucky Power Cooperative
4775 Lexington Road
Winchester, KY 40392-0707

RE: "Phase II Archaeological Investigation of Site 15Gd140 Garrard County,
Kentucky" by Melinda J. King Wetzel

Dear Mr. Settles:

The State Historic Preservation Office has received for review and comment the above referenced archaeological report. The Phase II investigation of Site 15Gd140 included geophysical survey and hand excavation of 10 1 x1 meter test units. Artifacts recovered in the Phase II work consisted of 210 historic artifacts and 39 prehistoric artifacts. No subsurface features or cultural deposits were identified. Based on the low density of artifacts, lack of subsurface features, the authors conclude that the site is not eligible for listing on the National Register of Historic Places and no further work is recommended. I concur with the authors' findings.

Should you have any questions, feel free to contact Lori Stahlgren of my staff at (502) 564-7005, ext 118.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

cc. George Crothers
Melinda J. King Wetzel





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Ernie Fletcher
Governor

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George Ward
Secretary

November 2, 2006

Mr. Joe Settles
Supervisor, Natural Resources and Environmental Communications
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

Re: Area of Potential Effect for the Proposed Smith-West Garrard Transmission Line in Clark, Madison and Garrard Counties, Kentucky

Dear Mr. Settles:

The State Historic Preservation Office has received for review and approval the above-referenced Area of Potential Effect (APE) maps. A meeting was held at the Kentucky Heritage Council on September 20, 2006, with Janie-Rice Brother of my staff attending, to discuss the potential APE for this project. The APE for the above-ground resources for the parallel/rebuild alternative routes of this undertaking will be one-quarter mile to either side of the centerline. This APE will fluctuate for the portions of the line that will be new build section, to one-half mile on either side of the centerline. During the cultural resource survey, the principal investigators may alter the APE after consultation with this office and EKPC.

We concur that the APE shown on the maps provided to this office looks appropriate and we look forward to reviewing the cultural historic reports for this undertaking. Should you have any questions about these comments, please contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,

David L. Morgan, Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer



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Ernie Fletcher
Governor

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George Ward
Secretary

November 2, 2006

Mr. Joe Settles
Supervisor, Natural Resources and Environmental Communications
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

Re: Area of Potential Effect for the Proposed Smith-West Garrard Transmission Line in Clark, Madison and Garrard Counties, Kentucky

Dear Mr. Settles:

The State Historic Preservation Office has received for review and approval a project map for the above-referenced project. A review of our files indicates that this proposed route has the potential for impacts on National Register for Historic Places listed and eligible archeological sites. In addition to the archaeological impacts, the line appears to be going through or near the Lower Howard's Creek Nature and Heritage Preserve, which contains not only very significant cultural resources, but also threatened and endangered species.

Please contact Dr. David Pollack of my staff at (502) 564-7005, extension 123, to determine the nature and extent of archeological investigations that may be needed for the proposed undertaking.

Sincerely,

David L. Morgan, Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer



November 27, 2006

Mr. David L. Morgan
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, KY 40601

**RE: Area of Potential Effect for Archaeological Resources for the Proposed
Smith-West Garrard Transmission Line Clark, Madison, and Garrard
Counties, Kentucky**

Dear Mr. Morgan,

Thank you for your letters dated November 2, 2006 regarding the area of potential effect (APE) for the aboveground and archaeological resources for the above-mentioned project. One letter focused on the APE regarding the aboveground resources in the area and the second letter focused on the potential impacts to archaeological resources in the project area. The letter focusing on aboveground resources confirmed your office agrees with the APE previously established for those resources. The second letter focused on potential impacts to archaeological sites that are listed or may be eligible for listing on the National Register of Historic Places. You requested someone contact Dr. David Pollack to determine the nature and extent of archaeological investigations that may be needed for the proposed undertaking.

EKPC, acting as an agent of U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development), is consequently seeking your concurrence with the following APE and work plan clarifications with respect to further archaeological investigations on the Project. A meeting between Dr. Pollack and myself was held on November 20, 2006 at the Kentucky Heritage Council office in Frankfort to discuss the APE for archaeological resources on the Project. During that meeting, Dr. Pollack recommended a Phase I archaeological survey in those areas along the proposed electric transmission line corridor that have a high potential for containing significant archaeological sites.

In a follow-up conference call among your office, AMEC Earth and Environmental (archaeological consultants), and EKPC on November 27, 2006, Dr. Pollack indicated that performance of a Phase I archaeological survey should be postponed until a centerline has been established for the Project following USDA Rural Development's completion of the remainder of the Section 106 process and its review under the National Environmental Policy Act (NEPA). At this time, USDA Rural Development will proceed with its identification and assessment of aboveground cultural

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historic resources pursuant to the Section 106 process (which is occurring in an area extending one-half mile on either side of the proposed sections of new transmission line rights-of-way and one-quarter mile on either side of the proposed sections of parallel or rebuild sections of transmission line rights-of-way).

USDA Rural Development also will complete its Environmental Assessment (EA) for the Project pursuant to NEPA. Once USDA Rural Development has completed those Section 106 and NEPA activities and has issued a Finding of No Significant Impact (FONSI) or other decision document confirming its selected alternative for the Project, USDA Rural Development, working through EKPC, will commission a Phase I archaeological survey within the one hundred and fifty foot wide transmission line right-of-way (seventy-five feet on each side of the centerline) of the selected alternative. The specific locations for the Phase 1 investigation will include the proposed locations for electric transmission line support structures (i.e., poles), as well as any other area that will require subsurface disturbance.

The foregoing approach will allow USDA Rural Development to focus its intensive archaeological identification activities in those subsurface areas that actually are anticipated to be disturbed. If the Phase I investigation reveals evidence of any eligible archaeological resources in those areas, USDA Rural Development, working through EKPC, will consult with your office at that time to identify measures to avoid, minimize, or mitigate any potential adverse effect on such resources. Such measures may include, but may not necessarily be limited to, moving the locations of the transmission line support structure(s) in order to avoid any impact to the identified archaeological resources. USDA Rural Development and EKPC are confident that appropriate modifications in the location of support structures can be made, if necessary, to avoid or minimize any adverse effects on archaeological resources.

I appreciate the continued cooperation and assistance of the Kentucky Heritage Council as we move forward with this Project. We believe that the approach described in this letter will ensure a thorough and adequate identification and assessment of archaeological resources while appropriately conserving limited agency resources and avoiding undue disturbance of archaeological resources in the general project area. We are committed to working with your office to ensure that the effects of the Project on all historic properties are evaluated and avoided or minimized to the greatest extent practicable.

I would appreciate receiving a response to this letter within thirty (30) days indicating whether you agree with the aforementioned course of action. And thank you again for your continued support.

Sincerely,



Joe Settles

Supervisor, Natural Resources
And Environmental Communications

Cc: Rich Stallings, AMEC Earth and Environmental
Gary Gilpin, Gilpin Group
Stephanie Strength, USDA Rural Development



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George Ward
Secretary

December 11, 2006

Mr. Joe Settles
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, Kentucky 40392

Re: **Area of Potential Effect for Archaeological Resources for the Proposed Smith-West
Garrard Transmission Line Clark, Madison, and Garrard Counties, Kentucky**

Dear Mr. Settles:

Thank you for your letter concerning the above referenced project. As the project is extensive, Phase I archaeological survey has been recommended. This Phase I archaeological survey will be conducted in areas of ground disturbance by the project and areas where there is a high probability of archaeological resources. These surveys will take place after a centerline has been established following USDA Rural Development's completion of the Section 106 process and review under the National Environmental Policy Act (NEPA). Meanwhile, USDA Rural Development will proceed with its identification and assessment of aboveground cultural historic resources pursuant to the Section 106 process. The foregoing approach will allow USDA Rural Development to focus archaeological investigation where ground disturbance will actually take place. If Phase I investigation reveals evidence of any eligible archaeological resources, this office must be consulted to determine further steps to avoid, minimize or mitigate any potential adverse effects on such resources.

Should you have any questions, feel free to contact David Pollack of my staff at (502) 564-7005.

Sincerely,

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer





February 16, 2007

Mr. David Pollack
 Kentucky Heritage Council
 300 Washington Street
 Frankfort, Kentucky 40601

RE: Submittal of the Cultural Historic Resources Reports for the Smith – West Garrard 345 kV Transmission Line Project in Clark, Madison, and Garrard Counties, Kentucky.

Dear Mr. Pollack,

East Kentucky Power Cooperative (EKPC) is in the process of preparing an environmental report for the Rural Utilities Service, the agency that administers the U.S. Department of Agriculture’s Rural Development Programs (USDA Rural Development), in order to assess the environmental impacts of the proposed Smith – West Garrard 345 kV Transmission Line Project in Clark, Madison, and Garrard Counties, Kentucky (the Project). USDA Rural Development will review the environmental report and determine whether to adopt the report to meet their environmental regulations for Environmental Assessments with Scoping (7 CFR Part 1794 *Environmental Policies and Procedures*). EKPC, on behalf of USDA Rural Development, also has commenced a review of the Project pursuant to Section 106 of the National Historic Preservation Act.

For this proposal, sixteen (16) alternative routes were investigated. The routes that would involve paralleling existing lines exclusively are identified as A through H, and the routes which would involve rebuilding existing transmission facilities are identified as Ar through Hr. In other words, an “r” in the route name indicates a route that would involve rebuilding sections 10 and/or 12 rather than paralleling these sections. The enclosed maps identify the particular line sections and the rebuild and parallel opportunities. The sections associated with each routing alternative are listed below:

Route	Sections
A	1, 2, 5, 9, 10, 11, 14
Ar	1, 2, 5, 9, 10r, 11, 14
B	1, 2, 5, 9, 10, 12, 13, 14
Br	1, 2, 5, 9, 10r, 12r, 13, 14
C	1, 3, 4, 5, 9, 10, 11, 14
Cr	1, 3, 4, 5, 9, 10r, 11, 14
D	1, 3, 4, 5, 9, 10, 12, 13, 14
Dr	1, 3, 4, 5, 9, 10r, 12r, 13, 14
E	1, 3, 6, 7, 9, 10, 11, 14

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Er	1, 3, 6, 7, 9, 10r, 11, 14
F	1, 3, 6, 7, 9, 10, 12, 13, 14
Fr	1, 3, 6, 7, 9, 10r, 12r, 13, 14
G	1, 3, 6, 8, 10, 11, 14
Gr	1, 3, 6, 8, 10r, 11, 14
H	1, 3, 6, 8, 10, 12, 13, 14
Hr	1, 3, 6, 8, 10r, 12r, 13, 14

In a letter dated November 2, 2006, your office concurred with the area of potential effect (APE) for the aboveground cultural historic resources for the Project. The APE established for the parallel/rebuild alternative route sections of the Project is an area extending one-quarter mile (0.25) on either side of the centerline for the alternative routes. The APE for the aboveground cultural historic resources for the alternative route sections that are considered new build sections (or “greenfield” routes) extends for one-half mile on either side of the centerline for the alternative routes.

