McBRAYER, McGINNIS, LESLIE & KIRKLAND, PLLC

ATTORNEYS-AT-LAW

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201 East Main Street, Suite 1000
Lexington, Kentucky 40507
(859) 231-8780
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July 14, 2010

Kentucky State Board on
Electric Generation & Transmission Siting
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

Case No. 2010-00233

RE: In the Matter of the Application of Southern Indiana Gas & Electric Co., d/b/a/ Vectren Energy Delivery of Indiana, Inc. for a Construction Certificate to Construct an Electric Transmission Line from its A.B. Brown Plant to the Big Rivers Reid EHV Station

Dear Docketing Clerk:

Enclosed please find an original and 10 copies of the Application of Vectren Energy Delivery of Indiana in the above referenced case. Volume 1 (Table of Contents and Tabs 1-13) consists of the Application and related attachments. Volume 2 (Tabs 17-45) consists primarily of detailed maps of the location of the proposed transmission line and related appurtenance structures. Tabs 14-16 were deliberately left blank.

If you have any questions, please feel free to contact me at (502) 875-1176.

Sincerely,

Jason R. Bentley
Attorney for Vectren

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD

ON ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of the Application of Southern Indiana Gas & Electric Co., d/b/a Vectren Energy Delivery of Indiana, Inc. for a Construction Certificate to Construct an Electric Transmission Line from its A.B. Brown Plant to the Big Rivers Reid EHV Station	)	Case No. 2010-00223

APPLICATION FOR CERTIFICATE TO CONSTRUCT NONREGULATED ELECTRIC TRANSMISSION LINE

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COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD

ON ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of the Application of Southern Indiana Gas & Electric Co., d/b/a Vectren Energy Delivery of Indiana, Inc. for a Construction Certificate to Construct an Electric Transmission Line from its A.B. Brown Plant to the Big Rivers Reid EHV Station	)	Case No. 2010-00223

APPLICATION FOR CERTIFICATE TO CONSTRUCT NONREGULATED ELECTRIC TRANSMISSION LINE

Pursuant to KRS 278.714 and 807 KAR 5:110 Section 3, Southern Indiana Gas & Electric Co., d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren") respectfully states as follows:

1. Vectren is an Indiana corporation with its principal office and principal place of business at One Vectren Square, Evansville, IN 47708, and a mailing address at One Vectren Square, 211 Northwest Riverside Drive, Evansville, IN 47708[1]. Vectren's telephone number is 812 491 4000.

2. Pursuant to KRS 278.714(1) and (5) and 807 KAR 5:100 Vectren hereby submits its application fee of $200,000.00 with this filing.

3. Pursuant to KRS 278.714(2)(a), the name of the person proposing to construct a nonregulated electric transmission line is Southern Indiana Gas & Electric Co., d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren"); William S. Doty, President. Vectren's address and

[1] Pursuant to 807 KAR 5:001 Section 8 (3), a copy of Vectren's Articles of Incorporation, certified by the Secretary of the State of Indiana, and a copy of Vectren's Certificate of Corporate Existence are included with this Application at Tab 2.

telephone number are stated above. For purposes of the application, Vectren can be contacted through either of its attorneys, whose names, addresses and telephone numbers are provided below.

4. Pursuant to KRS 278.714(2)(b), Vectren proposes to construct a 345kV electric transmission line from Vectren's A.B. Brown Plant on the Ohio River in Posey County, Indiana, between Evansville and Mt. Vernon, to the Big Rivers Reid EHV Station near Sebree, in Webster County, Kentucky. This proposed transmission line represents the Southern Indiana-to-Kentucky portion of a project known overall as the Gibson-Brown-Reid 345kV Project. The entire project will span a total of approximately 70 miles, of which approximately 15 miles will be located in Kentucky. Phase 2 of Vectren's Gibson-Brown-Reid 345kV Project, which is the portion beginning at Vectren's AB Brown Generating Station in Southern Indiana, parallels existing Vectren 138kV Transmission Lines in an Easterly direction for approximately 2.6 miles passing from Posey County to Vanderburgh County about a mile from the Generating Station. The Route continues Easterly, Southesterly, and then South through Vanderburgh County and crosses the Ohio River, entering Kentucky just south of the City of Henderson at N 3830957.73; E 4379284.76. The Route continues through the Henderson Industrial District before intercepting and paralleling an existing Henderson Municipal Power and Light (HMPL) 161kV Transmission Line in a Southeast direction through Henderson County (and entering Webster County) to Big River's Reid Generating Station at N 3763547.02; E 4411576.49, which is the endpoint for the 345kV Route.

Pursuant to KRS 278.714(2)(b)4, the Maps at Tab 3 show the distance of the proposed line from residential neighborhoods, schools, and public and private parks within one mile of the proposed facilities. Pursuant to KRS 278.714(2)(b)3, a list of persons who own the properties

over which the line will cross is at Tab 4. A diagram showing the detail of all support structures is at Tab 5. The Maps in Volume 2 of this application, Tabs 17-45, show the location of the proposed line and all proposed support structures, which consist of H-frame steel poles, single steel poles and steel towers on either side of the Ohio River crossing; the proposed right-of-way limits of 150 feet; and existing property lines and the names of persons who own the property over which the line will cross. Vectren sponsors as a witness in support of these Maps: Mr. Ben Shinabery, Licensed Professional Surveyor, QK4 Architecture Engineering Planning.

The purpose of this project is to help meet the region's future energy demand and to increase the reliability for the overall electric grid in the region. This Project is recognized by Vectren's regional planning authority, Midwest Independent Transmission System Operator ("Midwest ISO" or "MISO"), as a Baseline Reliability Project under MISO's Transmission Expansion Plan (MTEP 2006). It addresses current and projected congestion on electric transmission lines in the Southwest Indiana/Northwest Kentucky region outside the Midwest ISO system. As such, this project was granted incentive rate treatment by the Federal Energy Regulatory Commission (FERC) under Section 219 of the Energy Policy Act of 2005 and FERC Order No. 697 as ensuring reliability and/or reducing the cost of delivered power by reducing transmission congestion. A copy of FERC's Order, Docket Nos. EL08-82-000 and ER08-1468-000, which discusses the reliability benefits of this project and MISO's transmission planning process, is at Tab 6.

5. Vectren commissioned a comprehensive study to select a route which minimizes the societal, environmental, and scenic impacts of the proposed transmission line. The study utilizes a computer-based route selection methodology developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC) and modified in 2006 to

incorporate input from Kentucky stakeholders representing a variety of perspectives. This methodology employs increasingly detailed data and allows a utility to quantitatively consider stakeholder input in developing Alternative Corridors, using what is called the Kentucky Siting Model.

The Kentucky Siting Model was developed though a series of workshops and tested by a project team of independent experts. Stakeholders participating in the workshops represented a range of interests, including environmental concerns, historic preservation, homeowners associations, agricultural interests, government agencies, and utility companies. Stakeholders developed data layers with component features and avoidance areas, and then established relative suitability values, identifying through group consensus a means of identifying areas with high, moderate, and low suitability for electric transmission lines. From this data, suitability mapping is developed and alternative corridors identified. Using the Kentucky Siting Model for this project, approximately 208 square miles (133,000 acres) of land were studied, including land located in Posey and Vandenburgh Counties in Indiana; the Ohio River; and Henderson, Webster and McLean Counties in Kentucky, with 83% of the study area located in Henderson County, Kentucky. The Kentucky Model identified four separate or alternate "corridors," each representing a different planning perspective. The Built Corridor seeks to avoid impacts to human development and historical/cultural resources; the Natural Corridor seeks to protect natural resources and avoid impacts to plant and animal species; the Engineering Corridor seeks to maximize co-location opportunities and avoid areas which would pose difficulties for construction of the transmission line; the Fourth Corridor, a simple average, weighs each of the first three criteria equally. A copy of Electric Transmission Route Selection Technical Report prepared by Photo Science on behalf of Vectren is attached at Tab 7.

6. Pursuant to KRS 278.714(2)(c), the Gibson-Brown-Reid 345kV Project is a Midwest ISO-approved Baseline Reliability Project that has been deemed necessary for regional grid reliability. Vectren is a member of the Midwest ISO, Reliability First Corporation, and the North American Electric Reliability Corporation. In addition to meeting the reliability needs of MISO and the Vectren system, the project has reliability and operational benefits in Kentucky. The project will reduce congestion in the Southern Indiana/Western Kentucky region that is susceptible to north to south flows that result in congestion. This is expected to reduce Midwest ISO congestion costs and transaction curtailments. The project also provides an additional transmission path into the Reid Station area. With the support provided by this project, the need to drop load in the Reid area or rotate smelter potlines during multiple outage events is less likely.

The overall project consists of approximately seventy (70) miles of 345kV single-circuit transmission line that will provide additional transmission capacity between Duke Energy's Gibson station located in Gibson County, Indiana, Vectren's Brown Power Plant located in Posey County, Indiana, and Big Rivers Electric Corporation's Reid Station located in Webster County, Kentucky. The proposed line will be supported by steel H-frame poles, steel single poles, and towers on either side of the Ohio River crossing; and it will require right of way one hundred and fifty (150) feet in width. Right of way maintenance will be performed in accordance with the requirements of the North American Electric Corporation's (NERC's) Standards and Requirements, as well as requirements established by the NERC regional entity: ReliabilityFirst. Vectren anticipates executing Interconnection Agreements with Duke Energy and Big Rivers Electric Corporation to connect to the line's two terminal points (at the Duke Gibson Station and the Big River's Reid Station).

7. Pursuant to KRS 278.714(d), Vectren states that the proposed transmission line and appurtenances will be constructed and maintained in accordance with accepted engineering practices and the National Electric Safety Code. Pursuant to KRS, 278.714(3), Vectren states that the proposed transmission line and appurtenances will be constructed and maintained in accordance with all applicable legal requirements. An affidavit by James H. Cox, Chief Electrical Engineer for Vectren, is at Tab 8.

Moreover, a number of innovations and best practices will be employed in the construction of this electric transmission line project, which will enhance environmental stewardship. Vectren expects to use timber mats for equipment crossings at wetlands, steams and flood-prone areas. Timber mats preserve the topsoil and seed beds that would otherwise be destroyed by vehicles and equipment. All vehicle and equipment waterway crossing for the construction of this project will utilize timber mat bridges that do not disturb the natural channel. Mulch from tree clearing will also be spread across graded areas and haul roads to minimize erosion and sedimentation. This beneficial re-use enhances construction stormwater compliance while minimizing the amount and duration of heavy equipment operating at clearing sites. These practices, when combined with other water quality best practices, minimize the impact of construction activities on aquatic ecosystems. In addition, all land clearing and construction activities are planned to avoid working in flood-prone areas during periods of increased runoff. Lastly, bird diverters are being placed in areas where power line strikes are of concern to wildlife agencies. Vectren has placed approximately 500 of the larger swan diverters on the on the North section of the Gibson to Brown line near the Wabash River. The devices should reduce bird strikes by as much as 90%. A description of the bird diverters is at Tab 9.

8. Pursuant to KRS 278.714(e), Vectren states that it has provided public notice by publication in a newspaper of general circulation in the general area concerned, as required by this section. An affidavit that public notice was published in the Henderson Gleaner newspaper is submitted with this application at Tab 10. In addition, Vectren conducted an informational meeting on July 6, 2010, for potentially affected property owners and interested members of the public. Property owners identified as potentially affected received letters and informational brochures inviting them to the meeting. Members of the public were informed of the meeting through print and electronic media. At the meetings, attendees could learn about the Kentucky Siting Model and related siting methodology, and high voltage transmission lines, generally. Potentially affected property owners could see potential right of way on their particular properties and participate in initial conversations with land agents to learn about the right of way acquisition process. Copies of the invitation letter, insert and brochure sent to property owners, the follow-up letter to property owners who did not attend the meeting, and information made available to the public at the meeting are at Tab 11. Vectren also established a website for this project, so that members of the public can access information concerning the project at any time. That site is updated with information frequently. The website provides a means by which members of the public can ask questions and seek additional information by electronic mail and by toll free telephone number. A "screenshot" of the website www.kypowerup.com is at Tab 12.

9. Pursuant to KRS 278.714(f), Vectren states that it has served a copy of this application upon the chief executive officer of each county and municipal corporation in which the proposed line is to be located, and upon the chief officer of each public agency charged with the duty of planning land use in the general area in which the line is proposed to be located. A copy of the certificate of service is submitted with this application at Tab 13.

10. Vectren requests that its corporate counsel, Ms. Mary-James Young, be added as appearing in this matter. Ms. Young is admitted to practice law in Kentucky and Indiana. Ms. Young's title and contact information are provided below.

WHEREFORE, Vectren respectfully requests that the Board accept for filing this Application in accordance with 807 KAR 5:110 Section 3(3).

Dated: July 14th, 2010.

SOUTHERN INDIANA GAS & ELECTRIC CO.,
D/B/A VECTREN ENERGY DELIVERY OF INDIANA, INC.

William S. Doty, President
Southern Indiana Gas & Electric Co.
One Vectren Square
Evansville, IN 47708
Phone: 812 491 4552 (direct)
Assistant: 812 491 4697 (Susan Feaster)

Mary-James Young
Senior Regulatory Counsel
Vectren Corporation
One Vectren Square
Evansville, IN 47708
Phone: 812 491 4022
Email: mjyoung@vectren.com

By:
Jason R. Bentley, Attorney
McBrayer, McGinnis, Leslie & Kirkland,
305 Ann Street, Suite 308
Frankfort, KY 40601
Telephone: 502 875 1176
Fax: 502 226 6234
Email: jbentley@mmlk.com

TAB 2

STATE OF INDIANA
OFFICE OF THE SECRETARY OF STATE
CERTIFICATE OF EXISTENCE

To Whom These Presents Come, Greetings:

I, TODD ROKITA, Secretary of State of Indiana, do hereby certify that I am, by virtue of the laws of the State of Indiana, the custodian of the corporate records, and proper official to execute this certificate.

I further certify that records of this office disclose that

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

duly filed the requisite documents to commence business activities under the laws of State of Indiana on June 10, 1912, and was in existence or authorized to transact business in the State of Indiana on July 06, 2010.

I further certify this For-Profit Domestic Corporation has filed its most recent report required by Indiana law with the Secretary of State, or is not yet required to file such report, and that no notice of withdrawal, dissolution or expiration has been filed or taken place.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the State of Indiana, at the city of Indianapolis, this Sixth Day of July, 2010.

TODD ROKITA, Secretary of State

193082-040 / 2010070611019

INDIANA SECRETARY OF STATE
BUSINESS SERVICES DIVISION
CORPORATIONS CERTIFIED COPIES

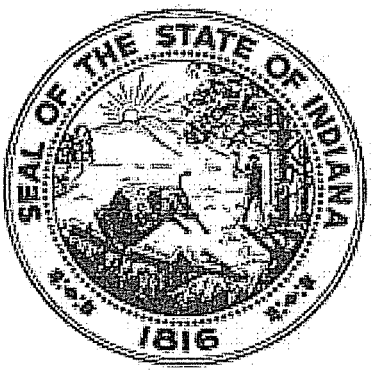
INDIANA SECRETARY OF STATE
BUSINESS SERVICES DIVISION
302 West Washington Street, Room E018
Indianapolis, IN 46204

http://www.sos.in.gov

July 06, 2010

Company Requested: SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
Control Number: 193082-040

Date	Transaction	# Pages
11/16/2000	Certificate of Assumed Business Name	2
01/24/2003	Amended and Restated Articles	15



State of Indiana
Office of the Secretary of State

I hereby certify that this is a true and complete copy of this 17 page document filed in this office.

Dated: July 06, 2010
Certification Number: 2010070611029

Secretary of State

193082-040

CERTIFICATE OF ASSUMED BUSINESS NAME
(All Corporations)

State Form 30353 (R8 / 8-97)
State Board of Accounts Approved 1995

SUE ANNE GILROY
SECRETARY OF STATE
CORPORATIONS DIVISION
302 W. Washington St., Rm. E018
Indianapolis, IN 46204
Telephone: (317) 232-6576

Indiana Code 23-15-1-1, *et seq.*

INSTRUCTIONS:

1. *This certificate must also be recorded in the office of County Recorder of each county in which a place of business or office is located.*
2. *FEES ARE PER ASSUMED NAME. Please make check or money order payable to: Indiana Secretary of State.*

Please TYPE or PRINT.

FILING FEES PER CERTIFICATE:

For-Profit Corporation, Limited Liability Company, Limited Partnership	$30.00
Not-For-Profit Corporation	$26.00
Certificate - Additional	$15.00

1. Name of Corporation, LLC or LP: Southern Indiana Gas and Electric Company
2. Date of incorporation / admission: June 10, 1912
3. Address at which the Corporation, LLC, LP will do business or have an office in Indiana. If no office in Indiana, then state current registered address (street address): 20 N.W. Fourth Street
   City, state and ZIP code: Evansville, Indiana 47741
4. Assumed business name(s) ($30.00 per name): Vectren Energy Delivery of Indiana, Inc.
5. Principal office address of the Corporation, LLC, LP (street address): 20 N.W. Fourth Street
   City, state and ZIP code: Evansville, Indiana 47741
6. Signature: Robert E. Heidorn
7. Printed name: Assistant Secretary

STATE OF Indiana
COUNTY OF Vanderburgh SS:

Subscribed and sworn or attested to before me, this 1st day of November, 2000

Notary Public: Deborah A. Hague

My Notarial Commission Expires: August 29, 2008

My County of Residence is: Warrick

This instrument was prepared by: Catherine L. Bridge, Barnes & Thornburg, 11 S. Meridian Street, Indianapolis, Indiana 46204

DEBORAH A HAGUE
NOTARY PUBLIC STATE OF INDIANA
WARRICK COUNTY
MY COMMISSION EXP. AUG. 29,2008

NOTARY PUBLIC SEAL INDIANA

State of Indiana
Office of the Secretary of State

CERTIFICATE OF ASSUMED BUSINESS NAME
of
SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

I, SUE ANNE GILROY, Secretary of State of Indiana, hereby certify that Certificate of Assumed Business Name of the above For-Profit Domestic Corporation have been presented to me at my office, accompanied by the fees prescribed by law and that the documentation presented conforms to law as prescribed by the provisions of the Indiana Business Corporation Law.

Following said transaction the entity named above will be doing business under the assumed business name(s) of:

VECTREN ENERGY DELIVERY OF INDIANA, INC.

NOW, THEREFORE, with this document I certify that said transaction will become effective Thursday, November 16, 2000.

In Witness Whereof, I have caused to be affixed my signature and the seal of the State of Indiana, at the City of Indianapolis, November 16, 2000.