As you are aware, Cultural Resource Analysts, Inc. (CRAI) and Palmer Engineering (with the assistance of AMEC, Earth and Environmental) have been conducting the aboveground cultural historic investigation for the proposal. CRAI performed the investigation on the western/southern half of the proposal and Palmer Engineering conducted the investigation on the eastern/northern half of the proposal. As you are aware, the two firms were preparing separate reports for their respective halves of the proposal. The reports are entitled:

A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345kV Transmission Line in Clark and Madison Counties, Kentucky. Jayne H. Fiegel, Mathia Scherer, and Carrie Naas, Authors. Kentucky Heritage Council Site Check No. FY07-0001.

Cultural Historic Survey For The Proposed Smith-West Garrard East Kentucky Power Cooperative Transmission Line In Madison And Garrard Counties, Kentucky. Jacqueline P. Horlbeck, Craig A. Potts, and Trent Spurlock, Authors. Contract Publication Series 06-187. Kentucky Heritage Council Site Check No. FY07-0002.

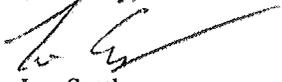
At this time, EKPC, on behalf of USDA Rural Development, is providing your office with these reports in an effort to consult with your office pursuant to Section 106. The reports provided are the views and recommendations of the cultural historians that have conducted the investigation. EKPC, on behalf of USDA Rural Development, requests your office review this information and provide any recommendations related to the identification, eligibility, and potential effects of the Project on these resources. I would appreciate a response from your office within thirty days (30) of the receipt of these reports and information.

Upon reviewing the comments received from your office as well as other consulting parties, USDA Rural Development will issue findings for the Project as required by Section 106. USDA Rural Development’s findings and the appropriate

documentation related to the findings (as outlined in 36 CFR 800.11 of the National Historic Preservation Act) for the Project will be provided to you and the consulting parties for the Project as soon as possible. In the event USDA Rural Development returns a finding of adverse effect for any cultural resource, USDA Rural Development will consult with the SHPO and the consulting parties to develop and evaluate alternatives or modifications that could avoid, minimize or mitigate the adverse effects. Any agreement regarding avoidance, minimization or mitigation of adverse effects would be documented in a Memorandum of Agreement (MOA) among USDA Rural Development, EKPC, the SHPO, and any other parties invited to be signatories by USDA Rural Development.

I appreciate the continued cooperation and assistance of the Kentucky Heritage Council as we move forward with this Project. We are committed to working with your office to ensure that the effects of the Project on all historic properties are evaluated and that any adverse effects are avoided or minimized to the greatest extent practicable. I look forward to receiving your comments.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications

Cc: Stephanie Strength, USDA Rural Development
Gary Gilpin, Gilpin Group



February 21, 2007

Mr. David Pollack
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Pollack,

Please substitute pages 59 and 60 in the report entitled:

A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345kV Transmission Line in Clark and Madison Counties, Kentucky. Jayne H. Fiegel, Mathia Scherer, and Carrie Naas, Authors. Kentucky Heritage Council Site Check No. FY07-0001.

The report submitted February 16th stated Site 12 encompassed 40 acres when in fact it encompasses 400 acres. The corrected text is enclosed with this letter.

Thank you for your efforts in this matter. If you have any questions, please do not hesitate to contact me at your convenience.

Sincerely,

Joe Settles
Supervisor, Natural Resources
And Environmental Communications

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February 21, 2007

Mr. David Pollack
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

Dear Mr. Pollack,

East Kentucky Power Cooperative (EKPC) provided your office the cultural resource reports for the Smith – West Garrard 345 kV Transmission Line Project for your review on February 16th. Today, we would like to provide large bulletin board maps that may aid in your review process. These large maps were prepared by EKPC staff from data files provided by Cultural Resource Analysts, Inc. and Palmer Engineering.

Cultural Resource Analysts, Inc. and Palmer Engineering staffs have not reviewed these maps, so please consider them only as an aid. If there is any question regarding the accuracy (site numbers, etc.) of the maps we have provided today; please consider the maps provided by the two firms in their cultural resource reports as the standard for your review.

I hope the maps aid in the review process. We look forward to receiving your comments.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Joe Settles', is written over a light-colored background.

Joe Settles
Supervisor, Natural Resources
And Environmental Communications



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KENTUCKY HERITAGE COUNCIL

Ernie Fletcher
Governor

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George Ward ~~XXXXXXXXXXXX~~
Secretary

David Pollack, Ph.D. ~~XXXXXXXXXXXX~~
Interim Executive Director and
State Historic Preservation Officer

March 12, 2007

Mr. Joe Settles
Supervisor, Natural Resources and Environmental Communications
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

Re: A Cultural Historic Survey for the Proposed Smith-West Garrard East Kentucky Power Cooperative Transmission Line in Madison and Garrard Counties, Kentucky

Dear Mr. Settles:

The State Historic Preservation Office received on February 16, 2007, the above-referenced cultural historic report completed by Jacqueline P. Horlbeck, Craig Potts and Trent Spurlock of Cultural Resource Analysts, Inc. The proposed undertaking consists of a transmission line that begins at East Kentucky Power Cooperative's J.K. Smith Power Station in southern Clark County, near Trapp, and will extend to the Newby substation in Madison County, Kentucky. The project corridor is approximately 35-37 miles long and will involve rebuilding of existing line as well as new transmission lines that will follow new routes. This report covers the southwest section of the proposed line and encompasses several alternatives, which are broken down into seven sections. The Area of Potential Effect (APE) for this project was defined as a quarter-mile on either side for the parallel and rebuild route sections, and a one mile corridor for the new build portions of the project. Nine sites within the Madison county portion of the APE had previously been surveyed and 20 sites within the Garrard county portion of the APE had previously been surveyed (these sites are marked with an asterisk in our findings of eligibility and effect below).

We agree with the authors that Site 1 (MA-856), Site 2 (MA-857), Site 3 (MA-858), Site 4 (MA-859), Site 5 (MA-860), Site 6 (MA-861), Site 7 (MA-862), Site 11 (MA-864), Site 12 (MA-865), Site 13 (MA-866), Site 14 (MA-867), Site 15 (MA-155)*, Site 16 (MA-868), Site 17 (MA-869), Site 18 (MA-870), Site 19 (MA-871), Site 20 (MA-462)*, Site 23 (MA-872), Site 24 (MA-873), Site 26 (MA-874), Site 27 (MA-875), Site 28 (MA-876), Site 29 (MA-877), Site 31 (MA-449)*, Site 32 (MA-878), Site 33 (MA-879), Site 34 (MA-880), Site 35 (MA-881), Site 37 (GD-458), Site 38 (GD-459), Site 39 (GD-460), Site 40 (GD-461), Site 41 (GD-462), Site 42 (GD-463), Site 43 (GD-464), Site 44 (GD-465), Site 45 (GD-466), Site 46 (GD-467), Site 47 (GD-468), Site 49 (GD-470), Site 50 (GD-471), Site 51 (GD-472), Site 53 (GD-473), Site 54 (GD-474), Site 55 (GD-475), Site 56 (GD-476), Site 57 (GD-477), Site 58 (GD-478), Site 59 (GD-479), Site 60 (GD-480), Site 61 (GD-481), Site 62 (GD-482), Site 63 (GD-483), Site 64 (GD-484), Site 65 (GD-485), Site 66 (GD-486), Site 67 (GD-487), Site 68 (GD-488), Site 69 (GD-489), Site 70 (GD-490), Site 72 (GD-491), Site 73 (GD-492), Site 76 (GD-494), Site 77 (GD-495), Site 78 (GD-496), Site 79 (GD-497),



Site 80 (GD-498), Site 81 (GD-499), Site 82 (GD-500), Site 83 (GD-501), Site 84 (GD-502), Site 85 (GD-503), Site 86 (GD-504), Site 87 (GD-505), Site 88 (GD-506), Site 89 (GD-507), Site 90 (GD-508), Site 91 (GD-509), Site 92 (GD-510), Site 94 (GD-400)*, Site 95 (GD-398)*, Site 97 (GD-397)*, Site 98 (GD-511), Site 99 (GD-512), Site 100 (GD-513), Site 101 (GD-514), Site 102 (GD-515), Site 103 (GD-516), Site 105 (GD-518), Site 106 (GD-519), Site 107 (GD-520), Site 108 (GD-521), Site 109 (GD-522), Site 110 (GD-523), Site 111 (GD-524), Site 112 (GD-525), Site 113 (GD-526), Site 114 (GD-395)*, Site 115 (GD-394)*, Site 118 (GD-391)*, Site 199 (GD-527), Site 120 (GD-390)*, Site 122 (GD-528), Site 125 (GD-402)*, Site 125 (GD-529), Site 126 (GD-530), Site 127 (GD-531), Site 128 (GD-532), Site 129 (GD-533), Site 130 (GD-534), Site 131 (GD-535), Site 132 (GD-536), Site 133 (GD-537), Site 134 (GD-538), Site 135 (GD-539), Site 136 (GD-540), Site 137 (GD-541), Site 138 (GD-542), Site 139 (GD-543), Site 140 (GD-544), Site 141 (GD-545), Site 142 (GD-546), Site 143 (GD-547), Site 144 (GD-548), Site 145 (GD-549) and Site 149 (GD-550) appear to be ineligible for listing in the National Register of Historic Places either individually or as part of a district.

The survey identified two previously inventoried properties as being demolished: Site 8 (MA-153) and Site 148 (GD-65), which was listed in the NRHP.

We also concur that the following properties are either eligible or listed; our effects determinations are listed below as well:

- Site 9 (MA-460)*, Eligible for NRHP listing under Criterion C, **No Effect**
- Site 10 (MA-863), Eligible for NRHP listing under Criteria A and D, **No Effect**
- Site 21 (MA-464)*, Eligible for NRHP listing under Criterion A, **No Effect**
- Site 22 (MA-463)*, Eligible for NRHP listing under Criterion A, **No Effect**
- Site 25 (MA-156)*, Eligible for NRHP listing under Criteria A and C, **No Adverse Effect**
- Site 30 (MA-157)*, Eligible for NRHP listing under Criterion C, **No Effect**
- Site 36 (MA-882), Eligible for NRHP listing under Criterion C, **No Adverse Effect**
- Site 48 (GD-469), Eligible for NRHP listing under Criterion C, **No Effect**
- Site 52 (GD-15), Eligible for NRHP listing under Criterion C, **No Adverse Effect**
- Site 71 (GD-31)*, NRHP Listed, **Adverse Effect** from alternatives A, C, E, and G, **No Effect** from alternatives B, Br, D, Dr, F, Fr, H and HR
- Site 74 (GD-58)*, NRHP Listed, **No Effect**
- Site 75 (GD-493), Eligible for NRHP listing under Criterion C, **No Effect**
- Site 93 (GD-399)*, Determined eligible by consensus in 2004, **No Effect**
- Site 96 (GD-396)*, Determined eligible by consensus in 2004, **No Effect**
- Site 116 (GD-393)*, Determined eligible by consensus in 2004, **No Adverse Effect**
- Site 117 (GD-393)*, Determined eligible by consensus in 2004, **No Adverse Effect**
- Site 121 (GD-389)*, Determined eligible by consensus in 2004, **No Adverse Effect**
- Site 123 (GD-66), NRHP listed, **Adverse Effect** from Alternatives B, Br, D, Dr, F, Fr, H and Hr, **No Adverse Effect** from alternatives A, Ar, C, Cr, E, Er, G and Gr
- Site 146 (GD-67)*, NRHP Listed, **No Adverse Effect**
- Site 147 (GD-27)*, NRHP Listed, **No Effect**

Mr. Settles
March 12, 2007
Page 3

We do not agree with the authors' evaluation of Site 104 (GD-517). It is our determination that this site is eligible as a rural historic landscape. The characteristics which qualify it do not have to be outstanding, nor is it precluded from conveying its association with the agricultural traditions of Garrard County simply because many of its elements are common elsewhere on the landscape. Therefore, we would recommend that the proposed NRHP boundary encompass the entire parcel. Alternatives A, Ar, C, Cr, E, Er, G and G would have an **Adverse Effect** on this site. Alternatives B, Br, D, Dr, F, Fr, H and Hr would have **No Effect** on Site 104.

We request further discussion and consultation concerning Sites 71, 104 and 123 and the effects of this undertaking on these resources. Should you have any questions about these comments, please contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,



David Pollack, Ph.D., Interim Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: Craig Potts, CRAI



COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL

Ernie Fletcher
Governor

The State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601
Phone (502) 564-7005
Fax (502) 564-5820
www.kentucky.gov

George Ward ~~XXXXXXXXXXXX~~
Secretary

David Pollack, Ph.D. ~~XXXXXXXXXXXX~~
David L. Morgan
Interim Executive Director and
State Historic Preservation Officer

March 15, 2007

Mr. Joe Settles
Supervisor, Natural Resources and Environmental Communications
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

**Re: A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard
345 KV Transmission Line in Clark and Madison Counties, Kentucky**

Dear Mr. Settles:

The State Historic Preservation Office received on February 16, 2007, the above-referenced cultural historic report completed by Jayne Fiegel and Carrie Naas of Palmer Engineering and Mathia Scherer of Amec Earth and Environmental.

The proposed undertaking consists of a transmission line that begins at East Kentucky Power Cooperative's J.K. Smith Power Station in southern Clark County, near Trapp, and will extend to the Newby substation in Madison County, Kentucky. This report covers the northeast section of the proposed line, which extends for 17 miles of the project in southern Clark County and northeast and central Madison County and encompasses several alternatives, which are broken down into nine sections. The Area of Potential Effect (APE) for this project was defined as a quarter-mile on either side for the parallel and rebuild route sections, and a one mile corridor for the new build portions of the project. Thirty-nine sites were recorded for this survey; five are previously inventoried resources (these sites are marked with an asterisk in our findings of eligibility and effect below). Many of the previously surveyed sites have been demolished, including seven sites in Clark County (CK-134, CK-135, CK-137, CK-138, CK-395, CK-400, CK-536) and five sites in Madison County (MA-16, MA-154, MA-201, MA-202 and MA-204).

We agree with the authors that Site 1 (MA-823), Site 4 (MA-825), Site 5 (MA-25)*, Site 6 (MA-826), Site 7 (MA-827), Site 8 (MA-828), Site 9 (MA-829), Site 10 (MA-830), Site 11 (MA-831), Site 13 (MA-832), Site 16 (MA-834), Site 17 (MA-835), Site 18 (MA-836), Site 19 (MA-837), Site 20 (MA-209)*, Site 21 (MA-838), Site 22 (MA-839), Site 23 (MA-840), Site 24 (MA-841), Site 25 (MA-842), Site 26 (MA-843), Site 27 (MA-844), Site 28 (MA-845), Site 29 (MA-846), Site 30 (MA-847), Site 31 (MA-848), Site 32 (MA-849), Site 33 (MA-850), Site 35 (MA-852), Site 36 (MA-853), Site 37 (MA-854) and Site 38 (MA-855) are not eligible for listing in the National Register of Historic Places either individually or as part of a district.



Mr. Settles
March 15, 2007
Page 2

We do not agree with the authors' assessment of Site 2 (MA-13)* and Site 3(MA-824). Despite some deterioration associated with the site's abandonment, there is still much to be learned from the log buildings at both sites, for their association with the settlement period in Madison County as well as their architecture, which illustrates construction and material changes in the nineteenth century. Both of these sites appear to be potentially eligible for NRHP listing under Criteria A and C. We do not feel, however, that the rebuilding of this section of the transmission line will negatively impact these resources; therefore, there will be **No Effect** to Sites 2 and 3.

Furthermore, we do not believe that the application of vinyl siding and the enclosure of a porch (a reversible change) renders Site 14 (MA-200)* ineligible for listing. Combined with the site's outbuildings, this resource appears to have eligibility potential under Criterion A. We do not believe that the new construction will be visible from this site; therefore, there will be **No Effect** to Sites 14. Finally, many bridges similar to Site 15 (MA-833) have been determined eligible by consensus between this office and FHWA, until we have further information regarding its condition; we feel that it is potentially eligible for NRHP listing under Criterion C. This project as proposed will have **No Effect** on this resource.

We agree with the authors that Site 12 (MA-203)*, is eligible for NRHP listing under Criterion C. At this time, it appears that both Sections 2 and 3 of the proposed line would have an **Adverse Effect** upon this resource; we would like to request a more detailed map that better delineates sections 2 and 3 as well as the resource and its recommended NRHP boundaries. We also agree that Site 34 (MA-851), a WPA bridge from 1938, is eligible for NRHP listing under Criterion A. This project as proposed will have **No Effect** on this resource.

We request further discussion and consultation concerning Site 12 and the effects of this undertaking on these resources. Should you have any questions about these comments, please contact Janie-Rice Brothor of my staff at (502) 564-7005, extension 121.

Sincerely,



David Pollack, Ph.D., Interim Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: Jayne Fiegel, Palmer Engineering



COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL

Ernie Fletcher
Governor

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George Ward
Secretary

March 30, 2007

Mr. Joe Settles
Supervisor, Natural Resources and Environmental Communications
East Kentucky Power Cooperative
4775 Lexington Road
P.O. Box 707
Winchester, KY 40392-0707

Re: Effects Determination for Site 12 (MA-203) in A Cultural Historic Resources Report for the Northeast Section of the Proposed Smith-West Garrard 345 KV Transmission Line in Clark and Madison Counties, Kentucky

Dear Mr. Settles:

Following a site visit on Tuesday, March 27, 2007, by a member of my staff to Greenlan Farm, Site 12 in the above-referenced project, it is our determination that our previous finding remains unchanged. Both Sections 2 and 3 of the proposed line would have an **Adverse Effect** upon Site 12.

Since there are other properties adversely affected by this project, it is our recommendation that we begin drafting a Memorandum of Agreement that addresses the adverse effects of this undertaking. It is clear from the cultural historic reports conducted for this project that there are several off-site and alternative mitigation possibilities, and we would like to discuss these with you at your earliest convenience.

Should you have any questions about these comments, please contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,

David Pollack, Ph.D., Interim Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: Jayne Fiegel, Palmer Engineering

From: CHRIS WATHEN [mailto:CWATHEN@kenvirons.com]
 Sent: Thursday, July 20, 2006 2:22 PM
 To: dtodd@aqslc.net; Bob Hughes; Craig Johnson; Mike Binkley;
 dkincaid@kecco.net
 Cc: Randy Dials; Roy Palk; jayholloway@hunton.com; pshamblin@hunton.com
 Subject: Class I Modeling Conference Call

To All:

Today at 1:00 PM EDT we had the conference call to discuss the Class I modeling protocol for the JK Smith project. Participants were Dee Morris and John Notar of the National Parks Service, Jim Renfro from the Smoky Mountains, Stuart Ecton and Martin Luther of KYDAQ, Stan Krivo of EPA Region IV, Penny Shamblin, Jay Holloway, and me. Bob Carson of Mammoth Cave, Bill Jackson of the Forest Service, and Don Shepherd of the NPS could not make the call, however we did receive comments from Bill and Don in separate emails.