Sue Anne Gilroy

SUE ANNE GILROY,
SECRETARY OF STATE

193082-040 [illegible]

1980082-040

APPROVED
AND
FILED

RESTATEMENT OF ARTICLES OF INCORPORATION

State Form 42152 (R2 / 4-95)
Approved by State Board of Accounts 1995

SUE ANNE GILROY
SECRETARY OF STATE
CORPORATIONS DIVISION
302 W. Washington St., Rm. E018
Indianapolis, IN 46204
Telephone: (317) 232-6576

Indiana Code 23-1-38-7

FILING FEE IS $30.00

INSTRUCTIONS: Use 8 1/2" x 11" white paper for inserts.
Present original and two (2) copies to address in upper right corner of this form.
Please TYPE or PRINT.
Upon completion of filing the Secretary of State will issue a receipt.

RESTATEMENT OF ARTICLES OF INCORPORATION OF

Southern Indiana Gas and Electric Company

(Name of Corporation)

The above corporation (hereinafter referred to as the "Corporation") existing pursuant to the Indiana Business Corporation Law, desiring to give notice of corporate action effectuating the restatement of its Articles of Incorporation, sets forth the following:

ARTICLE I - RESTATEMENT

SECTION 1: The date of incorporation of the Corporation:
June 10, 1912

SECTION 2: The name of the Corporation following this restatement:
Southern Indiana Gas and Electric Company

SECTION 3: The exact text of the Restatement of Articles of Incorporation is attached as "Exhibit A"

ARTICLE II - MANNER OF ADOPTION AND VOTE (Strike inapplicable section)

SECTION 1: The restatement does not contain an amendment requiring shareholder approval and the board of directors adopted the restatement.
☐

SECTION 2: The restatement contains an amendment requiring shareholder approval and the vote is set forth below:
☒ VOTE OF SHAREHOLDERS
The designation (i.e. common, preferred and any classification where different classes of stock exist), number of outstanding shares, number of votes entitled to vote separately on the amendment and the number of votes of each voting group represented at the meeting is set forth as follows:

	TOTAL	A	B	C
DESIGNATION OF EACH VOTING GROUP	Common			
NUMBER OF OUTSTANDING SHARES	15,754,826			
NUMBER OF VOTES ENTITLED TO BE CAST	15,754,826			
NUMBER OF VOTES REPRESENTED AT THE MEETING	15,754,826			
SHARES VOTED IN FAVOR	15,754,826			
SHARES VOTED AGAINST	0			

☒ The number cast for the amendment by each voting group was sufficient for approval by that voting group.

In Witness Whereof, the undersigned being the Sr. Vice President and Secretary (Title) of said Corporation executes this Restatement of Articles of Incorporation and verifies, subject to penalties of perjury, that the statements contained herein are true, this 17th day of January, 19 2003.

Signature: [signature]
Printed name: Ronald E. Christian

AMENDED AND RESTATED ARTICLES OF INCORPORATION OF SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

ARTICLE 1

IDENTIFICATION

The name of the Corporation is SOUTHERN INDIANA GAS AND ELECTRIC COMPANY, INC.

ARTICLE 2

PRINCIPAL OFFICE

SECTION 2.01. The street address of the principal office of the Corporation is 20 N.W. Fourth Street, Evansville, Indiana 47708, and the name and business office address of its registered agent in charge of such office are: Ronald E. Christian, 20 N.W. Fourth Street, Evansville, Indiana 47708.

ARTICLE 3

PURPOSE

SECTION 3.01. Purpose. The Corporation is formed for the purpose of engaging in any lawful business.

ARTICLE 4

GENERAL PROVISIONS REGARDING SHARES OF THE CORPORATION

SECTION 4.01. Distributions Upon Shares. The Board has authority to authorize and direct in respect of the issued and outstanding shares of capital stock of the corporation (i) the payment of dividends and the making of other distributions by the Corporation at such times, in such amounts and forms, from such sources and upon such terms and conditions as it may, from time to time, determine upon, subject only to the restrictions, limitations, conditions and requirements imposed by the Act, other applicable laws and these Articles, and (ii) the making by the Corporation of share dividends and share splits, pro rata and without consideration, subject only to any restrictions, limitations, conditions and requirements imposed by the Act, other applicable laws and these Articles.

SECTION 4.02. Acquisition of Shares. The Board has authority to authorize and direct the acquisition by the Corporation of the issued and outstanding shares at such times,

in such amounts, from such persons, for such considerations, from such sources and upon such terms and conditions as it may, from time to time, determine upon, subject only to the restrictions, limitations, conditions and requirements imposed by the Act, other applicable laws and these Articles.

SECTION 4.03. Record Ownership of Shares or Rights. The Corporation, to the extent permitted by law, shall be entitled to treat the person in whose name any Share or Right of the Corporation (a "Right") is registered on the books of the Corporation as the owner thereof, for all purposes, and shall not be bound to recognize any equitable or other claim to, or interest in, such share or right on the part of any other person, whether or not the Corporation shall have notice thereof.

ARTICLE 5

TERMS OF CAPITAL STOCK

SECTION 5.01. Total Authorized Capital Stock. The total authorized capital stock of the corporation consists of the following classes and amounts:

Clause (a). 800,000 shares of Preferred Stock having a par value of $100 per share;

Clause (b). 5,000,000 shares of Preferred Stock, No Par Value;

Clause (c). 5,000,000 shares of Special Preferred Stock;

Clause (d). 50,000,000 shares of Common Stock, Without Par Value.

SECTION 5.02 General Provisions Applicable to Preferred Stock Except Special Preferred Stock. The following provisions shall apply to the Preferred Stock having a par value of $100 per share and Preferred Stock, No Par Value, irrespective of Series:

Clause (a). The holders of the Preferred Stock of each series and the Preferred Stock, No Par Value, of each series, shall be entitled to receive dividends, payable when and as declared by the Board of Directors, on such dates and at such rates as shall be determined for the respective series, from the first day of the current dividend period within which such stock shall have been originally issued, before any dividends shall be declared or paid upon or set apart for the Common Stock or any other class of stock of the Corporation not having preference over the Preferred Stock and the Preferred Stock, No Par Value, as to payment of dividends. Such dividends shall be cumulative so that if for any dividend period or periods dividends shall not have been paid or declared and set apart for payment upon all outstanding Preferred Stock and Preferred Stock, No Par Value, at the rates determined for the respective series, the deficiency shall be fully paid, or declared and set apart for payment, before any dividends shall be declared or paid upon the Common Stock or any other class of stock of the Corporation not having preference over the Preferred Stock and the Preferred

Stock, No Par Value, as to payment of dividends. Dividends shall not be declared and set apart for payment, or paid on the Preferred Stock of any one series or the Preferred Stock, No Par Value, of any one series, for any dividend period, unless dividends are contemporaneously declared and set apart for payment or paid on the Preferred Stock and the Preferred Stock, No Par Value, of all series for all dividend periods terminating on the same or an earlier date.

Clause (b). When full cumulative dividends as aforesaid upon the Preferred Stock and the Preferred Stock, No Par Value, of all series then outstanding for all past dividend periods and for the current dividend periods shall have been paid or declared and set apart for payment, the Board of Directors may declare dividends on the Common Stock or any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, have a preference as to payment of dividends, and no holders of any series of the Preferred Stock or the Preferred Stock, No Par Value, as such shall be entitled to share therein; provided, however, that no dividends (other than dividends payable in stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to payment of dividends and as to assets) shall be paid or any other distribution of assets made, by purchase of shares or otherwise, on Common Stock or on any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to payment of dividends or as to assets except out of accumulated surplus available for distribution to stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to payment of dividends and as to assets, earned subsequent to December 31, 1935, or if, at the time of declaration thereof or the making of such distribution there shall not remain to the credit of earned surplus account (after deducting therefrom the amount of such dividends and distributions), an amount at least equal to two times the annual dividend requirements on all then outstanding shares of the Preferred Stock and the Preferred Stock, No Par Value, and of all other classes of stock over which the Preferred Stock and Preferred Stock, No Par Value, do not have preference as to the payment of dividends and as to assets.

Clause (c). Upon any dissolution, liquidation or winding up of the Corporation, whether voluntary or involuntary, the holders of Preferred Stock of each series and Preferred Stock, No Par Value, of each series, without any preference of the shares of any series of Preferred Stock or of any series of Preferred Stock, No Par Value, over the shares of any other series of Preferred Stock or Preferred Stock, No Par Value, shall be entitled to receive out of the assets of the Corporation, whether capital, surplus or other, before any distribution of the assets to be distributed shall be made to the holders of Common Stock or of any other class of stock not having preference as to assets over the Preferred Stock and the Preferred Stock, No Par Value, the amount determined to be payable on the shares of such series in the event of voluntary or involuntary liquidation, as the case may be. After payment to the holders of the Preferred Stock and the Preferred Stock, No Par Value, of the full preferential amounts hereinbefore provided for, the holders of the Preferred Stock and the Preferred Stock, No Par Value, as such

shall have no right or claim to any of the remaining assets of the Corporation, either upon any distribution of such assets or upon dissolution, liquidation, or winding up, and the remaining assets to be distributed, if any, upon a distribution of such assets or upon dissolution, liquidation or winding up, may be distributed among the holders of the Common Stock or of any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to assets. Without limiting the right of the Corporation to distribute its assets or to dissolve, liquidate or wind up in connection with any sale, merger or consolidation, the sale of all the property of the Corporation to, or the merger or consolidation of the Corporation into or with any other corporation shall not be deemed to be a distribution of assets or a dissolution, liquidation or winding up for the purposes of this paragraph.

Clause (d). At the option of the Board of Directors of the Corporation, the Corporation may redeem any series of Preferred Stock or Preferred Stock, No Par Value, determined to be redeemable, or any part of any series, at any time at the redemption price determined for such series; provided, however, that not less than thirty nor more than sixty days previous to the date fixed for redemption a notice of the time and place thereof shall be given to the holders of record of the Preferred Stock or the Preferred Stock, No Par Value, so to be redeemed, by mail or publication, in such manner as may be prescribed by the By-laws of the Corporation or by resolution of the Board of Directors; and, provided, further, that in every case of redemption of less than all of the outstanding shares of any one series of Preferred Stock or Preferred Stock, No Par Value, the shares of such series to be redeemed shall be chosen by lot in such manner as may be prescribed by resolution of the Board of Directors. At any time after notice of redemption has been given in the manner prescribed by the By-laws of the Corporation or by resolution of the Board of Directors to the holders of stock so to be redeemed, the Corporation may deposit, or (unless precluded by the terms of any sinking fund requirements applicable to the shares so to be redeemed) may cause its nominee to deposit, the aggregate redemption price with some bank or trust company named in such notice, payable on the date fixed for redemption as aforesaid and in the amounts aforesaid to the respective orders of the holders of the shares so to be redeemed, on endorsement to the Corporation or its nominee, or otherwise, as may be required, and upon surrender of the certificates for such shares. Upon the deposit of said money as aforesaid, or, if no such deposit is made, upon said redemption date (unless the Corporation defaults in making payment of the redemption price as set forth in such notice), such holders shall cease to be shareholders with respect to said shares, and from and after the making of said deposit, or, if no such deposit is made, after the redemption date (the Corporation not having defaulted in making payment of the redemption price as set forth in such notice), the said holders shall have no interest in or claim against the Corporation, or its nominee, with respect to said shares, but shall be entitled only to receive said moneys on the date fixed for redemption as aforesaid from said bank or trust company, or if no such deposit is made from the Corporation,

without interest thereon, upon endorsement, if required, and surrender of the certificates as aforesaid.

If such deposit shall be made by a nominee of the Corporation as aforesaid, such nominee shall upon such deposit become the owner of the shares with respect to which such deposit was made and certificates of stock may be issued to such nominee in evidence of such ownership.

In case the holder of any such Preferred Stock or Preferred Stock, No Par Value, shall not, within six-years after said deposit, claim the amount deposited as above stated for the redemption, then the depositary shall upon demand pay over to the Corporation such amounts so deposited and the depositary shall thereupon be relieved from all responsibility to the holder thereof.

Nothing herein contained shall limit any legal right of the Corporation to purchase any shares of the Preferred Stock or of the Preferred Stock, No Par Value.

Clause (e). So long as any shares of the Preferred Stock or the Preferred Stock, No Par Value, are outstanding, the Corporation shall not:

i. adopt an amendment to these Amended Articles without the affirmative vote in favor of the adoption of such amendment of the holders of at least a majority of the total number of shares of Preferred Stock and of Preferred Stock, No Par Value, at the time outstanding voting as a class or if the holders of 33-1/3% of such shares of Preferred Stock and of Preferred Stock, No Par Value, voting as a class, vote against the adoption of such amendment, each share of Preferred Stock being counted in either such case as one and each share of Preferred Stock, No Par Value, being counted in either such case as that fraction which shall be the equivalent of the ratio of the involuntary liquidation value of such share to the par value of the Preferred Stock, if such amendment would either (i) create any class of shares preferred as to dividends or assets over the Preferred Stock and Preferred Stock, No Par Value, or (ii) change the rights and preferences of the then outstanding Preferred Stock or Preferred Stock, No Par Value; provided, however, that nothing in this paragraph contained shall authorize the adoption of any amendment of these Amended Articles by the vote of the holders of a less number of shares of Preferred Stock or of Preferred Stock, No Par Value, or of any other class of stock, or of all classes of stock, than is required for the adoption of such amendment by the laws of the State of Indiana at the time applicable thereto; and provided, further, that if any such action would change the rights and preferences of only one such class of stock, only the affirmative vote of the holders of at least a majority of the class of stock so affected shall be required;

ii. issue or assume any evidences of indebtedness, maturing more than twelve months from the date of issue or assumption, in an amount at any one time outstanding exceeding 15% of the aggregate, at the time of such issue or assumption, of the capital represented by the outstanding shares of Preferred Stock and of Preferred Stock, No Par Value, and any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to dividends or assets and of the surplus of the corporation (paid-in, earned, and other, if any), unless (i) such evidences, of indebtedness are either (a) bonds issued under the Mortgage and Deed of Trust of the Corporation to Bankers Trust Company, New York, as Trustee, dated as of April 1, 1932, or (b) bonds or other evidences of indebtedness issued under another mortgage and deed of trust on substantially all the mortgageable property of the Corporation, or on substantially all the mortgageable property of the same general character as that subject to said Mortgage and deed of Trust dated as of April 1, 1932, under which mortgage and deed of trust bonds or other evidences of indebtedness have been issued upon the basis, directly or indirectly, of the refunding of bonds issued under said Mortgage and Deed of Trust dated as of April 1, 1932, and permitting the issuance of additional bonds or evidences of indebtedness upon the basis, directly or indirectly, of the refunding of the remainder thereof, if any, or (c) indebtedness, secured by the pledge of the bonds or evidences of indebtedness issued under said Mortgage and Deed of trust dated as of April 1, 1932, or such other mortgage and deed of trust, to an equal principal amount of such bonds or such evidences of indebtedness pledged or (ii) the issue and assumption of said evidence of indebtedness has been submitted to the vote of the shareholders of the Corporation at any annual or special meeting thereof, has been approved at such meeting by the affirmative vote of the holders of a majority of the outstanding shares of the Corporation, irrespective of class, and has not been voted against at such meeting by the holders of 33-1/3% or more of the total number of outstanding shares of Preferred Stock and of Preferred Stock, No Par Value, voting as a class, each share of Preferred Stock being counted in each such case as one and each share of Preferred Stock, No Par Value, being counted in each such case as that fraction which shall be the equivalent of the ratio of the involuntary liquidation value of such share to the par value of the Preferred Stock;

iii. issue, sell or otherwise dispose of any shares of Preferred Stock or Preferred Stock, No Par Value, or of any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, do not have preference as to the payment of dividends and as to assets, unless the net income of the Corporation available for the payment of dividends for a period of twelve consecutive calendar months within the fifteen calendar months immediately preceding the issuance, sale or disposition of such

stock is at least equal to 2-1/2 times the annual dividend requirements of all outstanding shares of Preferred Stock and of Preferred Stock, No Par Value, and of all other classes of stock over which the Preferred Stock and the Preferred Stock, No Par Value, do not have preference as to the payment of dividends and as to assets, including the shares proposed to be issued; or

iv. issue, sell or otherwise dispose of any shares of Preferred Stock or of Preferred Stock, No Par Value, or of any other class of stock over which the Preferred Stock and the Preferred Stock, No Par Value, do not have preference as to the payment of dividends and as to assets, in excess of the number of shares of Preferred Stock outstanding on December 31, 1948, if the sum of the capital represented by the shares of Preferred Stock and of Preferred Stock, No Par Value, and of such other class or classes of stock, if any, thereafter outstanding and of the principal amount of bonds and indebtedness maturing more than twelve months from the date of issue thereafter outstanding is in excess of 75% of the total capitalization of the Corporation and for this purpose the capitalization of the Corporation shall mean the aggregate amount of (i) the principal amount of bonds and other indebtedness maturing more than twelve months from the date of issue thereafter outstanding, (ii) the aggregate amount of capital represented by all shares of capital stock of the Corporation thereafter issued and outstanding and (iii) the surplus of the Corporation (paid-in, earned and other, if any); provided that no portion of the surplus of the Corporation at any time required to be included in total capitalization in order to satisfy the foregoing requirement for a disposition of shares actually consummated shall be thereafter available for dividends or other distributions of assets, by purchase of shares or otherwise, on Common Stock or on any other kind of stock over which the Preferred Stock and the Preferred Stock, No Par Value, have preference as to the payment of dividends and as to assets until the principal amount of bonds or of such indebtedness or the amount of capital represented by shares of Preferred Stock and Preferred Stock, No Par Value, or of stock over which the Preferred Stock, No Par Value, do not have preference as to the payment of dividends and as to assets are reduced and then only to the extent of the appropriate proportion (i.e., one-third) of the amount of such reduction or until and then only to the extent that the par value of, or stated capital represented by, the outstanding shares of Common Stock shall have been increased.

Clause (f). The term "accrued dividends" shall be deemed to mean in respect of any share of the Preferred Stock of any series or of any share of Preferred Stock, No Par Value, of any series, as of any given date, the amount, if any, by which the product of the rate of dividend per annum, determined upon the shares of such series, multiplied by the number of years and any fractional part of a year which shall have elapsed

from the date after which dividends on such stock became cumulative to such given date, exceeds the total dividends actually paid on such stock and the dividends declared and set apart for payment. Accumulations of dividends shall not bear interest.

The term "outstanding," whenever used herein with respect to shares of Preferred Stock or of Preferred Stock, No Par Value, or of any other class of stock which are by their terms redeemable, or with respect to bonds or other evidences of indebtedness shall not include any such shares or bonds or evidences of indebtedness which have been called for redemption in accordance with the provisions applicable thereto, of which call for redemption notice shall have been given, as required by such provisions and for the redemption of which a sum of money sufficient to pay the amount payable on such redemption shall have been deposited with a bank or trust company, irrevocably in trust for such purpose, or any bonds or other evidences of indebtedness for the payment of which at maturity provision has been made in a similar manner.

The term "capital represented by" whenever used herein with respect to shares of stock of the Corporation shall mean at any time the amount paid in on or contributed, transferred or otherwise then held and recorded or accounted for, as permitted by the provisions of law applicable thereto, as capital with respect to said shares.

Clause (g). The shares of Preferred Stock of the Corporation may be sold at less than their par value, and such shares may be issued, or, if reacquired, may be reissued, for such consideration as may be fixed from time to time by the Board of Directors and when so issued or reissued and such consideration received, such shares will be fully paid and non-assessable.

The Board of Directors of the Corporation are authorized to issue shares of Preferred Stock, No Par Value, or of Common Stock without nominal or par value for such consideration as may be fixed by the Board from time to time and, when so issued or reissued and such consideration received, such shares will be fully paid and non-assessable.

Shares of the capital stock of the Corporation which have been issued and thereafter acquired by the Corporation may be cancelled pursuant to resolution of the Board of Directors or may be disposed of for such consideration as the Board of Directors may determine.

Clause (h). No holder of the shares of the capital stock of any class of the Corporation shall have any pre-emptive or preferential right of subscription for or to purchase any shares of any class of the capital stock of the Corporation, whether now or hereafter authorized, or any bonds,

debentures or other obligations or rights or options convertible into or exchangeable for or entitling the holder or owner to subscribe for or purchase any shares of the capital stock of the Corporation, other than such right or rights, if any, and at such price, as the Board of Directors, in its discretion, from time to time may determine, and the Board of Directors may issue such shares of stock, bonds, debentures, obligations, rights or options without offering the same in whole or in part to the shareholders of the Corporation. Should the Board of Directors as to any portion of the shares of the Corporation, whether now or hereafter authorized, or any such bonds, debentures, obligations, rights or options, offer the same to the shareholders, such offer shall not constitute a waiver or release of the right of the Board of Directors subsequently to dispose of other portions thereof without so offering the same to the shareholders.

SECTION 5.03. Preferred Stock – Provision for Division into and Issue in Series of Preferred Stock Having a Par Value of $100. The shares of the Preferred Stock having a Par Value of $100 may be divided into and issued in series. Each series shall be designated so as to distinguish the shares thereof from the shares of all other series and classes and all shares of the Preferred Stock having a Par Value of $100 irrespective of series, shall be identical except as to the following relative rights and preferences in respect of any or all of which there may be variations between different series and authority is hereby expressly vested in the Board of Directors, to the extent that series are not established by these Amended Articles and that variations and the relative rights and preferences as between series fixed and determined therein, to establish series and to determine by resolution or resolutions adopted prior to the issuance of any shares of such series the following relative rights and preferences of the shares thereof in accordance with the provisions of the Indiana Business Corporation Law applicable thereto:

Clause (a). The rate of dividend and the dividend payment dates;

Clause (b). The price at which shares may be redeemed, such price to be not less than $100 nor more than $115 per share, plus accrued dividends to the date of redemption;

Clause (c). The amount payable upon shares in event of involuntary liquidation, which amount shall not be less than $100 per share or more than $115 per share, plus accrued dividends;

Clause (d). The amount payable upon shares in event of voluntary liquidation, which amount shall not be less than $100 per share or more than $115 per share, plus accrued dividends;

Clause (e). The terms and conditions, if any, on which shares of such series shall be by their terms convertible into or exchangeable for shares of any other class of stock of the Corporation over which the Preferred Stock $100 par Value has preference as to payment of dividends and as to assets.

SECTION 5.04. Preferred Stock, No Par Value – Provision for Division into and Issue in Series of Preferred Stock, No Par Value. The shares of the Preferred Stock, No Par Value, may be divided into and issued in series. Each series shall be designated so as to distinguish the shares thereof from the shares of all other series and classes and all shares of the Preferred Stock, No Par Value, irrespective of series shall be identical except as to the following relative rights and preferences in respect of any or all of which there may be variations between different series and authority is hereby expressly vested in the Board of Directors, to the extent that series are not established by these Amended Articles and the variations and the relative rights and preferences as between series fixed and determined therein, to establish series and to determine by resolution or resolutions adopted prior to the issuance of any shares of such series the following relative rights and preferences of the shares thereof in accordance with the provisions of the Indiana Business Corporation Law applicable thereto:

Clause (a). The rate of dividend and the dividend payment dates;

Clause (b). The price at which shares may be redeemed;

Clause (c). The amount payable upon shares in event of involuntary liquidation;

Clause (d). The amount payable upon shares in event of voluntary liquidation;

Clause (e). The terms and conditions, if any, on which shares of such series shall be by their terms convertible into or exchangeable for shares of any other class of stock of the corporation over which the Preferred Stock, No Par Value, has preference as to payment of dividends ad as to assets;

Clause (f). The sinking fund requirements, if any, for the purchase of redemption of shares of such series.

SECTION 5.05. Special Preferred Stock. The Board of Directors shall have authority to issue the shares of Special Preferred Stock from time to time on such terms as it may determine, and to divide the Special Preferred Stock into one or more series and in connection with the issuance of shares, of Special Preferred Stock and in connection with the creation of any series thereof, to fix by resolution or resolutions providing for the issue of such shares or the creation of such series, the designations, preferences, limitations and relative rights thereof, to the full extent now or hereafter permitted by law

Clause (a). 8 1/2% Series Special Preferred Stock. By virtue of resolutions adopted by the Board of Directors of the Corporation January 19, 1988, there is hereby established a series of Special Preferred Stock not to exceed 20,000 shares, designated as "8 1/2% Series Special

Preferred Stock." The preferences, limitations and relative rights of such 8 1/2% Series Special Preferred Stock shall be as follows:

(1) The rate of dividend will be 8 1/2% per annum and shall be payable on the first day of January, April, July and October in each year; provided, however, that with respect to the dividend payable April 1, 1988, the first day of the dividend period with respect to which such dividend is paid shall be the day that shares of the 8 1/2% Series Special Preferred Stock are first issued;

(2) The shares shall have no voting rights;

(3) Holders of the shares shall have the right to tender such shares for redemption by the Corporation as of any dividend payment date upon not less than 30 days prior written notice to the Corporation at a price of $100 per share, plus accrued dividends;

(4) The Corporation shall have the right at any time from and after 10 years from the day that shares of 8 1/2% Series Special Preferred Stock are first issued to redeem up to 1,160 shares per calendar year at a price of $100 per share, plus accrued dividends;

(5) The amount payable with respect to the shares in the event of the voluntary or involuntary liquidation of the Corporation shall be $100 per share plus accrued dividends; and

(6) Except as stated below, the further preferences, limitations and relative rights of the 8 1/2% Series Special Preferred Stock shall be the same as those contained in Section 5.02 with respect to the Preferred Stock, No Par Value, and for the purpose of determining such further preferences, limitations, and relative rights, and for that purpose only, the 8 1/2% Series Special Preferred Stock shall be deemed to be a series of Preferred Stock, No Par Value; provided, however, that the 8 1/2% Series Special Preferred Stock shall not be deemed to be nor counted as a series of Preferred Stock, No Par Value, and shall not have the same preferences, limitations and relative rights as the Preferred Stock, No Par Value, insofar as the vote of the Preferred Stock, No Par Value, or any series thereof, is required by the provisions of clause (e) of Section 5.02; provided, further, that nothing herein contained shall affect the right of the holders of the 8 1/2% Series Special Preferred Stock to vote on matters that the holders of non-voting stock are entitled to vote on pursuant to the laws of the State of Indiana.

SECTION 5.06. Common Stock. There shall be a class of stock of the Corporation designated Common Stock and each share of Common Stock shall be equal to every other share of said stock in every respect.

ARTICLE 6

DIRECTORS

SECTION 6.01. Number. The number of Directors of the Corporation shall not be less than four (4), and shall be specified in the Code By-Laws (Code). If and whenever the Code does not contain a provision specifying the number of Directors, the number shall be four (4). Each Director shall hold office until the next Annual Meeting of Shareholders or until his successor is duly qualified and elected. Directors need not be Shareholders of the Corporation.

SECTION 6.02. Vacancies. Except as may be expressly provided by law, newly created directorships resulting from any increase in the authorized number of Directors or any vacancies in the Board resulting from death, resignation, retirement, disqualification, removal from office or other cause shall be filled by a majority vote of the Directors then in office, and Directors so chosen shall hold office for a term expiring at the next Annual Meeting of Shareholders.

ARTICLE 7

PROVISIONS FOR REGULATION OF BUSINESS AND CONDUCT OF AFFAIRS OF CORPORATION

SECTION 7.01. Action By Shareholders. Meetings of the Shareholders shall be held at such place as may be specified in the Code of By-Laws (Code) or in the respective notices, or waivers of notice, thereof. Any action required or permitted to be taken at any meeting of the Shareholders may be taken without a meeting if a consent in writing setting forth the action so taken is signed by all the Shareholders entitled to vote with respect thereto, and such written consent is filed with the minutes of the proceedings of the Shareholders.

SECTION 7.02. Action By Directors. Meetings of the Board or any committees thereof (collectively, "Committees," and individually, a "Committee") shall be held at such place as may be specified in the Code or in the respective notices, or waivers of notice, thereof and shall be conducted in such manner as may be specified in the Code or permitted by the Act. Any action required or permitted to be taken at any meeting of the Board or a Committee may be taken without a meeting if a consent in writing setting forth the action so taken is signed by all members of the Board or such Committee, and such written consent is filed with the minutes of the proceedings of the Board or such Committee.

SECTION 7.03. Code of By-Laws. The Shareholders shall have power to make, alter, amend or repeal the Code by at least a majority vote of all outstanding shares at a meeting held for such purpose.

SECTION 7.04. Board Committees. Unless the Code otherwise provides, the Board may, by resolution adopted by a majority of the actual number of Directors elected and qualified, from time to time, designate from among its members one or more Committees, each of which shall, to the extent provided in the resolution or Code and not prohibited by the Act and other applicable laws, have and exercise all of the authority of the Board in the management of the Corporation.

SECTION 7.05. The Act. For purposes of these Articles, the Act shall mean the Indiana Business Corporation Laws, as the same may be amended from time to time.

SECTION 7.06. Limitation of Liability and Indemnification of Directors, Officers and Others.

Clause (a). Definitions. Terms defined in Chapter 37 of the Act (IND. CODE 23-1-37, et seq.) which are used in this Article 7 shall have the same definitions for purposes of this Article 7 they have in such chapter of the Indiana Business Corporation Law.

Clause (b). Indemnification of Directors and Officers. The Company shall indemnify any individual who is or was a director or officer of the Company, or is or was serving at the request of the Company as a director, officer, partner or trustee of another foreign or domestic Company, partnership, joint venture, trust, employee benefit plan or other enterprise whether or not for profit, against liability and expenses, including attorneys fees, incurred by him in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative, and whether formal or informal, in which he is made or threatened to be made a party by reason of being or having been in any such capacity, or arising out of his status as such, except (i) in the case of any action, suit, or proceeding terminated by judgment, order, or conviction, in relation to matters as to which he is adjudged to have breached or failed to perform the duties of his office and the breach or failure to perform constituted willful misconduct or recklessness; and (ii) in any other situation, in relation to matters as to which it is found by a majority of a committee composed of all directors not involved in the matter in controversy (whether or not a quorum) that the person breached or failed to perform the duties of his office and the breach or failure to perform constituted willful misconduct or recklessness. The Company may pay for or reimburse reasonable expenses incurred by a director or officer in defending any action, suit, or proceeding in advance of the final disposition thereof upon receipt of (i) a written affirmation of the director's or officer's good faith belief that such director or officer has met the standard of conduct prescribed by Indiana law; and (ii) an undertaking of the director or officer to repay the amount paid by the Company if it is ultimately determined that the director or officer is not entitled to

indemnification by the Company.

Clause (c). Other Employees or Agents of the Company. The Company may, in the discretion of the Board, fully or partially provide the same rights of indemnification and reimbursement as hereinabove provided for directors and officers of the Company to other individuals who are or were employees or agents of the Company or who are or were serving at the request of the Company as employees or agents of another foreign or domestic Company, partnership, joint venture, trust, employee benefit plan or other enterprise whether or not for profit.

Clause (d). Nonexclusive Provision. The indemnification authorized under this Article 7 is in addition to all rights to indemnification granted by Chapter 37 of the Act (IND. CODE 23-1-37, et seq.) and in no way limits the indemnification provisions of such Chapter.

TAB 6

125 FERC ¶ 61,124
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Southern Indiana Gas & Electric Co. Docket Nos. EL08-82-000
ER08-1468-000

DECLARATORY ORDER GRANTING INCENTIVES, AND ORDER ACCEPTING PROPOSED RATE FORMULA MODIFICATIONS, SUBJECT TO CONDITIONS

(Issued October 30, 2008)

1. Southern Indiana Gas & Electric Co. d/b/a Vectren Energy Delivery of Indiana, Inc. (Southern Indiana) petitioned the Commission, under Rule 207 of the Commission's Rules of Practice and Procedure,[1] for a declaratory order granting its request for two Order No. 679[2] transmission rate incentives for the proposed Gibson-Brown-Reid 345 kV Project (Project). Southern Indiana later filed, under section 205 of the Federal Power Act (FPA),[3] proposed modifications to its transmission rate formula under Attachment O of the Midwest Independent Transmission System Operator, Inc.'s (Midwest ISO) Open Access Transmission and Energy Markets Tariff (Tariff). In accordance with Order No. 679, Southern Indiana seeks to modify its formula rate to permit two types of incentive rate treatments for the project: (1) inclusion of 100 percent of prudently incurred Construction Work in Process (CWIP) in rate base (CWIP Recovery), and (2) recovery of 100 percent of prudently incurred costs of transmission facilities that are cancelled or abandoned for reasons beyond Southern Indiana's control (Abandoned Plant Recovery).

[1] 18 C.F.R. § 385.207 (2008).

[2] *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222, *order on reh'g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 (2006), *order on reh'g*, 119 FERC ¶ 61,062 (2007).

[3] 16 U.S.C. § 824d (2000).

2. For the reasons discussed below, we will grant Southern Indiana's request for incentive rate treatment for the Project. Also, we will accept Southern Indiana's proposed modifications to its Attachment O rate formula to implement the incentives, to become effective October 31, 2008, as requested.

I. Background

A. Description of Southern Indiana

3. Vectren Corporation is an investor-owned energy holding company based in Evansville, Indiana. It owns three utility companies: Southern Indiana, Indiana Gas Company, Inc., and Vectren Energy Delivery of Ohio, Inc. These utilities provide electric transmission and distribution services to nearly 140,000 customers in seven counties in southwestern Indiana, and natural gas service to more than 900,000 customers in adjoining service territories covering two-thirds of Indiana and west central Ohio.

4. Southern Indiana has approximately 1850 MW of generation with approximately 1850 MW of load in its balancing authority area. The transmission system includes about 350 miles of 138 kV lines and about 525 miles of 69 kV lines. Southern Indiana does not have any transmission lines above 138 kV. Its customer base is approximately 25 percent residential and 75 percent commercial, industrial and other. Southern Indiana is a member of the Midwest ISO, Reliability First Corporation, and the North American Electric Reliability Corporation.

B. Description of the Gibson-Brown-Reid Project

5. The proposed Gibson-Brown-Reid Project is an approximately 70 mile 345 kV single-circuit transmission line that will provide additional transmission capacity between Duke Energy's Gibson Station in Gibson County, Indiana; Southern Indiana's Brown Power Plant in Posey County, Indiana; and Big Rivers Electric Corporation's Reid Station in Webster County, Kentucky. Approximately half of the Project will be in Indiana and half in Kentucky.[4] The Project has a scheduled in-service date of June 2011 and an estimated cost of $68 to $100 million, depending on the route of the Project.[5]

6. The Project is a Midwest ISO-approved Baseline Reliability Project, which means that Midwest ISO has found it to be necessary for regional grid reliability. Southern Indiana's 138 kV and lower transmission system is surrounded by 345 kV transmission lines to the north and the south, and is located electrically between a large quantity of

[4] Petition Transmittal Letter at 4.

[5] *Id.* at 5.

generation located on 345 kV transmission lines and load points.[6] The Midwest ISO has explained that approximately 7,000 MW of generation on these regional 345 kV transmission lines is contributing to the loading of Southern Indiana's 138 kV system during line contingencies on the 345 kV system.[7] When accepting the Project as a Baseline Reliability Project, the Midwest ISO explained that the loading of Southern Indiana's 138 kV transmission system contributes to Southern Indiana's inability under first contingency conditions to import energy during times of generation deficiencies on the Southern Indiana system, as needed to meet "loss of load probability" targets.[8] Essentially, when lines on the 345 kV systems of neighboring utilities go out of service, energy flows instead on Southern Indiana's 138 kV transmission system and may make it impossible for Southern Indiana to use its own transmission system to import energy to serve its load. For this reason, the Midwest ISO has described this Project as a 345 kV bypass to Southern Indiana's lower voltage transmission system.[9]

7. Order No. 679 requires an applicant to provide a technology statement that describes any advanced technology the project will use. Southern Indiana provides in its technology statement that the advanced technologies planned for the Project include microprocessor-based protective relays, microprocessor-based Supervisory Control and Data Acquisition equipment for real-time monitoring and control, Digital Fault Recorders, and fiber-optic technologies.[10] In addition, Southern Indiana states that it is considering using high-temperature, low-sag conductors where the Project will cross the Ohio River.[11]

C. Proposed Incentive Rates

8. Southern Indiana requests approval of two incentive rate treatments under Order No. 679: CWIP Recovery and Abandoned Plant Recovery. Southern Indiana proposes to

[6] *Id.*, citing Exhibit No. SIG-1, pp. 5, 7.

[7] Exhibit No. SIG-5, p. 15.

[8] *Id.* Loss of load probability is a measurement of the reliability of a utility's electrical system that is calculated in days per year. A utility that is meeting the loss of load probability target may be unable to serve its electrical load on one day or less over a period of ten years (referred to as 0.1 days per year).