Overall, the call went very well with only minor comments coming from NPS/EPA/Smokies, nothing that significantly changes anything we had originally proposed. John Notar and Don Shepherd had some recommendations for minor adjustments to some of the Calpuff model variables that we will implement. A few positive comments also were provided:

-John Notar, responding to Stan Krivo's comment that a cumulative analysis could be required for visibility in the parks if the concern threshold was exceeded, stated that NPS was only requiring cumulative visibility analysis on a case-by-case basis for those sources "hitting the parks really hard" (i.e. having a significant number of visibility exceedances).

-Stan Krivo commented that even though modeling the CTs at 10 % load may in fact represent the worst case scenario, we should only have to model scenarios that can reasonably be expected to occur. This could alleviate concerns over whether any modeling of startup/shutdown emissions is required.

-John Notar referred us to Don Shepherd for an adjustment to the 30-day NOx average for application to 24-hour impact modeling (for increment and more importantly, visibility). We will obtain that factor from Mr. Shepherd, which may allow us to stick with a 30-day average NOx emission rate from the CFBs of 0.07 lb/mmBTU while modeling a 24-hour average that is somewhere between 0.07 and 0.10. We will obtain that factor and see if it helps the impacts.

-Finally, Mr. Notar suggested that they would consider alternate analysis of the visibility impacts, which can only help us with some of the suspect values we have modeled (i.e. > 10 % in the Smokies).

As far as "action items" for EKPC, we really only need to know what loads can be "reasonably expected" for the CTs and identify the worst-case on that basis. Mr. Notar indicated that he would accept 100 % load for the visibility and deposition analysis, but we still need to address this for the increment modeling per Stan Krivo. If running the CTs at 10 % load is reasonable, then we don't need any additional information.

So, we are ready to begin final setup of the Class I modeling and conduct the official modeling runs to accompany the application. I will keep everyone updated on the progress of the modeling.

Chris

Chris Wathen, P.E.

Principal
Kenvirons, Incorporated
502-695-4357
502-695-4363 - fax
cwathen@kenvirons.com

Gary: In reviewing the below list of streams in the Kentucky River Basin, I identified one stream, Muddy Creek, Madison County, as a Reference Reach/Exceptional water in 401 KAR 5:030. No degradation should occur to this exceptional water. In all watersheds, BMPs should be implemented such as, erosion curtains, construction during rain-free, low flow conditions, avoid disruption of riparian vegetation, etc.

Sincerely,

Randy Payne

From: GILPIN GROUP - Environmental Consulting & Planning [mailto:gwgilpin@twcny.rr.com]
Sent: Friday, January 12, 2007 4:18 PM
To: Payne, Randall (EPPC DEP DOW)
Subject: Special Use Waters

Randall Payne
Kentucky Dept. Of Environmental Protection
Division of Water

Randy,

East Kentucky Power Cooperative is proposing to construct a new Smith to Side View Transmission Line that would traverse the following streams:

Garrard County

- Boone Creek
- East Fork Sugar Creek
- Sugar Creek
- Long Branch
- Back Creek

Garrard/Madison County Line

- Paint Lick

Masion County

- Dry Branch
- Silver Creek
- Tate Creek
- Honest Branch
- Shallow Ford Creek
- Tribble Branch
- West Fork Otter Creek
- Otter Creek
- East Fork Otter Creek
- Rocky Lick Branch
- Muddy Creek

Clark/Madison County Line

- Kentucky River

Please review this list and notify me as to whether any of the creeks listed are recognized as Outstanding State Resource Waters, or special use or exception waters.

Thanks,
Gary...

Gary W. Gilpin
Environmental Scientist/Owner
GILPIN GROUP - Environmental Consulting & Planning
(315) 342-3456

APPENDIX B
TRIBAL CORRESPONDENCE



June 29, 2006

Dr. Richard Allen, THPO
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

Dear Dr. Richard Allen, THPO,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

A public scoping meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond, KY 40475** from **3 p.m. until 7 p.m. on Tuesday, July 11, 2006.**

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

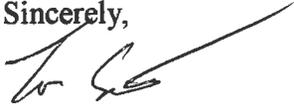
Because East Kentucky Power Cooperative plans to apply for financing assistance from the U.S. Department of Agriculture, Rural Utilities Service ("RUS"), the proposed project constitutes an undertaking subject to the requirements of Section 106 of the National Historic Preservation Act. In this case, RUS is utilizing the services of EKPC to prepare information, analyses and recommendations as part of the Section 106 review process. This correspondence is intended to provide you with a summary of the project and invite you to participate in the Section 106 process pursuant to your unique status as an Indian tribe, as recognized in the Section 106 regulations, 36 C.F.R. § 800.2(c)(2).

In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the

involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Russell Townsend, THPO
Eastern Band of Cherokee Indians
Cultural Resources Division
P.O. Box 455
Cherokee, NC 28719

Dear Russell Townsend, THPO,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

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Because East Kentucky Power Cooperative plans to apply for financing assistance from the U.S. Department of Agriculture, Rural Utilities Service ("RUS"), the proposed project constitutes an undertaking subject to the requirements of Section 106 of the National Historic Preservation Act. In this case, RUS is utilizing the services of EKPC to prepare information, analyses and recommendations as part of the Section 106 review process. This correspondence is intended to provide you with a summary of the project and invite you to participate in the Section 106 process pursuant to your unique status as an Indian tribe, as recognized in the Section 106 regulations, 36 C.F.R. § 800.2(c)(2).

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P.O. Box 707, Winchester,
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
221
<http://www.ekpc.coop>

In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Lisa Stopp
Historic Preservation Coordinator
United Keetoowah Band of Cherokee Indians
P.O. Box 746
Tahlequah, OK 74465

Dear Lisa Stopp,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

A public scoping meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond**, KY 40475 from **3 p.m. until 7 p.m. on Tuesday, July 11, 2006.**

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4775 Lexington Road 40391
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Tel. (859) 744-4812
Fax: (859) 744-6008
223
<http://www.ekpc.coop>

In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles

Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Rebecca Hawkins
Tribal Administrator
The Shawnee Tribe
P.O. Box 189
Miami, OK 74355

Dear Rebecca Hawkins,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

A public scoping meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond, KY 40475** from **3 p.m. until 7 p.m. on Tuesday, July 11, 2006.**

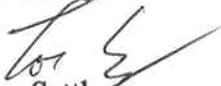
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In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles

Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Karen Kaniatobe, THPO
Cultural/Historic Preservation Department
Absentee Shawnee Tribe of Oklahoma
2025 S. Gordon Cooper Drive
Shawnee, OK 74801

Dear Karen Kaniatobe, THPO,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

A public scoping meeting will be held at the **Best Western-Holiday Plaza** located at 100 Eastern Bypass, **Richmond, KY 40475** from **3 p.m. until 7 p.m. on Tuesday, July 11, 2006.**

The purpose of the meetings is to provide information regarding the project, and solicit comments for the preparation of an EA. I have enclosed a macro-corridor study of the proposed project for your review. Also enclosed is a copy of the federal register notice for the public meeting.

Because East Kentucky Power Cooperative plans to apply for financing assistance from the U.S. Department of Agriculture, Rural Utilities Service ("RUS"), the proposed project constitutes an undertaking subject to the requirements of Section 106 of the National Historic Preservation Act. In this case, RUS is utilizing the services of EKPC to prepare information, analyses and recommendations as part of the Section 106 review process. This correspondence is intended to provide you with a summary of the project and invite you to participate in the Section 106 process pursuant to your unique status as an Indian tribe, as recognized in the Section 106 regulations, 36 C.F.R. § 800.2(c)(2).

In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Roxanne Weldon, Director
Environmental/Land Management Department
Eastern Shawnee Tribe of Oklahoma
P.O. Box 350
Seneca, MO 64865

Dear Roxanne Weldon, Director,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

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We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

Julie Olds, Cultural Preservationist
Miami Tribe of Oklahoma
P.O. Box 1326
Miami, OK 74355

Dear Julie Olds, Cultural Preservationist,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

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We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



June 29, 2006

John P. Froman, Chief
Peoria Indian Tribe of Oklahoma
P.O. Box 1527
Miami, OK 74355

Dear John P. Froman, Chief,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

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We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications



PEORIA TRIBE OF INDIANS OF OKLAHOMA

118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538

P.O. Box 1527

MIAMI, OKLAHOMA 74355

CHIEF

John P. Froman

SECOND CHIEF

Jason Dollarhide

July 10, 2006

East KY Power Cooperative
Attn: Joe Settles
4475 Lexington Road
Winchester, KY 40391

RE: Smith – West Garrad Transmission Line Project

Thank you for notice of the referenced project. The Peoria Tribe of Indians of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the proposed construction. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Peoria Tribe request notification and further consultation.

The Peoria Tribe has no objection to the proposed construction. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

John P. Froman
Chief

xc: Bud Ellis, Repatriation/NAGPRA Committee Chairman

TREASURER
John Sharp

SECRETARY
Hank Downum

FIRST COUNCILMAN
Claude Dagers

SECOND COUNCILMAN
Jenny Rampey

THIRD COUNCILMAN
Alan Goforth



June 29, 2006

Virginia Nail, THPO
Chickasaw Nation
P.O. Box 1548
Ada, OK 74821

Dear Virginia Nail, THPO,

RE: Smith - West Garrard Transmission Line Project

The Rural Utilities Service, an agency which administers the U.S. Department of Agriculture's Rural Development Programs (USDA Rural Development) intends to hold an agency scoping meeting and prepare an environmental assessment related to possible financial assistance to East Kentucky Power Cooperative, Inc. (EKPC) for the proposed construction of approximately 35 miles of 345 kilovolt (kV) transmission line in Clark, Madison, and Garrard counties, KY. The proposed 345 kV transmission line project would be constructed within one of several alternative corridors under consideration. The alternative transmission line corridors originate at the J.K. Smith Power Station near the community of Trapp in Clark County, KY and terminate at the proposed location of a new 345 kV switching station near Lancaster in Garrard County.

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In accordance with 36 CFR Part 800 and the National Historic Preservation Act of 1966, as amended, East Kentucky Power Cooperative, as agent for RUS, is soliciting the

4775 Lexington Road 40391
P.O. Box 707, Winchester,
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6368
<http://www.ekpc.coop>

involvement of any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by the proposed project. To notify RUS and EKPC of your tribe's desire to become a consulting party for this project, please send a letter, complete with contact information and statement of interest, to Joe Settles at joe.settles@ekpc.coop or at East Kentucky Power Cooperative, 4775 Lexington Road, Winchester, KY 40391.

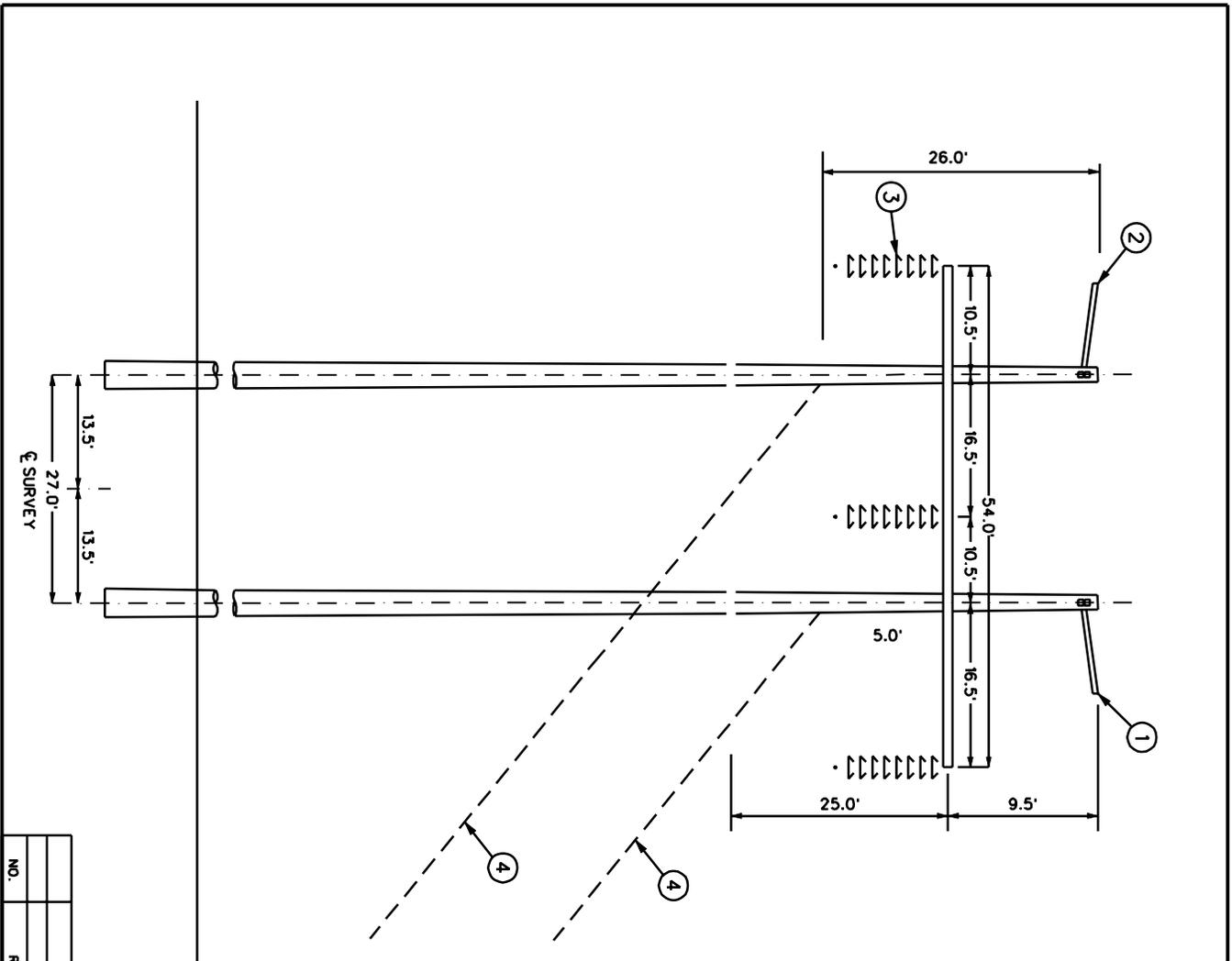
We hope you or someone from your staff will be able to attend. Thank you for your time and efforts in this matter.

Sincerely,



Joe Settles
Supervisor, Natural Resources
And Environmental Communications

APPENDIX C
TRANSMISSION LINE SUPPORT STRUCTURE DIAGRAMS

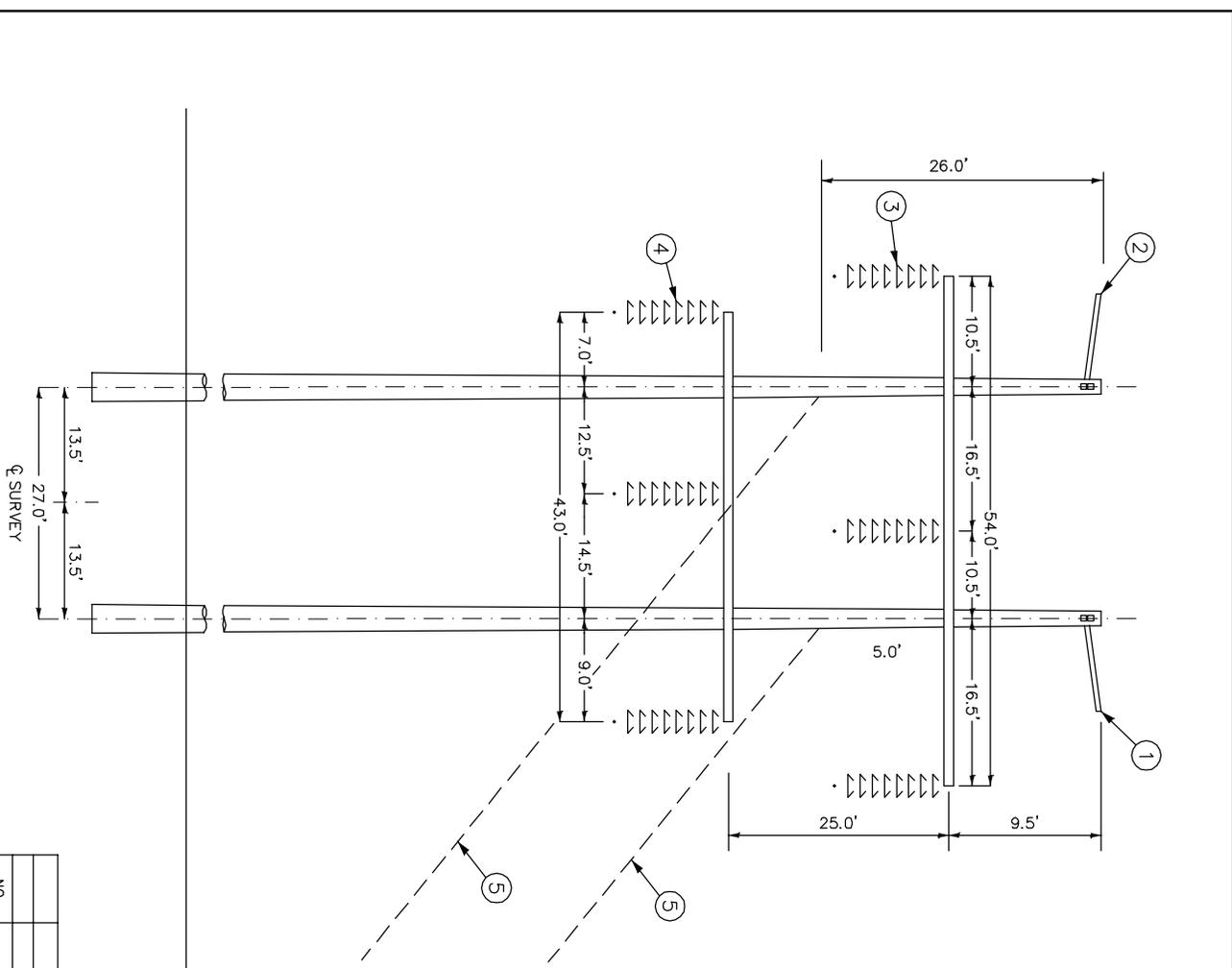


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DWG. REF.	QTY	DESCRIPTION	ITEM DET.
1	1	OPGW TANGENT ASSEMBLY	TH-1A-7N08
2	1	OPGW TANGENT ASSEMBLY	TH-0P0CW-0.470
3	3	INSULATOR ASS'Y SMALL ANGLE	TH-C-345-95AKSR
4	4	GUYPING ASSEMBLY	