[9] Midwest ISO's Vectren Area Baseline Reliability Project Recommendations on May 17, 2007, Exhibit SIG-6, p. 9.

[10] Exhibit No. SIG-1 at 20-21.

[11] *Id.* at 21.

modify its Attachment O transmission rate formula to include the requested incentives, and explains the necessary accounting treatment for these modifications.

9. Southern Indiana requests action on its petition for declaratory order by October 30, 2008, and requests an effective date for its section 205 filing of October 31, 2008.

II. Notice of the Filings and Responsive Pleadings

10. Notice of Southern Indiana's petition for declaratory order was published in the *Federal Register*, 73 Fed. Reg. 50608 (2008), with interventions and protests due on or before September 12, 2008. Notice of Southern Indiana's section 205 filing was published in the *Federal Register*, 73 Fed. Reg. 53857 (2008), with interventions or protests due on or before September 19, 2008.

11. Motions to intervene in Southern Indiana's petition were timely filed by Consumers Energy Company and Midwest ISO Transmission Owners. Ameren Services Company, on behalf of Ameren Companies [12] (Ameren) filed a timely motion to intervene and protest. On September 24, 2008, Southern Indiana filed an answer to Ameren's protest. The Missouri Public Services Commission (Missouri Commission) filed a motion to intervene out-of-time and late-filed comments in support of Ameren's protest. On September 30, 2008, Southern Indiana filed an answer to Missouri Commission's late-filed comments.

12. A motion to intervene in Southern Indiana's section 205 filing was timely filed by Consumers Energy Company. A motion to intervene and comments were timely filed by Ameren. Midwest ISO Transmission Owners filed a motion to intervene out-of-time. On September 30, 2008, Southern Indiana filed an answer to Ameren's comments.

III. Discussion

A. Procedural Matters

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,[13] the timely, unopposed motions to intervene serve to make the entities that filed them, parties to these proceedings. In addition, we will grant the late interventions of the Missouri

[12] For the purposes of this filing, the Ameren Companies are Central Illinois Light Company (d/b/a Ameren CILCO), Central Illinois Public Service Company (d/b/a Ameren CIPS), Illinois Power Company (d/b/a AmerenIP), and Union Electric Company (d/b/a AmerenUE).

[13] 18 C.F.R. § 385.214 (2008).

Commission and the Midwest ISO Transmission Owners in view of the early stage of the proceedings and the absence of undue prejudice or delay.

14. Rule 213(a) of the Commission's Rules of Practice and Procedure[14] prohibits an answer to a protest, unless otherwise permitted by the decisional authority. We will accept Southern Indiana's answers because they have provided information that assisted us in our decision-making process.

B. Requested Incentives

15. Southern Indiana states that its proposed treatment of CWIP and abandoned plant complies with Order No. 679 and Commission precedent, since: (a) the facilities for which Southern Indiana seeks incentives satisfy the requirements of FPA section 219 – that is, they either ensure reliability or reduce the costs of delivered power by reducing congestion; (b) the total package of incentives is tailored to address the demonstrable risks or challenges faced by the applicant in undertaking the project – that is, the incentives meet the "nexus" test; and (c) the resulting rates are just and reasonable.[15]

1. Section 219 Requirements

16. In the Energy Policy Act of 2005 (EPAct 2005), Congress addressed the allowance of incentive-based rate treatments for new transmission construction.[16] Specifically, section 219 directs the Commission to establish, by rule, incentive-based (including performance-based) rate treatments.[17]

17. Order No. 679 provides that a public utility may file a petition for declaratory order or a section 205 filing to obtain incentive rate treatment for transmission infrastructure investment that satisfies the requirements of section 219, i.e., the applicant must demonstrate that the facilities for which it seeks incentives either ensure reliability or reduce the cost of delivered power by reducing transmission congestion.[18] Order No. 679 established a rebuttable presumption that the standard in section 219 is met if: (1) the transmission project results from a fair and open regional planning process that considers and evaluates projects for reliability and/or congestion and is found to be

[14] 18 C.F.R. § 385.213(a)(2) (2008).

[15] Petition Transmittal Letter at 7-9, citing 18 C.F.R. § 35.35(d) (2007).

[16] Pub L. No. 109-58, 119 Stat 594, 961 (2005).

[17] 16 U.S.C. § 824s (2005).

[18] 18 C.F.R. § 35.35(i) (2008).

acceptable to the Commission; or (2) a project has received construction approval from an appropriate state commission or state siting authority.[19] Order No. 679-A clarifies the operation of this rebuttable presumption by noting that the authorities and/or processes on which it is based (i.e., a regional planning process, a state commission, or siting authority) must, in fact, consider whether the project ensures reliability or reduces the cost of delivered power by reducing congestion.[20]

18. Southern Indiana relies on the rebuttable presumption. It states that the Project has been identified as a Baseline Reliability Project in the Midwest ISO's Transmission Expansion Plan (MTEP) process.[21] Southern Indiana argues that the MTEP process is a fair and open regional planning process, and that it evaluates projects needed for reliability or to relieve congestion.

19. Southern Indiana also states that the two incentives requested are consistent and compatible with each other and that the resulting rates will be just, reasonable and not unduly discriminatory. It notes that for a transmission owner, participation in a Commission-approved Regional Transmission Organization (RTO) ensures that cost allocation and rate design are conducted in a manner to prevent undue discrimination or preference. Southern Indiana notes that the Commission has approved similar incentives for transmission owners within the Midwest ISO based in part on RTO participation.[22]

a. Protests

20. In Ameren's protest to Southern Indiana's petition it states that the Midwest ISO's determination that the Project qualifies as a Baseline Reliability Project is flawed and should be rejected. Ameren argues that the Midwest ISO Planning Staff did not consider generation re-dispatch alternatives when reviewing overloads during peak load conditions. It states that the decision to build additional lines instead of re-dispatching generation is an economic decision that is not required to meet North American Electric Reliability Corporation (NERC) reliability standards. It states that this Project could be evaluated as a Regionally Beneficial Project under Attachment FF and the Midwest ISO's Regional Expansion Criteria and Benefits (RECB) procedures, but does not qualify as a Baseline Reliability Project.

[19] Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 at P 58.

[20] *Id.* P 49.

[21] Petition Transmittal Letter at 11 and Exhibit No. SIG-8 at 17.

[22] Petition Transmittal Letter at 9 (citing *Xcel Energy Services, Inc.*, 121 FERC ¶ 61,284 (2007)).

21. Ameren also argues that the Midwest ISO Planning Staff used new tests and standards that were not subject to approval by NERC or relevant Regional Entity to determine that the Project is a Baseline Reliability Project. First, Ameren argues that the Midwest ISO Planning Staff reinterpreted NERC standards TPL-002 and TPL-003 in making their determination. These standards were reinterpreted to change from the need to include planned outages to a need to unconditionally enable any planned outage which might be scheduled. Ameren states that this change increases the number of contingencies applicable to each of the two standards by at least one. It also ignores the reality that scheduled outages are subject to coordination, review, and approval and fails to consider the fact that line and transformer maintenance outages, particularly for generator outlet facilities, are often scheduled to coincide with local generation outages to minimize their impact on the system.

22. Second, Ameren argues that the Midwest ISO Planning Staff redefined NERC standard TPL-002 so as to require a minimum level of first contingency incremental import capability into each Transmission Planner's system. Ameren states that TPL-002 does not impose import capability requirements. Imposition of this new criterion would mean that each Transmission Planner's portion of the system would have to meet the performance criteria for single contingencies, specified in Category B of Table 1 of the TPL standards, with outage of multiple local area generators.

23. Ameren states that the Midwest ISO's Planning Staff can not reasonably assert that its redefinitions are necessary to comply with NERC Standards. Ameren states that the Midwest ISO Planning Staff applied these new requirements to the Southern Indiana Project but has not consistently applied them to projects of other Transmission Owners, to generation interconnection studies, or to transmission service requests.

24. Ameren further argues that because Southern Indiana has indicated it has the option not to build the Project, the Project cannot be considered a Baseline Reliability Project. Ameren states that Southern Indiana indicates that it will face significant disincentives to complete the Project if it does not obtain relief sought in the petition. Ameren asserts that as a prudent transmission system operator, Southern Indiana would build all facilities that are required to ensure compliance with applicable NERC and Regional Entity standards. Ameren states that if Southern Indiana has the option to not build the Project, it cannot be required to ensure compliance with applicable NERC and Regional Entity standards, and thus does not meet the basic definition of a Baseline Reliability Project.

25. The Missouri Commission supports Ameren's protest of the petition. It is concerned about the costs that would be allocated to ratepayers in Missouri that are customers of Union Electric Company d/b/a AmerenUE (Ameren UE). For Missouri customers, it argues, the allocation to AmerenUE amounts to approximately 2.4 percent of the total cost of the Project (for $100 million project this allocation would be approximately $2.4 million or $450,000 annually at an 18.75 percent fixed charge rate).

The Missouri Commission agrees that the Midwest ISO Planning Staff improperly applied reliability standards in the determination that Southern Indiana's Project qualifies as a Baseline Reliability Project. Furthermore, it is critical to the integrity of the cost allocation process that there are proper decisions as to what regional transmission upgrades are needed for reliability.

b. Answers

26. Southern Indiana states that the MTEP process is a fair and open regional planning process that considers and evaluates projects for reliability and/or congestion. It argues that the designation of the Project as a Baseline Reliability Project demonstrates that the Midwest ISO has found that the Project is needed to ensure reliability, and thus that it is entitled to the rebuttable presumption under Order No. 679.

27. Southern Indiana states that Ameren and the Missouri Commission's concerns regarding the Midwest ISO's Baseline Reliability Project process in general, and the specific determination regarding this Project, are beyond the scope of this proceeding. It states that the Commission routinely rejects attempts by parties to inject issues beyond the scope of a proceeding through protests. Furthermore, Southern Indiana asserts that any such concerns that Ameren has should be raised through Midwest ISO's stakeholder processes.

c. Commission Determination

28. We find that Southern Indiana is entitled to a rebuttable presumption of eligibility for incentive rate treatment as a result of the approval of its Project as a Baseline Reliability Project by the Midwest ISO. The arguments of the protestors challenging how the Midwest ISO made this determination are outside of the scope of this proceeding, and do not rebut the presumption of eligibility. As the Commission noted in Order No. 679-A, the rebuttable presumption was created to avoid duplication in determining whether a project maintains reliability or reduces congestion.[23]

29. Ameren argues that the Midwest ISO Planning Staff has used incorrect or new tests and standards for determining whether Southern Indiana's Project is a Baseline Reliability Project. However, as the Commission has stated previously, the rebuttable presumption does not require any specific standards to be used by regional entities in making their determinations.[24] Instead, each regional entity may base its own conclusions on the needs and requirements of the particular region. The rebuttable

[23] Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 at P 46.

[24] *Southern California Edison Co.*, 123 FERC ¶ 61,293, at P 23 (2008).

presumption requires only that the project be vetted through an open and fair regional process that considers and evaluates projects for reliability and/or congestion.[25] Although Ameren argues with the standards used for determination, it presents no evidence that the Midwest ISO process is not open or fair.

30. This proceeding is not the proper place to challenge the mechanics of the Midwest ISO planning process. The Commission has found that Midwest ISO's planning process clearly identifies the details of how planning will be coordinated with interested parties. The Commission found that the Midwest ISO's process is fair and open, and, subject to a further compliance filing, complies with the Commission's Order No. 890 requirements.[26] Interested parties had the opportunity to file comments with the Commission during this review. Additionally, the Midwest ISO provides a variety of forums where interested parties can be involved with the determination on what projects are found to be Baseline Reliability Projects, and to challenge the determination once it is made. Meetings are held throughout the planning process where stakeholders may provide input into planning decisions.[27] This input may be provided during meetings of the Planning Advisory Committee or Planning Subcommittee, which consist of representatives of many different stakeholder groups.[28] The Midwest ISO tariff also provides for a more formal dispute resolution process including informal negotiation, mediation, and arbitration.[29] It includes provisions for the formation of an Alternate Dispute Resolution Committee, along with procedures for Expedited Dispute Resolution.[30] If parties differ over interpretation of reliability standards, they may also file comments at NERC using a Standard Authorization Request.[31]

31. Accordingly, we see no reason to reopen the Midwest ISO's determination that Southern Indiana's Project qualifies as a Baseline Reliability Project in this proceeding.

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[25] *Id.*

[26] *Midwest Indep. Transmission Sys. Operator*, 123 FERC ¶ 61,164, at P 28 (2008).

[27] *See* Midwest ISO Tariff at Attachment FF at section I.i.2, Original Sheet No. 1834C.

[28] *See id.*

[29] *See id.* at Attachment HH, Original Sheet No. 1887.

[30] *See id.* at Original Sheet No. 1888.

[31] NERC Reliability Standards Development Procedure, Mar. 12, 2007, available at: http://www.nerc.com/fileUploads/File/Standards/RSDP_V6_1_12Mar07.pdf.

2. The Nexus Requirement

32. In addition to satisfying the section 219 requirement, an applicant for an incentive rate must show that there is a nexus between the incentive sought and the investment being made. The Commission has stated that in evaluating whether an applicant has satisfied the required nexus test, the Commission will examine the total package of incentives being sought, the interrelationship between the incentives, and how any requested incentives address the risks and challenges faced by the project.[32] Applicants must provide sufficient explanation and support to allow the Commission to evaluate the incentives. In addition, the Commission has clarified that it retains the discretion to grant incentives that promote particular policy objectives unrelated to whether a project presents specific economic risks or challenges.[33]

33. In Order No. 679-A, the Commission clarified that its nexus test is met when an applicant demonstrates that the total package of incentives requested is "tailored to address the demonstrable risks or challenges faced by the applicant."[34] The nexus test is fact-specific and requires the Commission to review each application individually. Notably, the Commission chose not to adopt a list of criteria or characteristics that must be met by every applicant before an incentive would be approved. The Commission recognized that it would be impossible to identify every conceivable challenge or risk faced by an applicant, or to develop a menu of incentives that would or would not be appropriate given a particular set of risks and challenges.[35]

34. Southern Indiana states that the Project faces substantial regulatory, multi-party, construction and engineering challenges and risks.[36] According to Southern Indiana, these include: the fact that the company does not have eminent domain in Kentucky; the Project will likely require partnerships with utilities in Kentucky; the Project crosses the Ohio River; the Project will require coordination with neighboring utilities; the Project requires coordination with two Reliability Coordinators; the Project requires work on

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[32] 18 C.F.R. § 35.35(d); Order No. 679, FERC Stats. & Regs. ¶ 31,222 at P 26. *See also* Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 at P 21 ("By this we mean that the incentive(s) sought must be tailored to address the demonstrable risks and challenges faced by the applicant in undertaking the project.").

[33] Order No. 679-A, FERC Stats. & Regs. ¶ 31,236 at n.37.

[34] *Id.* P 40.

[35] *Id.* P 24.

[36] Petition Transmittal Letter at 13-18.

energized lines; the Project's corridor requires most of the transmission line route to be inaccessible by road and a portion will cross environmentally sensitive areas; and the Project will require completion of multiple, simultaneous permitting processes involving federal, state and perhaps local authorities.

35. Southern Indiana states that the Project has a scheduled in-service date of June 2011 and an estimated cost of $68 to $100 million, depending on the route of the Project. Allowing CWIP recovery will result in lower construction costs; reduce charges to ratepayers; provide a more gradual increase in transmission costs to ratepayers; and result in stronger net cash flow, reducing downward pressure on Southern Indiana's credit metrics.[37] In addition, Southern Indiana states that the Abandoned Plant Recovery incentive will remove a potential disincentive to undertaking the Project by eliminating the risk that shareholders may have to bear the costs of transmission projects that are cancelled for reasons outside Southern Indiana's control.

36. We find that Southern Indiana has demonstrated that the Project is not a routine construction project and presents special risks. As discussed below, we find that each incentive sought by Southern Indiana is designed to address a distinct set of risks associated with the Project. Thus, we find that the total package of incentives is just and reasonable.

a. CWIP Recovery

37. Order No. 679 allows utilities to include, where appropriate, 100 percent of prudently-incurred transmission-related CWIP in rate base.[38] The Commission noted that this rate treatment will further the goals of section 219 by providing up-front regulatory certainty, rate stability, and improved cash flow for applicants, thereby reducing the pressure on their finances caused by investing in transmission projects.[39] As discussed below, we find that Southern Indiana has shown a nexus between the proposed CWIP incentive and its investment in the Project.

[37] Petition Transmittal Letter at 13. Southern Indiana includes with its Petition an affidavit of the Vice President and Treasurer of Vectren Corporation and its subsidiaries with analysis showing the impacts of CWIP on their cash flow position using both the $68 million and $100 million scenario and analysis showing that they expect to face a negative cash flow position while undergoing the project.

[38] Order No. 679, FERC Stats. & Regs. ¶ 31,222 at P 29, 117.

[39] *Id.* P 115.

38. Consistent with Order No. 679, we find that authorizing 100 percent of CWIP treatment for the Project would enhance Southern Indiana's cash flow, reduce interest expenses, assist Southern Indiana with financing, and improve Southern Indiana's coverage ratios used by rating agencies to determine credit quality by replacing non-cash Allowance for Funds Used During Construction (AFUDC) with cash earnings. This, in turn, will reduce the risk of a downgrade in Southern Indiana's, or its holding company Vectren Corporation's, corporate credit and debt ratings.

39. Southern Indiana has demonstrated that due to the size and the scope of the proposed Project, there is an increased risk to its credit rating. The Project has a long lead time, with a scheduled in-service date in June of 2011, and the overall magnitude of the investment is significant ($68 to $100 million) compared to Southern Indiana's current investment in existing transmission plant of $155 million. These factors are comparable to those that the Commission has taken into consideration in authorizing CWIP in rate base for other utilities.

40. The increased cash flow resulting from a CWIP incentive will be used in calculating a utility's coverage ratio,[40] a ratio that Standard and Poor's considers in deciding what credit rating to give a utility.[41] Southern Indiana has secured debt and its current credit rating is A from S&P. In addition, Southern Indiana obtains the majority of its additional debt from its immediate parent, which has an unsecured current credit rating of A- from S&P.[42] These credit ratings allow Southern Indiana to secure borrowed money at the lowest possible cost and with the most flexible borrowing terms and conditions.

41. Southern Indiana provides a statement of cash flows for the years during the Project's construction (2008-2011).[43] Under a $68 million scenario, the company faces a projected net cash flow deficit of $46 million over the four year period. Under a $100 million scenario, the company faces a projected net cash flow deficit of $78 million. CWIP recovery will improve the company's cash flow position while the Project is being constructed. Southern Indiana has demonstrated that without CWIP in rate base, it will have negative cash flows, with a converse increase in interest expenses from debt and a potential negative effect on its credit rating and ability to procure debt at a low cost.[44]

[40] A coverage ratio is a measurement of a utility's ability to repay debt obligations.

[41] *See* Standard and Poor's Encyclopedia of Analytical Adjustments for Corporate Entities, available at: www.standardandpoors.com/ratingsdirect.

[42] Exhibit SIG-10 at 7.

[43] Exhibit SIG-13.

[44] *See* Exhibit. SIG-13.

This showing is similar to the demonstrations made by other companies that have received authorization to include CWIP in rate base.[45]

42. In addition, we also find that allowing Southern Indiana to recover 100 percent of CWIP in its rate base will provide better rate stability for customers. As we have explained in prior orders,[46] when large-scale transmission projects come on line, consumers may experience "rate shock" if CWIP is not permitted in rate base. By allowing CWIP in rate base, the rate impact of the Project can be spread over the entire construction period and will help consumers avoid a return on and of capitalized AFUDC.

43. For the reasons discussed above, the Commission finds that Southern Indiana should be granted the 100 percent CWIP Recovery incentive for the Project.

b. Abandoned Plant Recovery

44. In Order No. 679, the Commission found that allowing abandoned plant recovery is an effective means to encourage transmission development by reducing the risk of non-recovery of costs.[47] We will grant Southern Indiana's request for recovery of 100 percent of prudently-incurred costs associated with abandonment of the Project, provided that the abandonment is a result of factors outside of the control of Southern Indiana, which must be demonstrated in a subsequent section 205 filing for recovery of abandoned plant.[48]

45. We find that Southern Indiana has shown, consistent with Order No. 679, a nexus between the recovery of prudently-incurred costs associated with abandoned transmission projects and its planned investment. Besides the scope, size, and long lead-time, the Project presents special risks because it requires approval from multiple jurisdictions. Accordingly, the Commission finds Southern Indiana should be granted Abandoned Plant Recovery incentive for the Project.

[45] *See* Xcel Energy Services application filed in Docket No. ER07-1415-000, Ex XES-18; *Xcel Energy Services*, 121 FERC ¶ 61,284 (2007).

[46] *See, e.g., American Electric Power Service Corp.*, 116 FERC ¶ 61,059, at P 59 (2006), *order on reh'g*, 118 FERC ¶ 61,041, at P 27 (2007); *PPL Electric Utilities Corp.*, 123 FERC ¶ 61,068, at P 40- P 43 (2008).

[47] Order No. 679, FERC Stats. & Regs. ¶ 31,222 at P 163.

[48] *Id.* P 163, 165-66; *see also Alleghany Energy, Inc.*, 116 FERC ¶ 61,058, at P 122 (2006).

3. Revisions to RECB Procedures

46. Ameren also argues that because the Midwest ISO is considering revisions to the costs allocation methodologies established under its RECB procedures, the Commission should make it clear that nothing in this proceeding precludes application of any new procedures that are adopted to the Project.

47. In response, Southern Indiana argues that RECB procedures should not affect the eligibility of the Project for incentives and that any changes in RECB procedures should be prospective. Retroactively applying changes in the RECB procedures would harm Midwest ISO transmission owners making transmission investment and negatively impact the development of much-needed transmission.

48. We agree with Southern Indiana that any potential changes in the RECB procedures in the future do not affect the eligibility of the Project for incentives. We are basing our decision to approve the requested incentives on the facts and the law as they are today, and this decision will not be affected if RECB procedures are revised. However, to the extent Ameren requests clarification regarding the effect of our decision here on the application to the Project of future revisions to cost allocation methodologies within the Midwest ISO, we grant Ameren's request. We clarify that nothing in this order is intended to prejudge whether Southern Indiana's project should be subject to revised cost allocation methodologies in the future.

C. Attachment O Modifications

49. Southern Indiana filed under section 205, proposed modifications to Attachment O of the Midwest ISO Tariff to incorporate the incentives it requests. Southern Indiana proposes to add Line No. 18a – 100 percent CWIP recovery for Commission-accepted or Commission-approved Order No. 679 transmission incentive projects – to page 2 of the Midwest ISO's formula rate template.[49] The year-end CWIP balances for the Project from the previous calendar year would be entered on this line and added to Rate Base on Line 30, page 2, of the formula rate.[50] This modification will allow Southern Indiana to earn a current return on 100 percent of year-end CWIP balances for this Project.[51]

50. Southern Indiana is also proposing to add Line No. 23a – Unamortized Balance of Cancelled or Abandoned Plant – as a placeholder to page 2 of the formula rate in the

[49] Section 205 Transmittal Letter at 4.

[50] *Id.*

[51] Section 205 Exhibit No. SIG-1, at 6.

event that the Project should ever be cancelled or abandoned due to circumstances outside of Southern Indiana's control.[52] The unamortized plant balance associated with any such cancelled or abandoned plant would be entered on this line and added to the Total Adjustment to Rate Base shown on Line 24, page 2, of the formula rate. Southern Indiana is also proposing to add Line No. 9a – Cancelled or Abandoned Plant Amortization – as a placeholder to page 3 of the formula rate.[53] Annual amortization expenses associated with the canceling or abandonment of the Project for reasons outside of Southern Indiana's control would be entered on this line and added to Total Depreciation expenses shown on Line 12, page 3, of the formula.[54] At this time Southern Indiana is only seeking these placeholders for Abandoned Plant Recovery and would have to make a separate section 205 filing to obtain prior Commission acceptance or approval for the specific amounts that Southern Indiana would propose. Note W to Attachment O makes this clarification.[55]

51. Southern Indiana will also recover costs from the Project through Attachment GG of the Midwest ISO Tariff, which sets forth a method for calculating and collecting carrying charges associated with Network Upgrades identified in the MTEP, developed annually.[56]

1. Protests and Answers

52. Ameren filed a protest to Southern Indiana's section 205 filing restating its objections to Southern Indiana's petition. Ameren continues to believe that the Project should not be considered a Baseline Reliability Project or be subject to the Baseline Reliability Project cost sharing procedures. Therefore, it states, the Commission should reject Southern Indiana's rate formula template as improper to the extent it would allow any of the costs of the Project to be allocated to other pricing zones within the Midwest ISO, or accept the section 205 filing subject to the outcome of the proceedings in the petition.

53. Southern Indiana states in response that in Order No. 679, the Commission approved a procedure in which an applicant may file its request for transmission rate incentives in a petition for declaratory order and make a separate, single-issue rate filing

[52] Section 205 Transmittal Letter at 4.

[53] *Id.*

[54] Section 205 Exhibit No. SIG-1, at 7.

[55] *Id.*

[56] Section 205 Transmittal Letter at 5.

to implement its request for transmission rate incentives. If an applicant's petition for declaratory order shows that it qualifies for transmission rate incentives, the separate, single-issue section 205 filing will be limited to review of the applicant's implementation of the transmission rate incentives.[57]

2. Commission Determination

54. We deny Ameren's protest in the section 205 docket as outside the scope of the proceeding.[58] The arguments Ameren raises in its protest relate to whether Southern Indiana should receive incentives, not how those incentives should be implemented in its rates. We address Ameren's arguments on the determination of Baseline Reliability Projects in our discussion above.

55. After our review of the proposed rates and the proposed treatment in Attachment O, and based on the reasons discussed above, we find that Southern Indiana's proposed modifications are just and reasonable and not unduly discriminatory.

D. Other Issues

1. Accounting Treatment

56. Under Order No. 679 and the Commission's regulations,[59] a company must propose accounting procedures that ensure that customers will not be charged for both capitalized AFUDC and corresponding amounts of CWIP in rate base.[60] To satisfy this requirement, Southern Indiana explains that its proposed accounting procedures and tracking mechanisms will allow it to track, segregate, and record the capital costs of the

[57] Southern Indiana Section 205 Answer at 2, citing Order No. 679, FERC Stats. & Regs. ¶ 31,222 at PP 76-78.

[58] *See Trans-Allegheny Interstate Line Co.*, 119 FERC ¶ 61,219, at P 67 (2007).

[59] 18 C.F.R. § 35.25 (2008) (recovery of CWIP in rate base).

[60] Accounting procedures that have satisfied this burden have provided internal procedures, processes, and/or journal entries intended to prevent costs recovered in current rates from being included in future rates. For example, entities have provided detailed narratives and illustrations showing modifications to the accounting system to identify and segregate work orders associated with projects that include CWIP in rate base. These accounting procedures also explain the manner in which the costs of a work order will be traced to specific FERC accounts based on the appropriate accounting treatment. Other entities have provided accounting procedures showing and explaining specific accounting journal entries that ensure that no improper capitalization occurs.

Project while it is under construction to prevent any double recovery of the Project costs.[61] Specifically, Southern Indiana will assign a project number to the Project that will be designated on all capital work orders for the Project. As construction costs are incurred on the Project, they will be recorded to the Project's assigned project number in the Company's projects accounting module and/or accounting ledger system. Further, Southern Indiana states that during the Project's construction, construction costs will be recorded to FERC Account No. 107, Construction Work in Process - Electric. Southern Indiana will use the FIS Projects Accounting Module to maintain the accounting records for Account No. 107 CWIP electric plant assets during the Project's construction and after the Project is placed into service. Southern Indiana states that this accounting process will ensure that it recovers CWIP in rate base for the Project and does not recover AFUDC.

57. The Commission finds that Southern Indiana's proposed accounting procedures in Exhibit No. SIG-16 of its filing demonstrate that Southern Indiana has accounting procedures and internal controls in place to prevent recovery of AFUDC to the extent it is allowed to include CWIP in rate base. However, public utilities that receive a current return on CWIP through rate base recover this cost in a different period than it would ordinarily be charged to expense under the general requirements of the Commission's Uniform System of Accounts. To promote comparability of financial information between entities, the Commission has required a specific accounting treatment or the use of footnote disclosures to recognize the economic effects of having CWIP in rate base.[62] Southern Indiana fails to address that requirement. The Commission therefore directs Southern Indiana to provide footnote disclosures in the notes to the financial statements of its annual FERC Form No. 1 and their quarterly FERC Form No. 3-Q that: (1) fully explain the impact of the transmission rate incentives it receives insofar as the incentives provide for a deviation from the general requirements of the Uniform System of Accounts; (2) include details of amounts not capitalized because of the transmission rate incentives for the current year, the previous two years, and the sum of all years beginning October 31, 2008; and (3) include a partial balance sheet consisting of the Assets and Other Debits section of the balance sheet to include the amounts not capitalized because of the transmission rate incentives.

[61] Testimony of M. Susan Hardwick, Exhibit No. SIG-16.

[62] *See, e.g.*, *American Transmission Company LLC*, 105 FERC ¶ 61,388 (2003), *order on reh'g*, 107 FERC ¶ 61,117 (2004); *Trans-Allegheny Interstate Line Company*, 119 FERC ¶ 61,219, *order on reh'g*, 121 FERC ¶ 61,009 (2007); and *Southern California Edison Company*, 122 FERC ¶ 61,187 (2008).

2. Request for Waivers

58. Southern Indiana requests that the Commission waive several regulations in 18 C.F.R. §§ 35.13 and 35.25.[63] Southern Indiana argues that its filing provides sufficient supporting information to ensure that CWIP is accounted for correctly and that no double recovery occurs. It also argues that it should not have to file Statements AA through BM because at this time it is only seeking approval to add a placeholder to its Attachment O concerning recovery of cancelled or abandoned plant. Southern Indiana also requests any other waivers required in connection with its petition.

59. We grant Southern Indiana's request for waivers of the specific regulations in 18 C.F.R. §§ 35.13 and 35.25. As we note above, subject to Southern Indiana complying with the required footnote disclosures, we find that Southern Indiana's proposed accounting procedures are adequate and sufficient to prevent double counting.[64]

3. Annual Filing Requirement

60. To comply with the requirement that an applicant seeking CWIP recovery in rate formulas make an annual filing with the Commission, Southern Indiana states that they will annually file the FERC Form No. 730 report.[65]

61. The Commission has previously found that filing a FERC Form No. 730 report would satisfy the Commission's requirement for an annual filing for CWIP recovery through a rate formula.[66] Accordingly, we will accept Southern Indiana's proposal.

The Commission orders:

(A) Southern Indiana's petition for a declaratory order is hereby granted, as discussed in the body of this order.

[63] The waivers sought are to the provisions in 18 C.F.R. §§ 35.13(a)(2)(iv), 35.13(c), 35.13(d) (with the exception of the corporate attestation requirement in 35.13(d)(6)), 35.13(e) and (h) (with respect to Statements AA through BM), and 35.25.

[64] *See Commonwealth Edison Co.*, 119 FERC ¶ 61,238 (2007), *order on reh'g* 122 FERC ¶ 61,037 (2008).

[65] Petition Transmittal Letter at 23.

[66] *The United Illuminating Co.*, 119 FERC ¶ 61,182, at P 92 (2007). *See also Xcel Energy Services, Inc.*, 121 FERC ¶ 61,284 (2007).

(B) Southern Indiana's proposed formula rate modifications are hereby accepted for filing, to become effective October 31, 2008, as discussed in the body of this order.

By the Commission.

(SEAL)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

TAB 7

Electric Transmission Route Selection Technical Report

Proposed 345kV Transmission Line connecting AB Brown Generating Station & Reid Substation

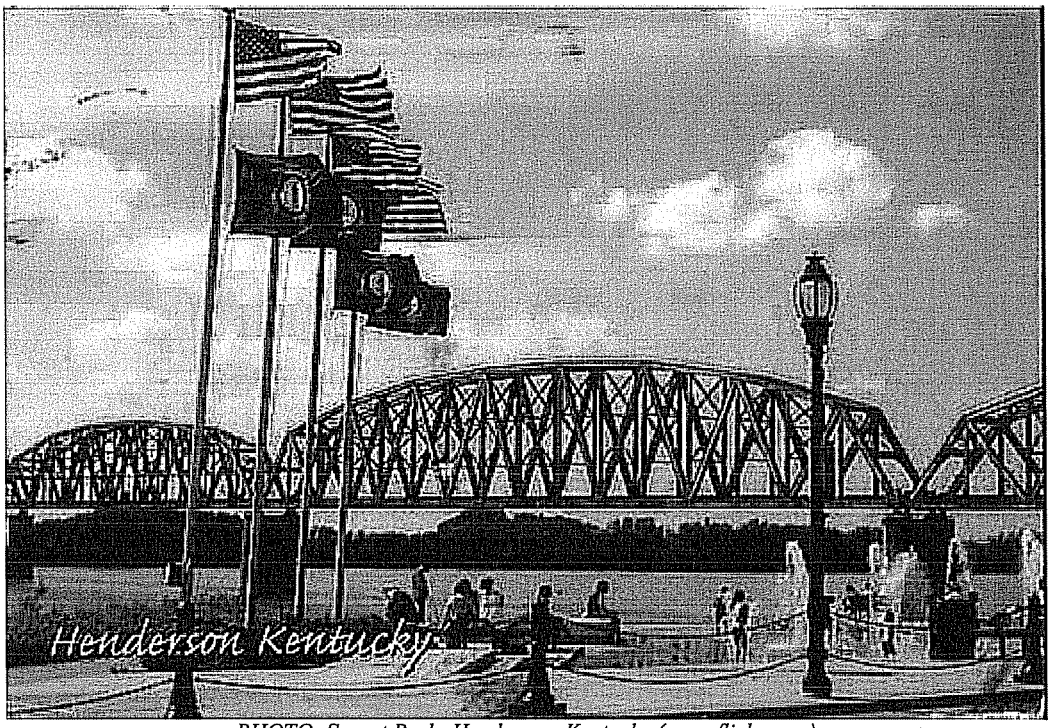

PHOTO: Sunset Park; Henderson, Kentucky (www.flickr.com)

Study by Photo Science on behalf of

Vectren Corporation

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Part I: Introduction

Vectren Corporation is a progressive energy-holding company headquartered in Evansville, Indiana. Vectren delivers gas and/or electricity to more than one million utility customers in Indiana and Ohio. Vectren North provides energy delivery services to approximately 568,000 natural gas customers located in central and southern Indiana. Vectren South provides energy delivery services to approximately 141,000 electric customers and approximately 111,000 gas customers located in southwestern Indiana. Vectren South also owns and operates electric generation facilities to serve its electric customers and optimizes those assets in the wholesale power market. VEDO provides energy delivery services to approximately 317,000 natural gas customers located in west central Ohio.

Vectren has identified the need to construct a 345 kV transmission line connecting AB Brown generating station in southeast Posey County, Indiana, to the Reid substation located in northeast Webster County, Kentucky, as part of a larger project proposed to and approved by the Midwest Independent Transmission System Operator (Midwest ISO or MISO), Vectren's regional planning authority, as part of Midwest ISO's Transmission Expansion Plan (MTEP 2006) as a baseline reliability project. The full project is a 345 kV line from Duke's Gibson Station in Gibson County, Indiana to Vectren's AB Brown Power Plant in Posey County, Indiana to Big Rivers Electric Corporation's Reid Station in Webster County, Kentucky. This baseline reliability project addresses current and projected congestion on electric transmission lines in the southwest Indiana/Northwest Kentucky region which have at times driven up locational marginal prices for electricity in this part of the Midwest ISO system and which have resulted in transmission load relief (TLRs) in the region outside the Midwest ISO system. This Gibson- Brown- Reid project consists of two phases. Phase 1, the Gibson to Brown phase, is under construction. Phase II, the Brown to Reid phase, is the focus of this route study. As this project is an interstate project, Vectren has worked to address recommendations from staff at both the Kentucky Public Service Commission (KYPSC) and the Indiana Utility Regulatory Commission (IURC). This route study is the preferred route selection methodology for Kentucky projects, and, for that reason, is the methodology selected to study routes for the Brown- Reid Phase of this project.This transmission line will help meet the region's future energy demand and increase reliability for the overall electric grid in the region.

The study area was identified as Phase II of the Project, the area between Vectren's AB Brown Power Plant and Big River's Reid Substation, an area of approximately 208 square miles (133,000 acres) located in portions of Posey and Vanderburgh Counties in Indiana, the Ohio River, and Henderson, Webster, and McLean Counties in Kentucky. The overwhelming majority (83%) of the study area is in Henderson County. The area is predominately rural with pockets of urbanized areas. The predominant land use within the study area is row-crop agriculture, with isolated forested and wetland areas.