TRANSMISSION LINE STEEL STRUCTURE
 2 POLE, SINGLE CIRCUIT SMALL-MEDIUM ANGLE

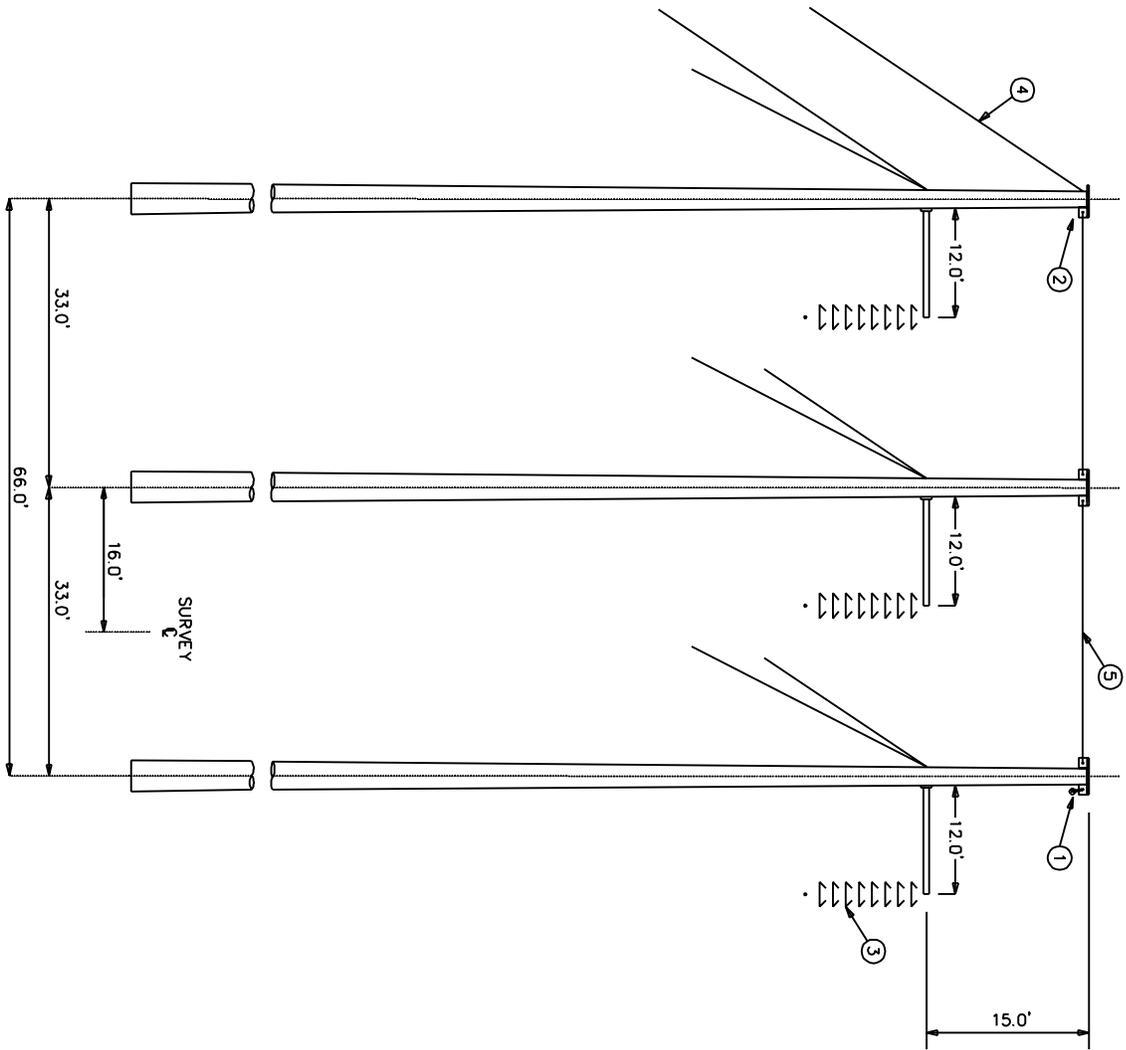
NO.	REVISION	DATE	BY	TH-11S-345
			DRN	
			ML TRANS	
			DATE	
			CHECKED	
			1. MAJUM	

DWG. REF.	QTY	DESCRIPTION	ITEM	DET.
TH-11US-345	1	OHGW TANGENT ASSEMBLY		
1	1	OHGW TANGENT ASSEMBLY	TM-4A-7NO8	
2	1	OPGW TANGENT ASSEMBLY	TM-OPGW-0.470	
3	3	INSULATOR ASSY SMALL ANGLE	TM-IC-345-954ACSR	
4	3	INSULATOR ASSY SMALL ANGLE	TM-IC-138-795ACSR	
5	4	GUINING ASSEMBLY	TC-31A	



TRANSMISSION LINE STEEL STRUCTURE
2 POLE, DOUBLE CIRCUIT SMALL-MEDIUM ANGLE

NO.	REVISION	DATE	DWGN	CHECKED	DATE	TH-11US-345
			M. TRAVIS	T. NUMM	3-2-06	



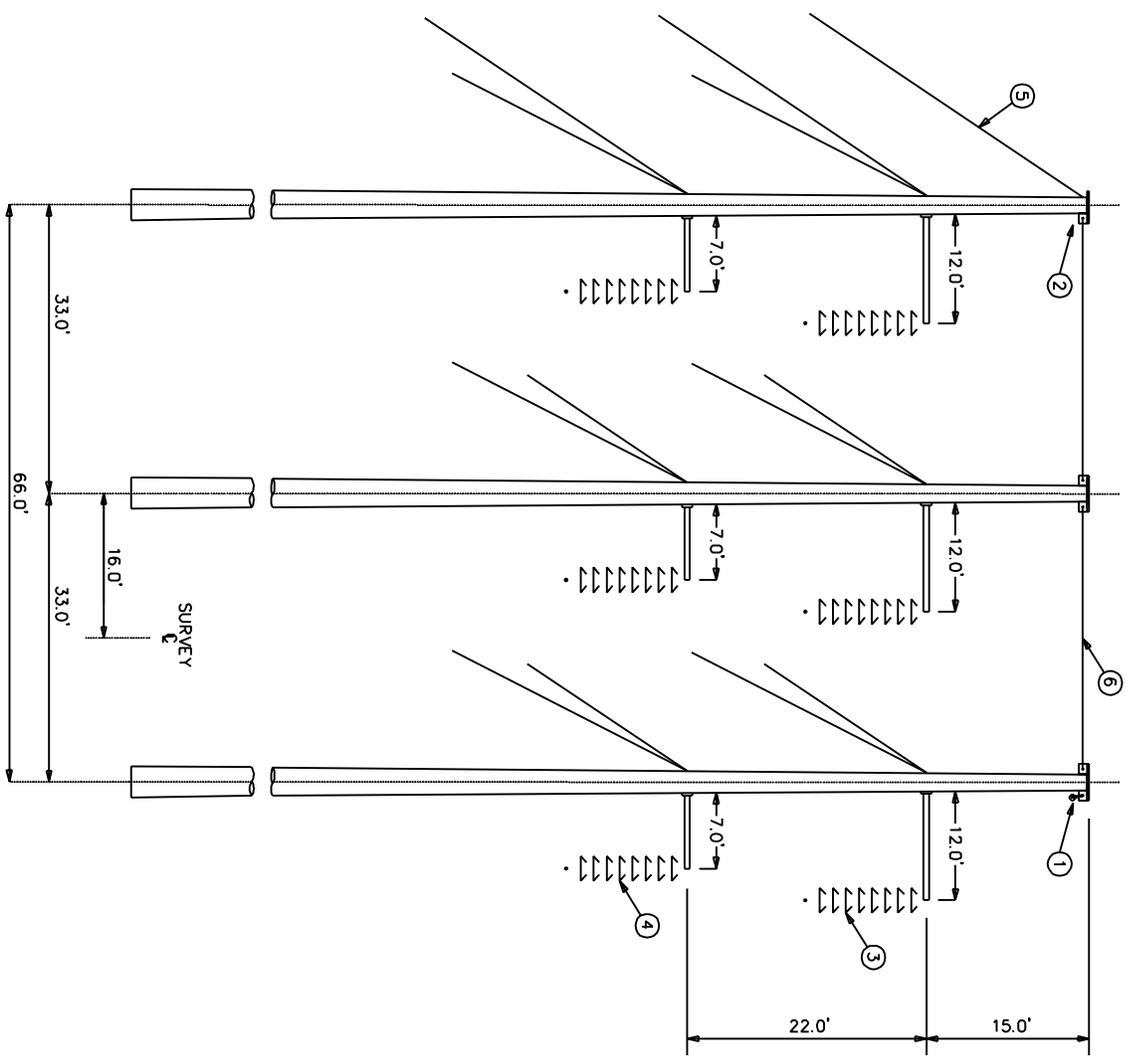
LIST OF MATERIALS

DWG. REF.	QTY	DESCRIPTION	ITEM	DET.
1	1	OHGW SUSPENSION ASSEMBLY		TH-44-7008
2	1	OPGW SUSPENSION ASSEMBLY		TH-095ND-0470
3	3	INSULATOR ASS'Y LARGE ANGLE		TH-1C-345-954ACS
4	4	GUY ATTACHMENT ASSEMBLY		TC-31A
5	2	TIE GUY ASSEMBLY		TC-31D

TRANSMISSION LINE STEEL STRUCTURE
 3 POLE, SINGLE CIRCUIT MEDIUM ANGLE

NO.	REVISION	DATE	BY	CHECKED	DATE
			M. TRAVIS		
		11-17-06			

TH-13-S-345

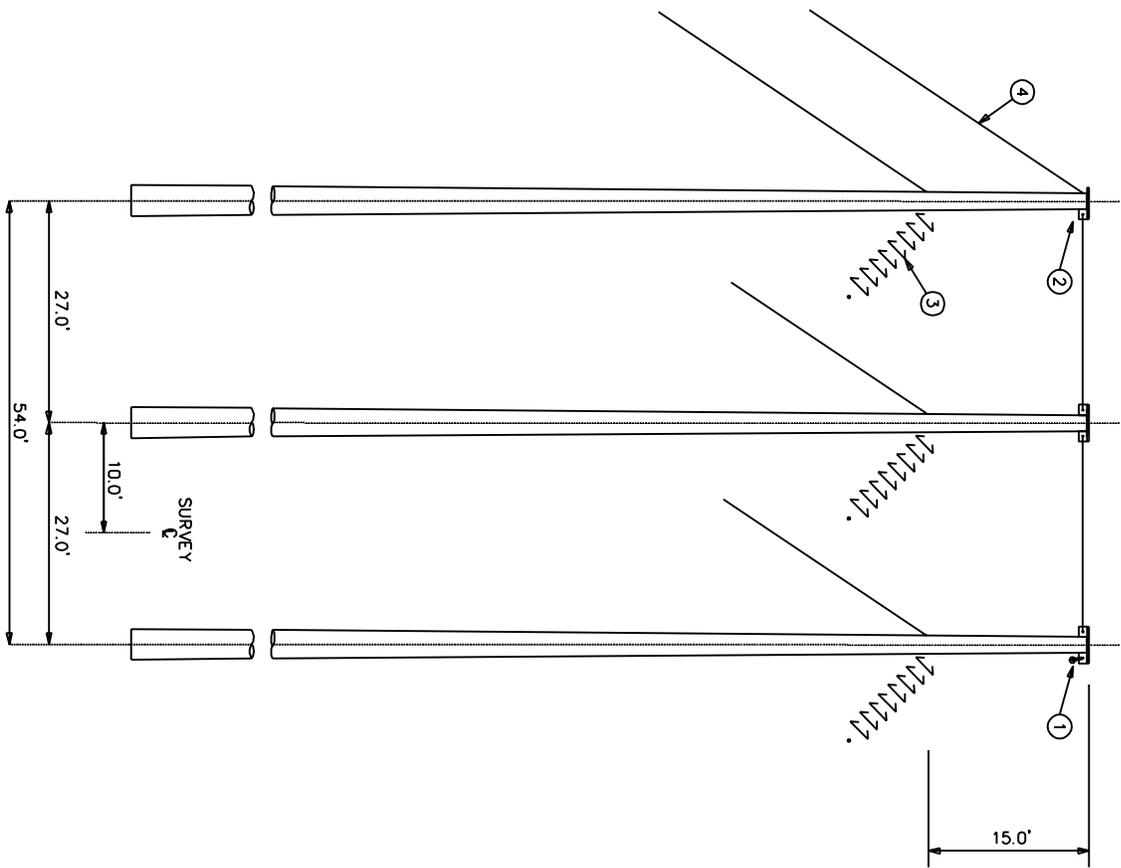


LIST OF MATERIALS

DWG. REF.	QTY	DESCRIPTION	ITEM	DET.
1	1	OHGW SUSPENSION ASSEMBLY		TM-44-7008
2	1	OPGW SUSPENSION ASSEMBLY		TM-096ND-0470
3	3	INSULATOR ASS'Y LARGE ANGLE		TM-1C-345-954ACS
4	3	INSULATOR ASS'Y LARGE ANGLE		TM-1C-138-795ACS
5	7	GYW ATTACHMENT ASSEMBLY		TC-31A
6	2	THE GUY ASSEMBLY		TC-310

TRANSMISSION LINE STEEL STRUCTURE
 3 POLE, DOUBLE CIRCUIT MEDIUM ANGLE

NO.	REVISION	DATE	DWN	M. TRAVIS	TH-13-US-345
		3-9-06	CHECKED		

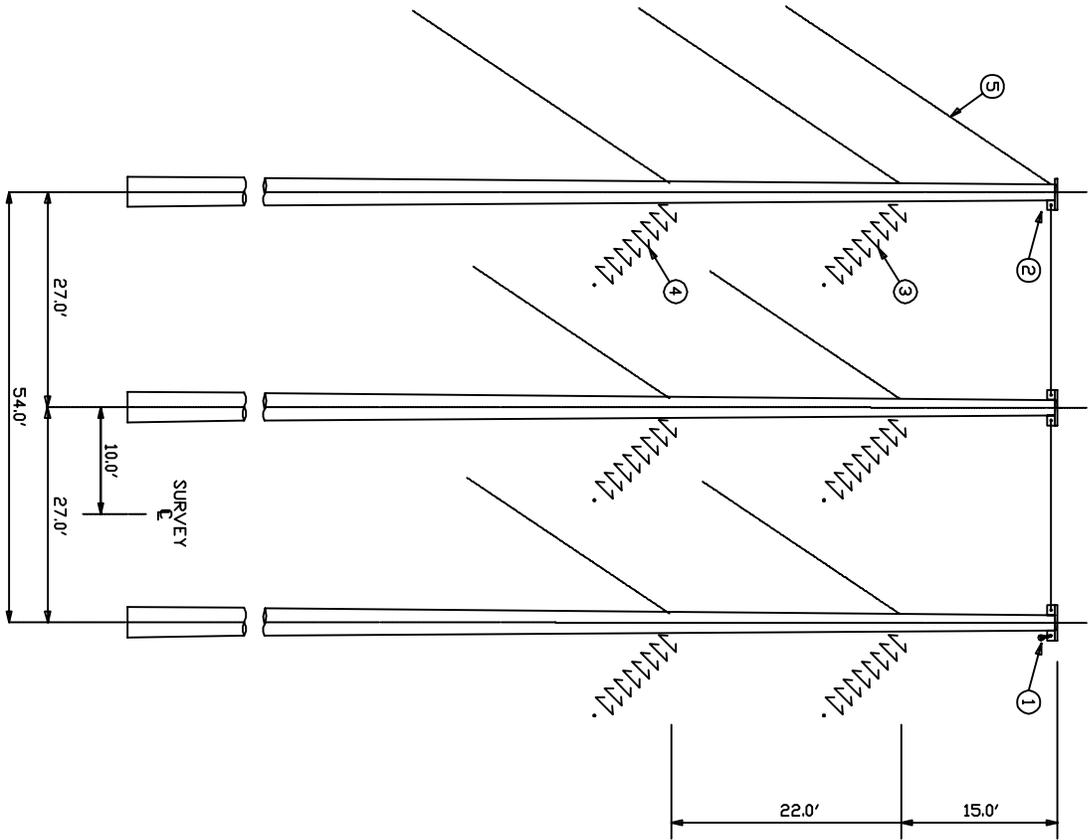


TH-14S-345		LIST OF MATERIALS	
DWG. REF.	QTY	DESCRIPTION	ITEM DET.
1	1	OHGW SUSPENSION ASSEMBLY	TM-44-7008
2	1	OPGW SUSPENSION ASSEMBLY	TM-0950-0470
3	3	INSULATOR ASSY LARGE ANGLE	TM-1C2-345-95AACSR
5	4	GUY ATTACHMENT ASSEMBLY	10-31A

TRANSMISSION LINE STEEL STRUCTURE
 3 POLE, SINGLE CIRCUIT LARGE ANGLE

NO.	REVISION	DATE	BY	CHECKED	TH-14S-345
			M. TRAMS		
		11-17-06			

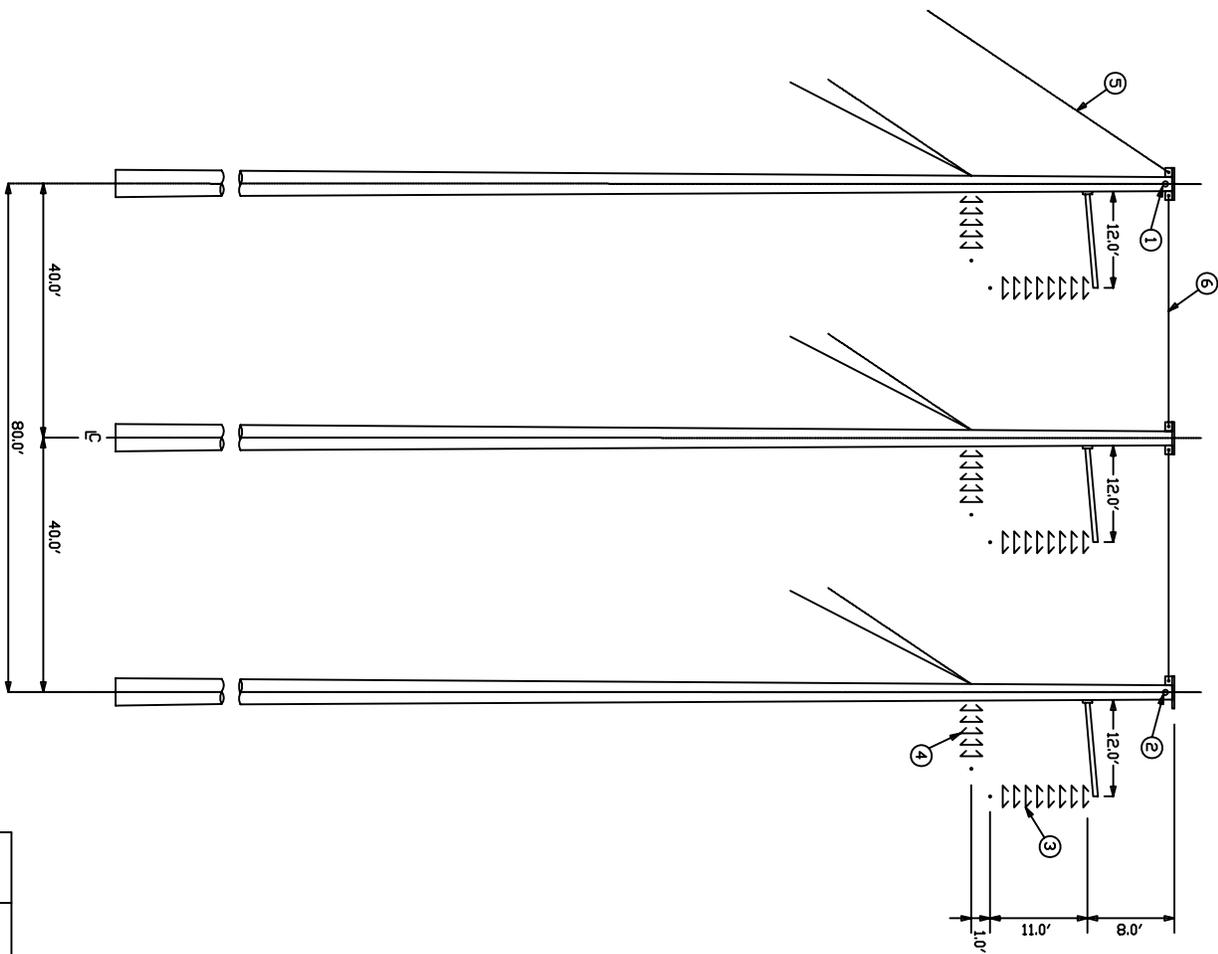
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TH-14US-345	1	DHGV SUSPENSION ASSEMBLY		TH-44-7NB8
1	1	DPCW SUSPENSION ASSEMBLY		TH-1PQWD-0470
2	1	DPCW SUSPENSION ASSEMBLY		TH-1PQWD-0470
3	3	INSULATOR ASS'Y LARGE ANGLE		TH-1C2-345-95AACSR
4	3	INSULATOR ASS'Y LARGE ANGLE		TH-1C2-188-795AACSR
5	7	GUY ATTACHMENT ASSEMBLY		TG-31A