Once the Macro Corridors were identified, detailed datasets were developed for siting purposes. Using these detailed datasets, Alternate Corridors were generated using the Kentucky Model in a process outlined in this report. This phase involved the production of four corridors, each representing a different perspective. The Built Corridor seeks to avoid impacts to human development and historical / cultural resources. The Natural Corridor seeks to protect natural resources and avoid impacts to plant and animal species. The Engineering Corridor seeks to maximize co-location opportunities and avoid areas that would be difficult to construct the transmission line. Finally, the fourth corridor, Simple Average, weighs all criteria equally.

Vectren then analyzed these corridors and developed alternate route possibilities. The second phase of this study evaluated each possible alternate route in order to narrow down the total possibilities and select a preferred route. This Preferred Route represents the result of this study to date. The Preferred Route and the processes used to generate it are detailed in this report.

For the purposes of this study, "corridors" are defined as the most suitable areas for routing transmission lines corridors in variable widths through the "study area." The study area represents a larger land area between the end points for this project and through which corridors might be logically and practically identified (Figure 1). The term "route" describes the preferred path of the transmission line centerline, whereas a "corridor" is a more general area of sufficient width to contain the eventual right-of-way.

Part II: Project Description

This is a proposed project to construct a new 345 kV transmission line approximately 25 miles from Indiana over the Ohio River into Kentucky. The northern terminus is the AB Brown generating station, a bituminous coal power plant located in Posey County, Indiana. The southern terminus is the Reid Substation, owned by Big Rivers Electric Corporation, in Webster County, Kentucky. Vectren plans to purchase 150 feet of right-of-way (ROW) for this line. To facilitate this, Vectren has elected to implement the Electric Power Research Institute – Georgia Transmission Corporation (EPRI-GTC) Electric Transmission Line Siting Methodology and the Kentucky Siting Model to identify the preferred route for constructing the 345 kV transmission line.

Within Henderson County, Kentucky, the corridors avoid an area that includes most of the city of Henderson, as well as some developed areas around the city. The City of Henderson had a 2007 US Census-estimated population of 27,786 and is the Henderson County seat.

This project is part of a larger transmission line project. The Gibson-Brown-Reid Project is a proposed 345 kV project spanning two states, Indiana and Kentucky, to provide additional transmission capacity between Duke Energy's Gibson Station located in Gibson County, Indiana, and Vectren's Brown Power Plant located in Posey County, Indiana, and Big Rivers Electric Corporation's Reid Station located in Webster County, Kentucky.

The project is part of Vectren's plan to increase import capacity in Vectren's Electric Transmission System Long Range Plan, 2006-2015, and it has a scheduled in service date of June 2012. The project provides for approximately 63 miles of 345 kV line at an estimated cost of $68-100 Million (2007 estimate). Approximately two-thirds of the line is in Indiana and one-third in Kentucky.

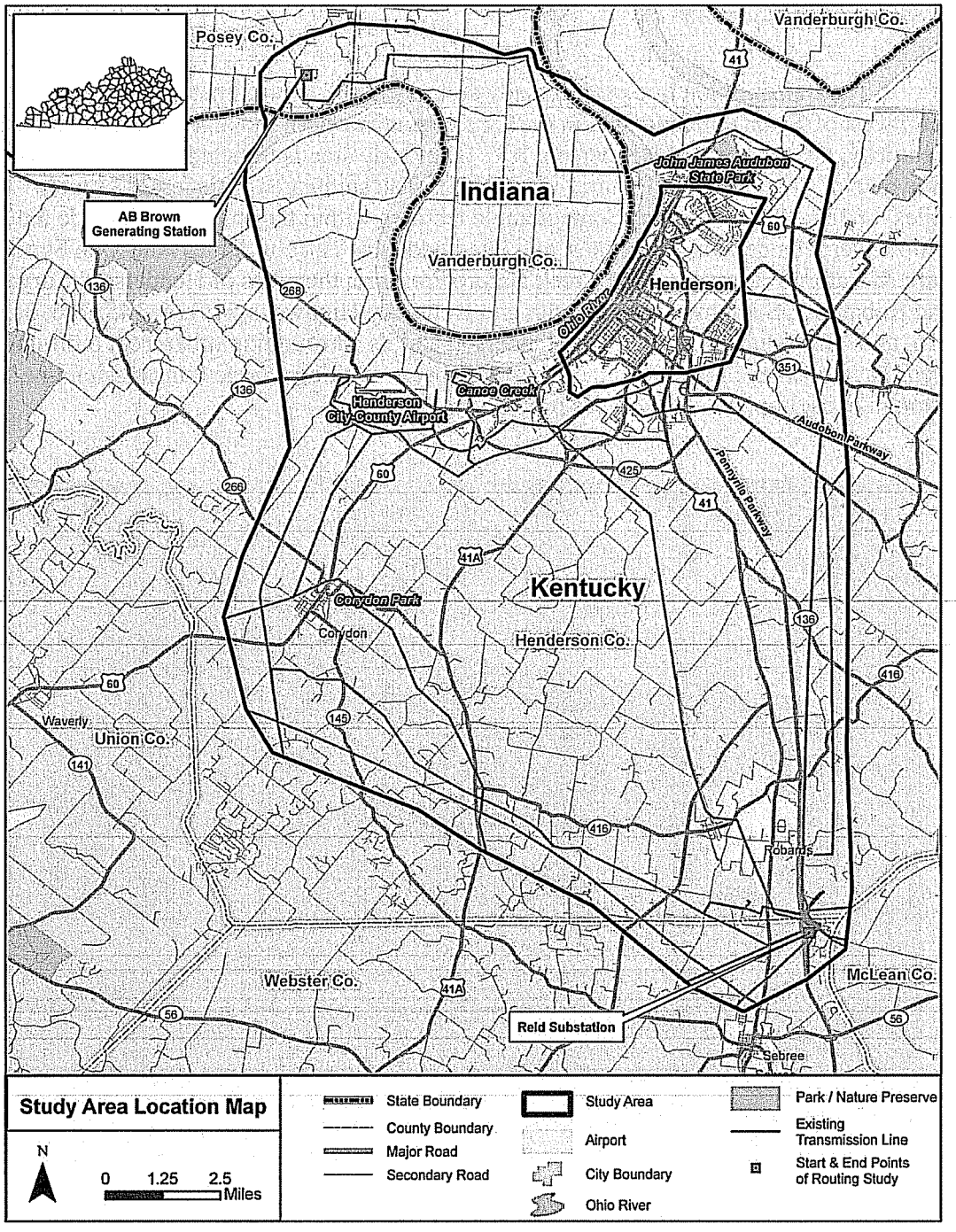
Part III: Study Area Description

1. Study Area Location

The transmission line project study area is located approximately 15 miles southwest of Evansville, Indiana, in portions of southwestern Indiana and northwestern Kentucky, near the city of Henderson, KY. The study area is bisected by the Ohio River (See map of Study Area in Figure 1 on Page 5). The study area includes 207 square miles, or 132,984 total acres. Some notable features within the study area include the Ohio River; Henderson, Deadmans, and Diamond Islands; John James Audubon State Park & Nature Preserve; Canoe Creek Nature Preserve; the cities of Henderson, Corydon, and Robards; US Highways 41 and 60; and Kentucky Highways 54, 136, 145, 266, 351, 416, and 425. Much of the City of Henderson and its surrounding urbanized, built-up areas have been excluded from the study area because siting a large transmission line through densely-populated areas is problematic.

PHOTO: Henderson County Courthouse (www.flickr.com)

FIGURE 1: LOCATION MAP



The study area encompasses three cities: Henderson (with the exception noted above), Corydon, and Robards. There are several other towns and cities in close proximity to the study area, including:

- Anthoston, Henderson County KY
- Cairo, Henderson County KY
- Finley Addition, Henderson County KY
- Graham Hill, Henderson County KY
- Rock Springs, Henderson County KY
- Tunnel Hill, Henderson County KY
- Wilson, Henderson County KY
- West Franklin, Posey County IN
- Cypress, Vanderburgh County IN
- Rahm, Vanderburgh County IN

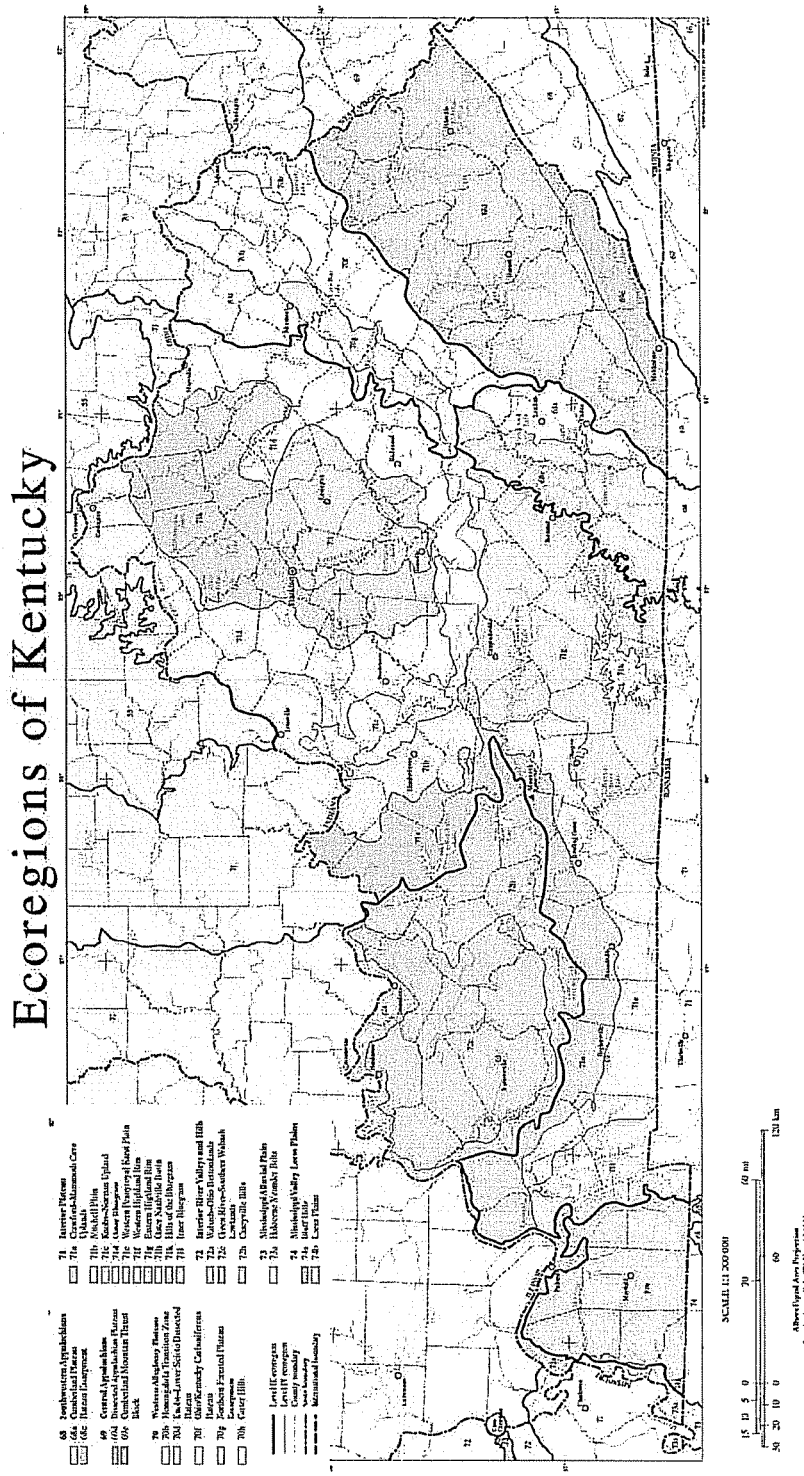
PHOTO: Main St. Intersection: Corydon, Kentucky (Google Street View)

2. Study Area Characteristics

Ecological Region

The project area lies within the "Interior River Valleys and Hills" ecological region of Kentucky (See Figure 2). This ecological region includes three sub-provinces: Wabash-Ohio Bottomlands, Green River-Southern Wabash Lowlands, and Caseyville Hills. Of these three sub-provinces, the study area transects only the Wabash-Ohio Bottomlands and the Green River-Southern Wabash Lowlands (*ftp://ftp.epa.gov/wed/ecoregions/ky/ky_eco_lg.pdf*).

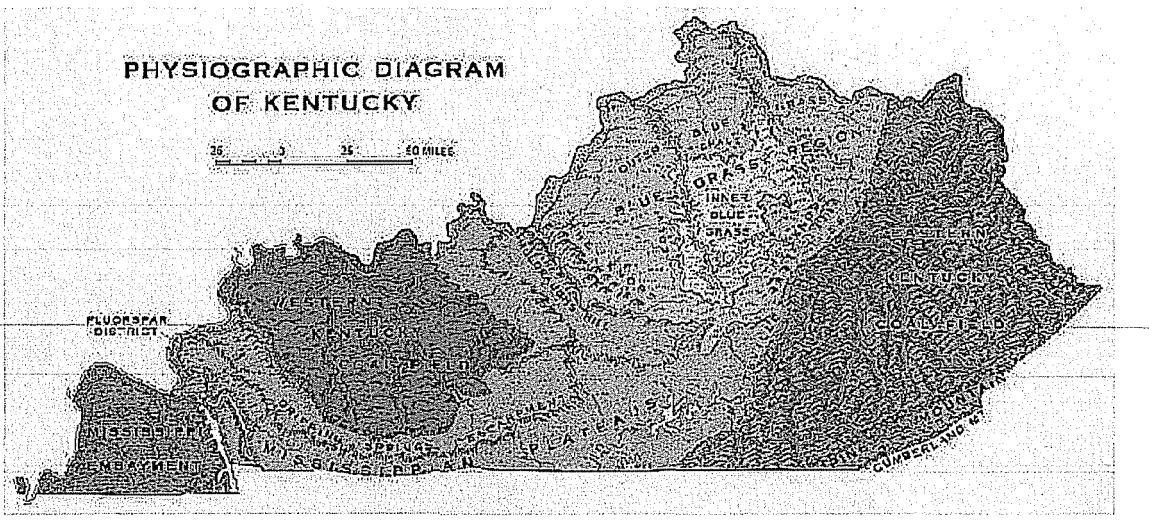
FIGURE 2: ECOREGIONS OF KENTUCKY



Ecoregions of Kentucky (ftp://ftp.epa.gov/wed/ecoregions/ky/ky_eco_lg.pdf)

The physiographic description of the study area corresponds to the Western Kentucky Coalfield, and is described thusly: "The Western Kentucky Coal Field is smaller than its eastern counterpart. It comprises the southern edge of a larger geologic feature called the Illinois or Eastern Interior Basin, which includes the coal fields in Indiana and Illinois. As in eastern Kentucky, the border of the Western Kentucky Coal Field and the Mississippi Plateau is commonly marked by an escarpment because thick Pennsylvanian-age sandstones are resistant to erosion. However, because this coal field is not adjacent to the Appalachian Mountains, and the sandstones are less continuous, the escarpment is not as dramatic as along the Cumberland Escarpment of the Eastern Kentucky Coal Field (*http://www.uky.edu/KGS/geoky/regionwestern.htm*)."

FIGURE 3: PHYSIOGRAPHIC MAP OF KENTUCKY



http://www.uky.edu/KGS/geoky/regionwestern.htm

Land Use/Land Cover

The project study area consists primarily of Row Crops (agriculture) at approximately 69% of the total area. Forested Land comprises the second highest percentage of total area, as it makes up 14% of the total area. Residential Areas account for 5%, while Water accounts for 5%. The remaining 7% is split between the remaining Land Use / Land Cover types: Airport, Commercial/Industrial, Fruit Orchard, Institutional, Open Land, Planted Pine / Silviculture, Recreational, Transportation, and Utility ROW. The Land Use / Land Cover are detailed in Table 1 (Page 11) and Figure 4 (Page 12).

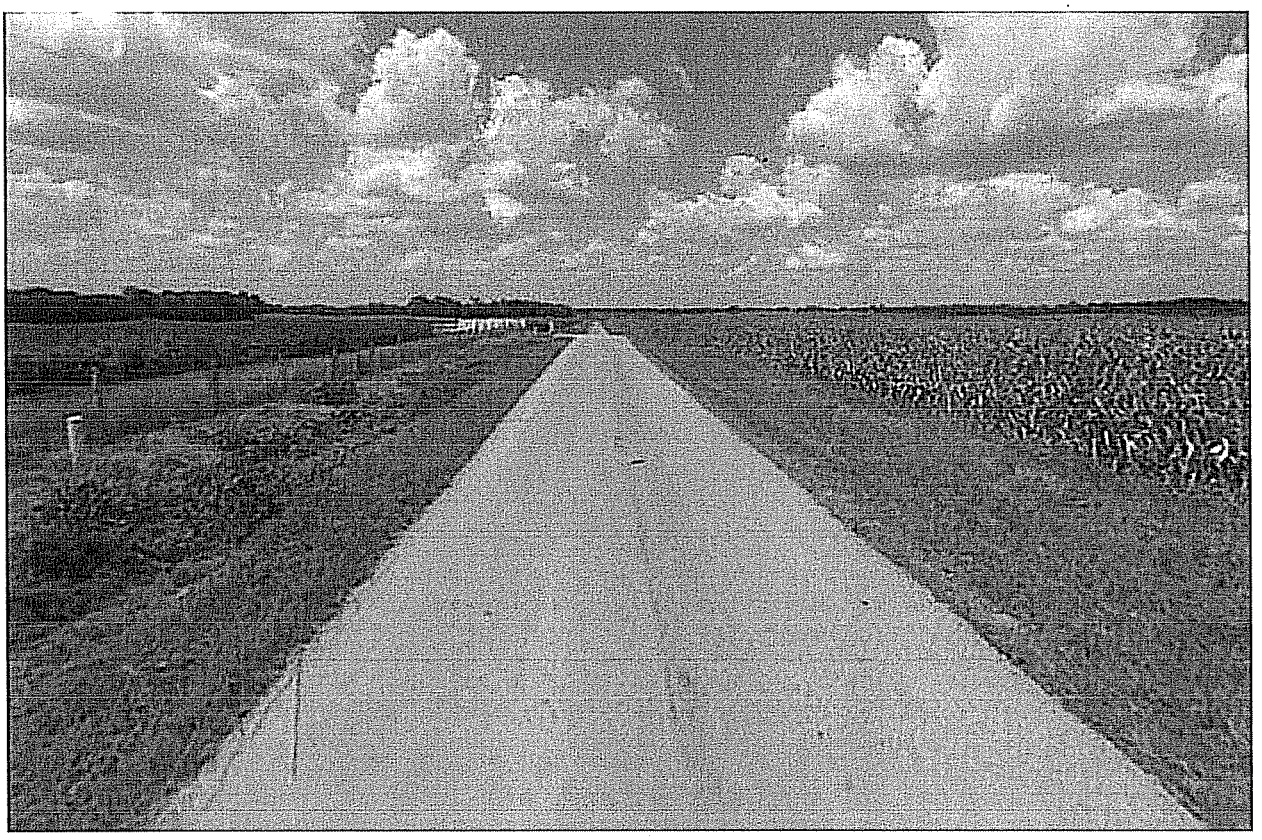


PHOTO: Cropland Within the Study Area (Google Street View)

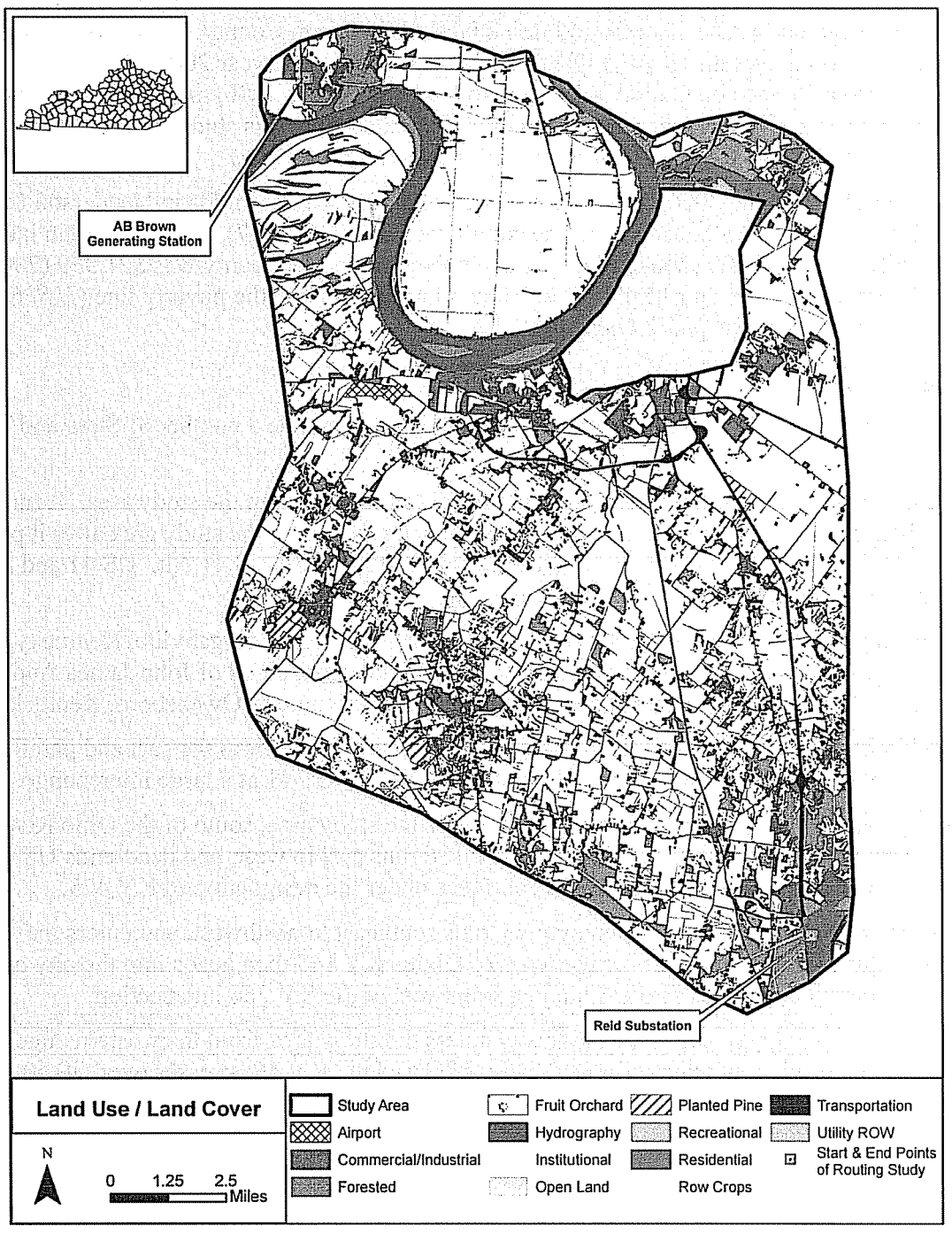
The forested areas occur mostly along streams and wetland areas. The wetland areas are persistent throughout the study area, but are concentrated in oxbows on the Kentucky side of the Ohio River.

TABLE 1: LAND USE/LAND COVER OF STUDY AREA

Land Cover Type	Total Acres	Percent of Area
Airport	237.40	0.18%
Commercial/Industrial	2914.55	2.19%
Forested	18867.49	14.19%
Fruit Orchard	36.28	0.03%
Water	6439.53	4.84%
Institutional	162.85	0.12%
Open Land	2599.55	1.95%
Planted Pine / Silviculture	711.29	0.53%
Recreational	71.89	0.05%
Residential	6669.56	5.02%
Row Crops	91160.51	68.55%
Transportation	2051.35	1.54%
Utility ROW	1061.87	0.80%

PHOTO: Cropland Within the Study Area (Google Street View)

FIGURE 4: LAND USE / LAND COVER CLASSIFICATION



Socioeconomics

In the State of Kentucky, population growth from 2000 to 2008 was 5.63 %, while the national average during the same period was 8.04%. Henderson County, Kentucky, experienced an estimated population growth of 1.4% from the year 2000 to the year 2008. There were 44,825 people living in Henderson County according to the U.S. Census 2000, though slightly over half reside in the city of Henderson, much of which is excluded from this study for the reasons noted above on Page 3. *(U.S. Census Bureau State and County Quick Facts)*

According to the 2000 Census data, there were 12,141 households in Henderson County. The median income for a household in the county was $38,096 (2007), and the median income for a family was $49,2700 (2007). The per capita income for the county was $21,539 (2007). About 10.3% of families and 12.4% of the population were below the poverty line (*U.S. Census Bureau State and County Quick Facts 2000 data).*

Transportation

Significant transportation features in the study area include a number of State and US Highways:

US Highway 41 – This highway runs roughly north to south through the study area. It runs from Evansville, Indiana, and Interstate 164 in the north and comes into the study area after it passes over the Ohio River. It enters the city of Henderson and spurs off US 41 Alt. US 41 and its alternate continue south, gradually diverging.

US Highway 60 – This highway runs southeast to northwest from Morganville, Kentucky, through Corydon and into the city of Henderson. In Henderson, south of John James Audubon State Park, US 60 bends due east and exits the study area en route to Owensboro, Kentucky.

Kentucky State Highway 54 – This highway enters the study area from the east and parallels US 60 to the south. South of Henderson, KY 54 dead-ends into US 41 at a large interchange.

Kentucky State Highway 136 – This highway enters the study area, south of the Ohio River, from the west and the town of Smith Mills. KY 136 runs east to west, and dead-ends US 41 south of the city of Henderson. The road continues under the designation of KY 425.

Kentucky State Highway 145 – This highway runs southeast to northwest, and enters the southern edge of the study area near the town of Dixie. KY 145 then heads into the city of Corydon where it dead-ends into US 60, just southwest of the KY 266 intersection.

Kentucky State Highway 266 – This highway enters the study area from the western edge of the study area and heads southeast towards the city of Corydon. KY 266 crosses over US 60 just north of Corydon and continues southeast to the town of Rock Springs, where it dead-ends into US 41 Alt.

Kentucky State Highway 351 – This highway runs east to west, paralleling US 60 to the south along the right half of the study area. From the town of Zion, KY 351 passes through the town of Graham Hill and enters the city of Henderson where it dead-ends at US 41 just north of the junction with US 41 Alt.

Kentucky State Highway 416 – This highway runs east to west across the southern portion of the study area. It enters from the east and the town of Niagara, crossing over US 41. KY 416 continues to head west into the town of Tunnel Hill, where it dead-ends at US 41 Alt.

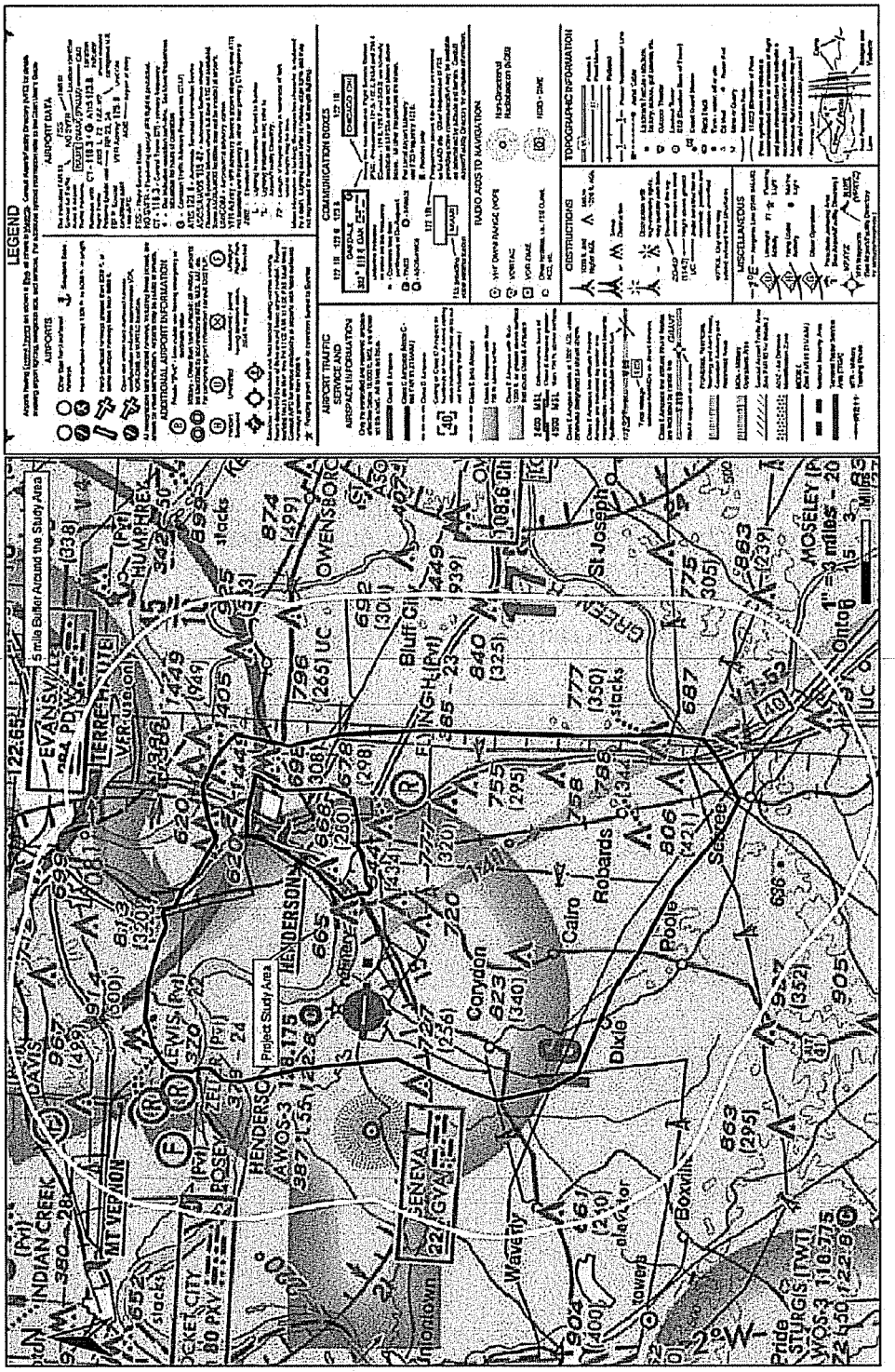
Kentucky State Highway 425 – This highway functions as a bypass of the city of Henderson, connecting US 60 at its western terminus at the intersection of US 60 and KY 136, to Pennyrile Parkway at its eastern terminus.

A number of secondary routes exist throughout the study area and connect many of the cross-road communities. Pennyrile Parkway is a four-lane divided highway with no federal or state designation. Pennyrile Pkwy runs north to south through the study area, beginning in Henderson at the junction of US 41, and runs south out of the study area. Pennyrile Pkwy roughly parallels US 41 until the two eventually intersect again near the town of Madisonville, Kentucky.

Within a five mile radius of the study area, and within the study area proper, the Henderson City-County Airport is the only air travel facility (See Figure 5). The airport has one 5,500' runway with full parallel taxiway, oriented in an east to west direction (*www.hendersonkyairport.com).* Henderson City-County Airport is found south of the Ohio River and southwest of the city of Henderson. During the Alternate Route Analysis portion of the project, it was learned that the airport is planning an expansion of its facilities (See Fig 11 on Page 32), and that expansion was considered in this study.

PHOTO: Henderson City-County Airport (www.hendersonkyairport.com)

FIGURE 5: THE FEDERAL AVIATION ADMINISTRATION (FAA) MAP



Water Resources

The study area is 4.84% open water, totaling approximately 6,440 acres. This is predominantly the Ohio River, with the area included in the study area approximately 5,564 acres in size, or 86% of all open water in the study area. A water body near the AB Brown Power Plant is approximately 113 acres in size, and divided by earth dam.

Numerous perennial and intermittent streams are found in the study area. Wetlands are persistent throughout the study area, but are primarily found in oxbows of the Ohio river on the Kentucky side. A list of all the named water bodies and streams can be found below in Table 2 (*USGS Blueline Stream Database).*

TABLE 2: WATER RESOURCES WITHIN STUDY AREA

Major Water Features	
Still Water	**Moving Water**
Big Pond	Barrett Ditch
Big Swan Pond Slough	Bayou Creek
Bushy Slough	Beaverdam Creek
Cypress Slough	Canoe Creek
Deep Slough	Camp Duesner Ditch
Little Swan Pond Slough	Cypress Dale Ditch
Little Cypress Slough	East Fork Canoe Creek
Muddy Slough	Grane Creek
Sandy Slough	Green River
Sellers Ditch	Goose Pond Ditch
Servel Lake	Groves Creek
Slim Pond Slough	North Fork Beaverdam Creek
Sportsman Lake	North Fork Canoe Creek
William Hamilton Lake	Ohio River
Woodland Lake	Pond Creek
	Rock Creek
	West Fork Canoe Creek
	Weymouth Branch
	Wilson Creek

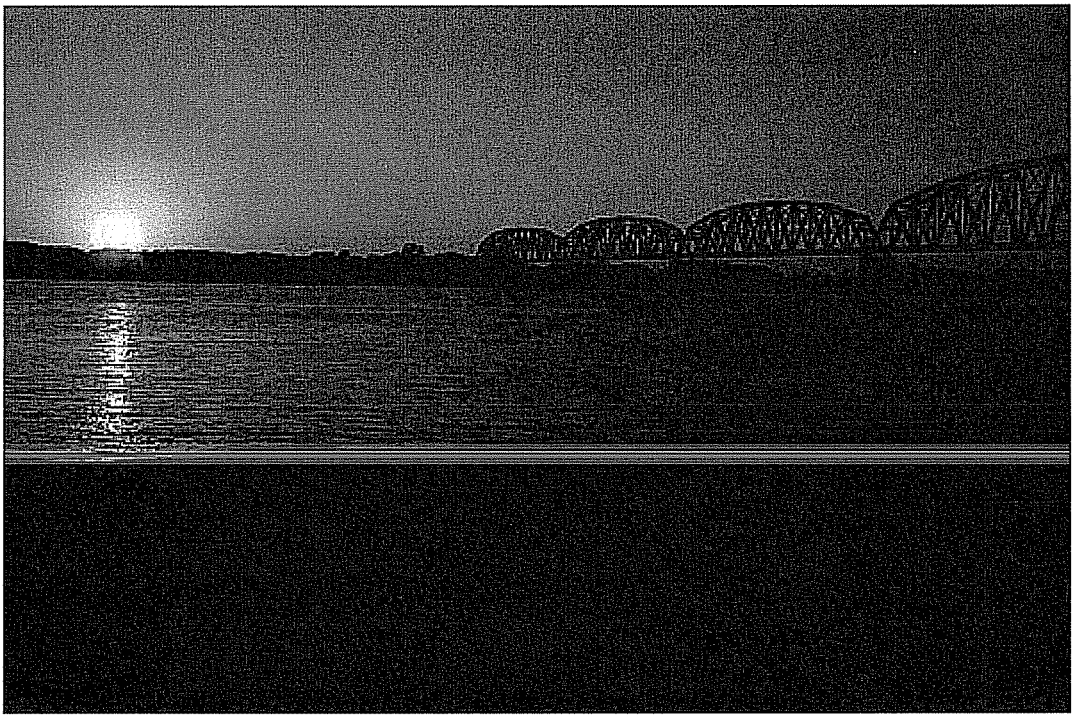


PHOTO: CSX Railroad Bridge over the Ohio River in Henderson, Kentucky (www.flickr.com)

Recreational Resources

Recreational resources in the study area include several parks and two nature preserves. The John James Audubon State Park and the John James Audubon Nature Preserve are adjacent to one another and are just northeast of the city of Henderson. The combined site is over 700 acres and contains the John James Audubon Museum. Also in the study area is the Canoe Creek Nature Preserve, found adjacent to the location of the mouth of Canoe Creek. Canoe Creek is home to an endangered species of sun flower, the Tennessee Leafcup. The Canoe Creek Nature Preserve is owned by The Nature Conservancy (http://www.nature.org/). More information about these State Nature Preserves can be found at http://www.naturepreserves.ky.gov/. In addition to the State Park and Nature Preserves, several small city/county parks can be found within the study area. All parks are excluded from analysis by the model (See Table 3 on Page 19).