TRANSMISSION LINE STEEL STRUCTURE

3 POLE, DOUBLE CIRCUIT LARGE ANGLE

NO.	REVISION	DATE	BY	CHECKED	DATE	PROJECT
			M. TRAVIS		3-2-06	TH-14US-345

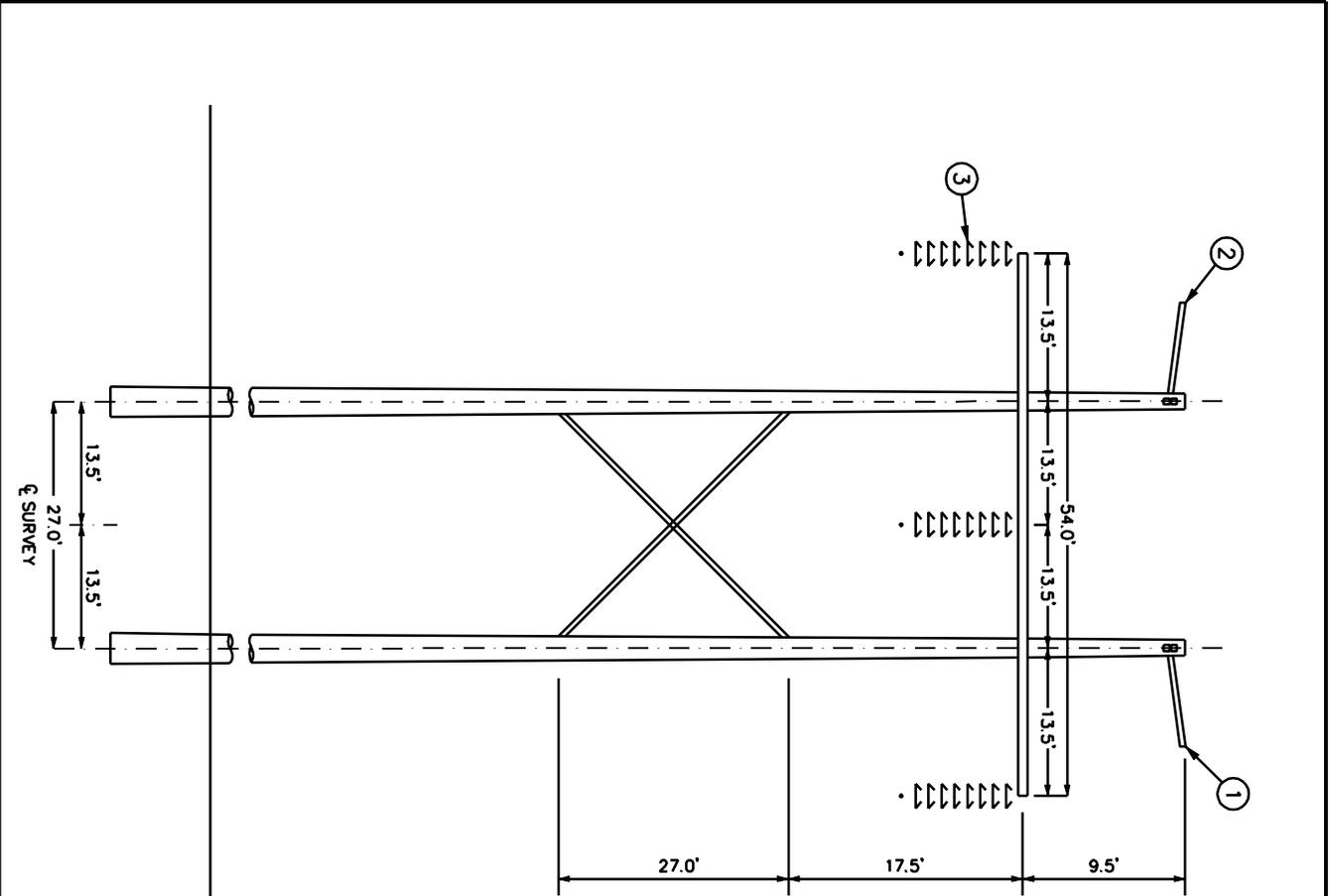


LIST OF MATERIALS

DWG.	QTY	DESCRIPTION	ITEM	DET.
1	2	DHW DEADEND ASSEMBLY		TH-4E-7NDB
2	2	DPGW DEADEND ASSEMBLY		TH-2E-DPGW-0.470
3	3	INSULATOR ASS'Y, SUSPENSION		TH-1J-345-95AACSR
4	6	INSULATOR ASS'Y, DEADEND		TH-1D-345-95AACSR
5	17	GUY ATTACHMENT ASSEMBLY		TG-31A
6	2	TIE GUY ASSEMBLY		

TRANSMISSION LINE STEEL STRUCTURE
 3 POLE, SINGLE CIRCUIT
 345KV

NO.	REVISION	DATE	DWN M. TRAVIS DATE 4-14-06 CHECKED	TH-155-345

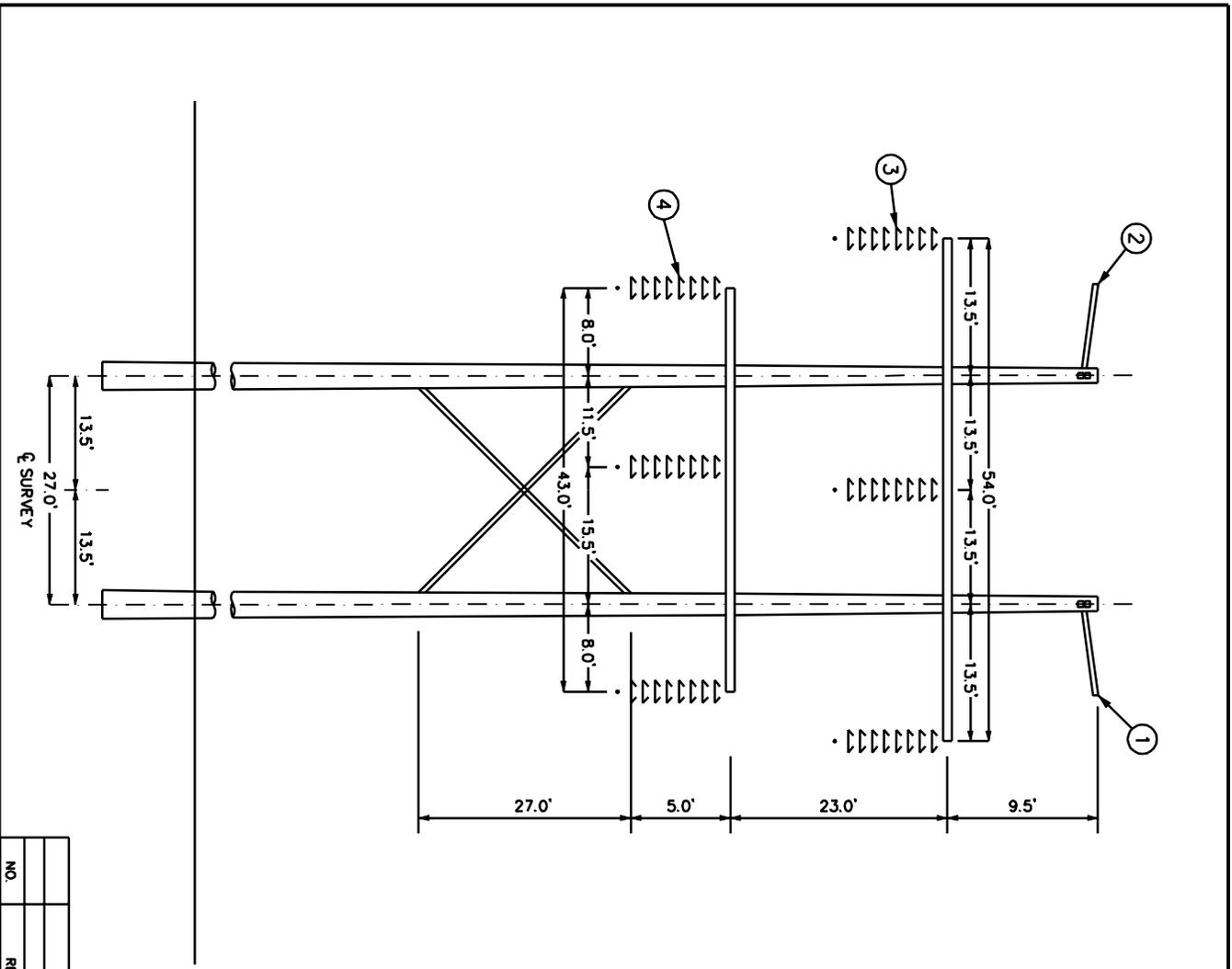


TH-345-S		LIST OF MATERIALS	
DWG. REF.	QTY	DESCRIPTION	ITEM DET.
1	1	OHGW TANGENT ASSEMBLY	TH-4A-710B
2	1	OPGW TANGENT ASSEMBLY	TH-OPGW-0.47D
3	3	INSULATOR ASS'Y TANGENT	TH-1B-345-95AACS8

TRANSMISSION LINE STEEL STRUCTURE

2 POLE, SMALL ANGLE

NO.	REVISION	DATE	BY	TH-345-S



TH-345-US LIST OF MATERIALS

DWG. REF.	QTY	DESCRIPTION	ITEM	DET.
1	1	OHGW TANGENT ASSEMBLY		TH-44-7908
2	1	OPGW TANGENT ASSEMBLY		TH-OPGW-0.470
3	3	INSULATOR ASS'Y TANGENT		TH-18-345-95AACSR
4	3	INSULATOR ASS'Y TANGENT		TH-18-138-79AACSR

TRANSMISSION LINE STEEL STRUCTURE
 2 POLE, DOUBLE CIRCUIT TANGENT

NO.	REVISION	DATE	BY	CHKD	DATE	NO.	REVISION	DATE	BY	CHKD

TH-345-US