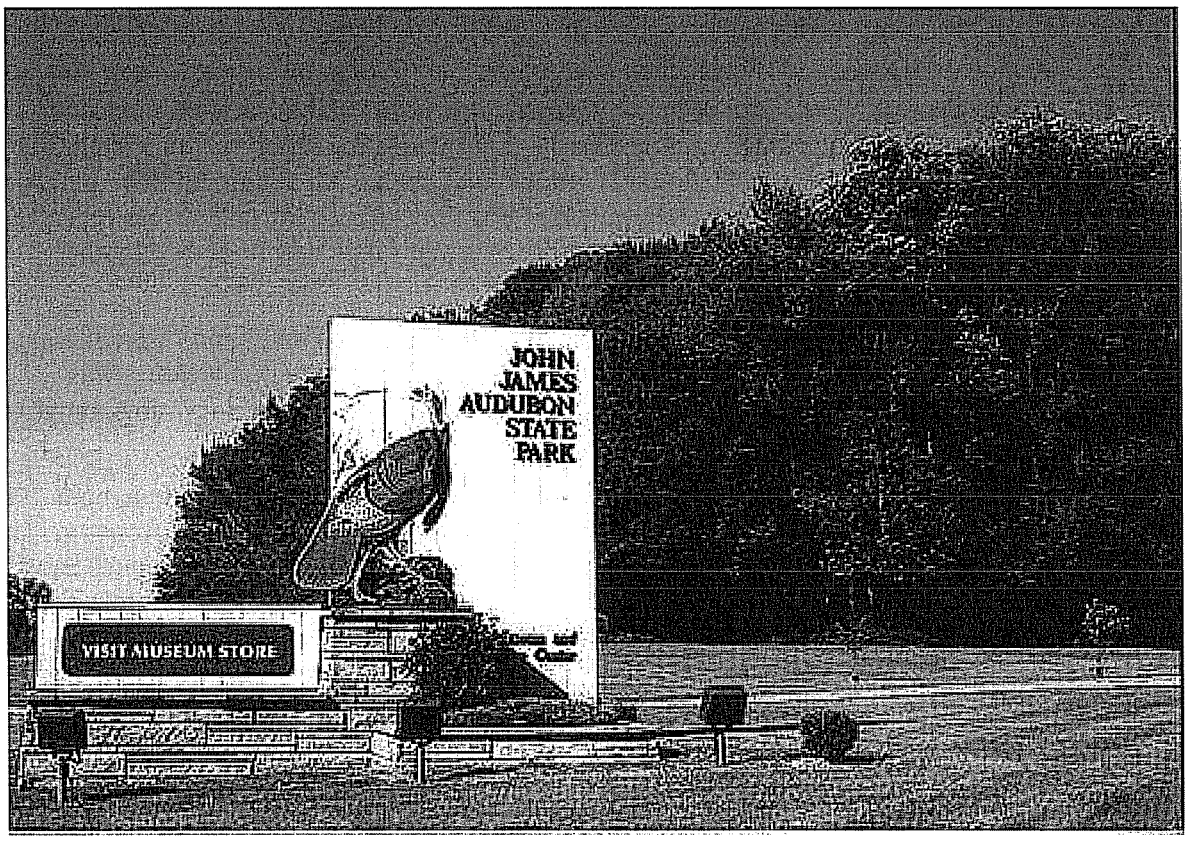


PHOTO: Entrance to the John James Audubon State Park (www.flickr.com)

TABLE 3: MAJOR RECREATION AREAS WITHIN STUDY AREA

Park	Website
John James Audubon State Park	http://parks.ky.gov/findparks/recparks/au/
John James Audubon Nature Preserve	http://www.naturepreserves.ky.gov/stewardship/jjaudubon.html
Canoe Creek Nature Preserve	http://www.nature.org/wherewework/northamerica/states/kentucky/preserves/art10862.html

Source: ESRI Data and Maps

Cultural Resources

The National Register of Historic Places (NRHP) lists 10 historic structures and 2 historic properties within the study area. Additionally, there are 4 historic structures within the study area which are eligible for the NRHP. Table 4 on Page 20 details the NRHP listed and eligible historic structures in the study area. It should be noted that there are 88 additional known historic structures whose NRHP eligibility is undetermined at this time. These locations were modeled as eligible in the event that they become so at a future date. This data was furnished by the Kentucky Heritage Council in May 2009.

The two NRHP listed properties, "John James Audubon State Park," and "Barrett-Keach House (The Elms)," are both located in Henderson County. The state park's location was described previously; the Barrett-Keach house is located in the center of the study area, on US 60 to the west of the KY 425 intersection.

The National Register recognizes 2 Archaeological Sites within the study area, both European-American cemeteries. Of these, one site is listed as a National Register property. The other site is eligible for the National Register at this time. Additionally, 198 known sites have not been assessed for National Register status. These locations were modeled as eligible in the event that they become eligible at a future date. Table 5 on Page 20 details the Archaeology Sites in the study area. This data was furnished by the Kentucky Office of State Archaeology in May 2009.

TABLE 4: NRHP LISTED & ELIGIBLE HISTORIC STRUCTURES

Historical Name	Status
Smokehouse at Barrett-Keach House	NRHP Listed Historic Site
Kitchen at Barrett-Keach House	NRHP Listed Historic Site
Equipment Shed at Barrett-Keach Farm	NRHP Listed Historic Site
Chicken House at Barrett -Keach Farm	NRHP Listed Historic Site
Farm Shop at Barrett-Keach Farm	NRHP Listed Historic Site
Barn #1 at Barrett-Keach Farm	NRHP Listed Historic Site
Barn #2 at Barrett-Keach Farm	NRHP Listed Historic Site
Pump Hosue at Barrett-Keach Farm	NRHP Listed Historic Site
Keach Tenant House	NRHP Listed Historic Site
Keach Tenant House	NRHP Listed Historic Site
John James Audubon State Park Memorial Museum	NRHP Listed Property
Barrett-Keach House (The Elms)	NRHP Listed Property
House	NRHP Eligible Site
Lambert House	NRHP Eligible Site
McCormick House (Forest Grove)	NRHP Eligible Site
M E Church South	NRHP Eligible Site

TABLE 5: ARCHAEOLOGICAL SITES

Status	Historical Date	Site Type
Eligible for National Register	1900 - 2000	Cemetery
NRHP Listed Property	1801 - 1900	Cemetery

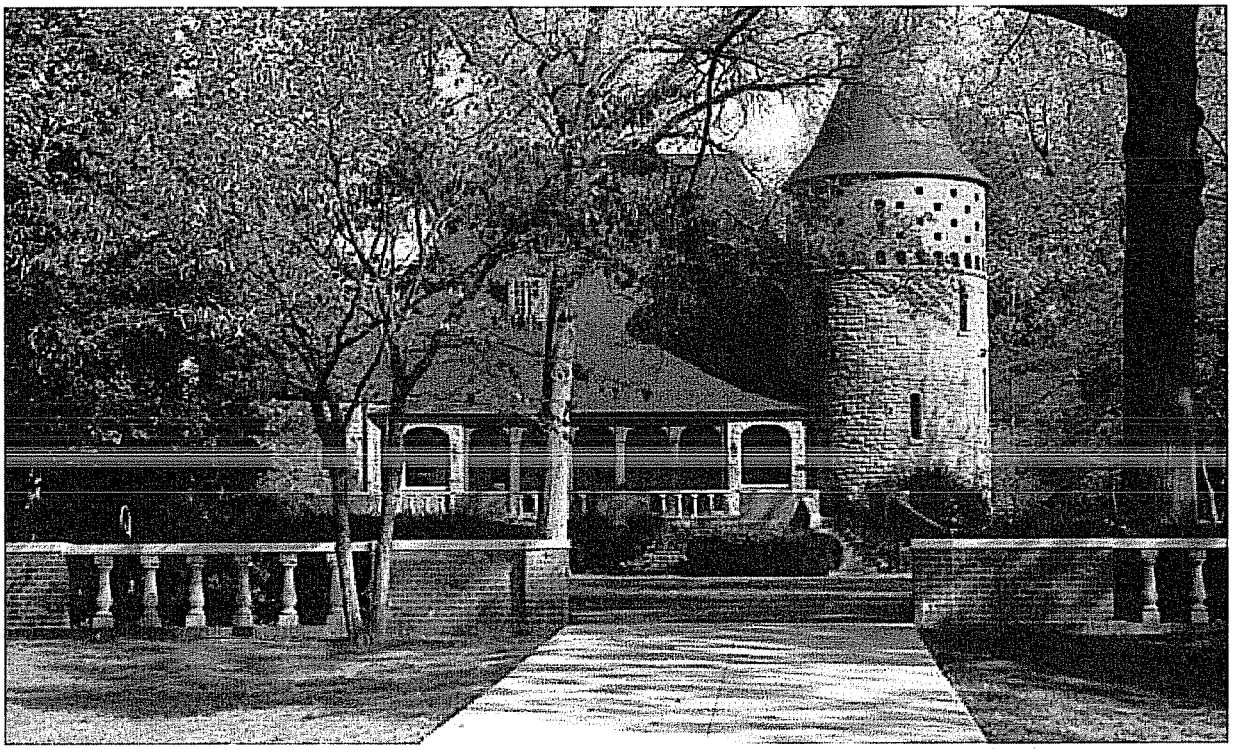


PHOTO: John James Audubon Museum (www.flickr.com)

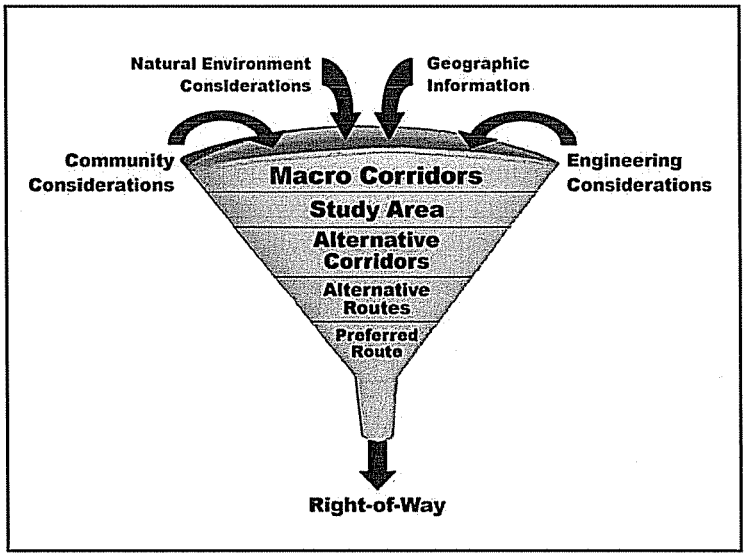
Part IV: Overview of Suitability Analysis

1. EPRI-GTC Methodology

Vectren incorporated a computer-based methodology that was developed by the Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC). The EPRI-GTC methodology is used as a tool to evaluate the suitability of individual land tracts, or "grid cells," for locating transmission facilities. Based on analysis of a large area between and in the vicinity of the endpoints for the proposed transmission line, a study area was developed. Then, using more-detailed information for the grid cells within the study area, Alternate Corridors were developed for further evaluation.

Among its advantages, the EPRI-GTC methodology is objective, comprehensive, consistent, and defensible. Employing increasingly detailed data, it allows the utility to take into consideration vast amounts of information and to quantitatively consider stakeholder input in developing Alternative Corridors by using the Siting Model discussed in the next section. Figure 6 below represents the EPRI-GTC methodology.

FIGURE 6: EPRI-GTC SITING METHODOLOGY



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

- **Built Environment,** which is concerned with minimizing the impact on people, places ,and cultural resources;
- **Natural Environment,** which is concerned with protecting water resources, plants and animals;
- **Engineering Environment,** which is concerned with maximizing co-location and considering physical constraints; and
- **Simple Average,** which is concerned with weighing each environment equally.

Features within each of these environments are identified and evaluated to map the suitability of grid cells in each environment and develop Alternative Corridors for each. Simple Average Alternative Corridors are developed to consider all three environments equally. These processes are discussed in detail in the following sections.

2. The Siting Model

A siting model was developed using data collected from stakeholders during workshops conducted in February, 2006, in Lexington, Kentucky. The workshops were conducted and the model developed and tested by a project team of independent experts. Stakeholders at the workshops represented a range of interests, such as environmental concerns, historic preservation, homeowners associations, agricultural groups and government agencies, as well as personnel and representatives of utility companies. The resulting model (see Figure 7 on Page 25) includes data layers, features, layer weights and suitability values that are used for siting transmission lines. More information concerning these workshops is available in the EPRI-GTC Project Report (published by EPRI in 2006) and the Kentucky Transmission Line Siting Methodology (published by EPRI in 2007). Some minor alterations were made to this model for site specific and data availability reasons. The alterations are discussed in the following chapters.

Based on the interest he or she represented, each stakeholder was assigned to a breakout group for each of the three environments—Built, Natural or Engineering. Guided by an independent expert from the project team, each of these groups developed a set of data layers (in green on Figure 7) with component features (in yellow), as well as avoidance areas (in red). For example, one of the data layers in the Natural Environment is floodplains, which has two component features: background and 100-year floodplain.

For each feature, the stakeholders then used consensus-building techniques to develop a relative suitability value. 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 (2006) 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.

After assigning suitability values to features, stakeholders then weighted each data layer based on their view of its relative importance in the siting process. This was accomplished by conducting pair-wise comparisons. The result is a percentage weighting for each data layer within each environment, totaling 100 percent within each environment.

The EPRI-GTC methodology recognizes it can be difficult to locate overhead transmission lines on or around some features, because of physical constraints or permitting delays, for example,. 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 stakeholder groups and are listed in red in Figure 7. 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.

A final note—in each data layer where "background" appears, this feature represents areas that are not the location of any of the other features in that layer. For example, in the Floodplain data layer of the Natural Environment, all areas that are not within a 100-year floodplain are considered background.

FIGURE 7: SITING MODEL

Co-location / Engineering	
Linear Infrastructure	**86.2%**
Parallel Existing Transmission Lines	1
Rebuild Existing Transmission Lines (good)	2.2
No Linear Infrastructure	4.4
Parallel Interstates ROW	4.7
Parallel Roads ROW	5.4
Parallel Pipelines	5.6
Future DOT Plans	5.6
Parallel Railway ROW	6.1
Road ROW	7.2
Rebuild Existing Transmission Lines (bad)	8.6
Scenic Highways ROW	9
Slope	**13.8%**
Slope 0-15%	1
Slope 15-30%	4
Slope 30-40%	6.7
Slope >40%	9
AVOIDANCE AREAS	
Non-Spannable Waterbodies	
Mines and Quarries (Active)	
Buildings	
Airports	
Military Facilities	
Center Pivot Irrigation	

Natural Environment	
Floodplain	**4.6%**
Outside of Floodplain	1
100 Year Floodplain	9
Streams/Wetlands	**29.2%**
No Streams/Wetlands	1
Streams < 5cfs+ Regulatory Buffer	6.2
Rivers/Streams > 5cfs+ Regulatory Buffer	7.1
Wetlands + 30' Buffer	8.7
Outstanding State Resource Waters	9
Public Lands	**17.7%**
No Public Lands	1
WMA - Not State Owned	5.1
USFS (proclamation area)	6.2
Other Conservation Land	7.8
USFS (actually owned)	9
State Owned Conservation Land	9
Land Cover	**19.8%**
Developed Land	1
Agriculture	4.6
Forests	9
Wildlife Habitat	**23.7%**
No Species of Concern Habitat	1
Species of Concern Habitat	9
AVOIDANCE AREAS	
EPA Superfund Sites	
State and National Parks	
USFS Wilderness Area	
Wild/Scenic Rivers	
Wildlife Refuge	
State Nature Preserves	
Designated Critical Habitat	

Built Environment	
Proximity to Buildings	**16.8%**
>1200'	1
900'-1200'	3.4
600'-900'	5.7
300'-600'	8
0-300'	9
Building Density	**8.4%**
0 - 0.05 Buildings/Acre	1
0.05 - 0.2 Buildings/Acre	3
0.2 - 1 Buildings/Acre	5.6
1 - 4 Buildings/Acre	8.5
> 4 Buildings/Acre	9
Proposed Development	**3.9%**
No Proposed Development	1
Proposed Development	9
Spannable Lakes and Ponds	**4.0%**
Dry Land	1
Spannable Lakes and Ponds	9
Land Use	**35.9%**
Commercial/Industrial	1
Agriculture (crops)	3.5
Agriculture (other livestock)	4.6
Silviculture	6
Other (forest)	6.7
Equine Agri - Tourism	8
Residential	9
Proximity to Eligible Historic and Archeological Sites	**31.0%**
>1200'	1
900'-1200'	4.6
600'-900'	7.9
0-300'	8.6
300'-600'	9
AVOIDANCE AREAS	
Listed Archaeology Sites & Dist.	
Listed NRHP Districts and Buildings	
City and County Parks	
Day Care Parcels	
Cemetery Parcel s	
School Parcels (K-12)	
Church Parcels	

Data layers (green cells): Percentages represent relative importance, or weighting, of each layer in the siting process, as determined by stakeholders.

Features (yellow cells): Numbers between 1 and 9 represent degrees of suitability, as determined by stakeholders, with 1 being most suitable for locating a transmission line and 9 being least suitable for locating a line.

Avoidance Areas (red cells): Features to avoid siting transmission lines, if possible, as determined by stakeholders.

For more detailed information on datasets used in the model, including data sources, please see Appendix C of the EPRI-GTC Project Report (2006). This report was used as a guideline for this project.

3. Suitability Mapping

The methodology begins with two endpoints as the basis for creating transmission line corridors. A large area in the vicinity of and between the endpoints is divided into 15' square grid cells.

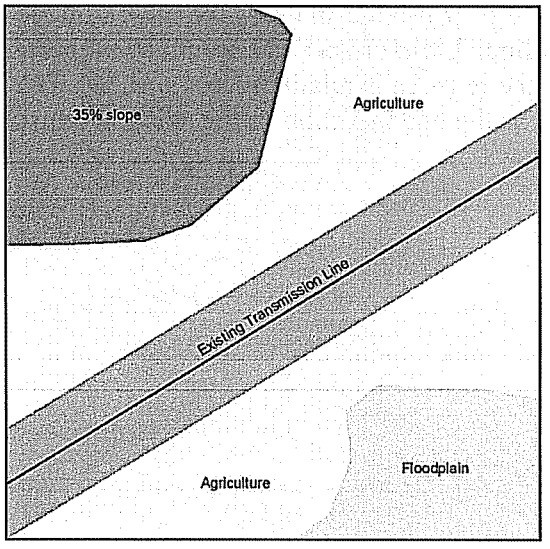
Data from aerial photography, geographic information systems, publicly available datasets and other sources are used to identify features within each grid cell. Based on these features and the values and data layer weights determined in the Kentucky Siting Model, the methodology then assigns a suitability value to each cell. More-detailed data are employed by the methodology as corridor locations are narrowed down more precisely.

Because cells deemed to have lower suitability for locating a transmission line are assigned higher values, the methodology employs an algorithm that seeks to minimize the sum of values as it works its way from one endpoint to the other. The resulting corridor is referred to as the "least-cost path." In this sense, "least cost" refers not to economic costs, but to the fact that low values indicate greater suitability for locating transmission facilities.

Figures 8-10 demonstrate the development of a sample "least-cost path" using information from a hypothetical situation.

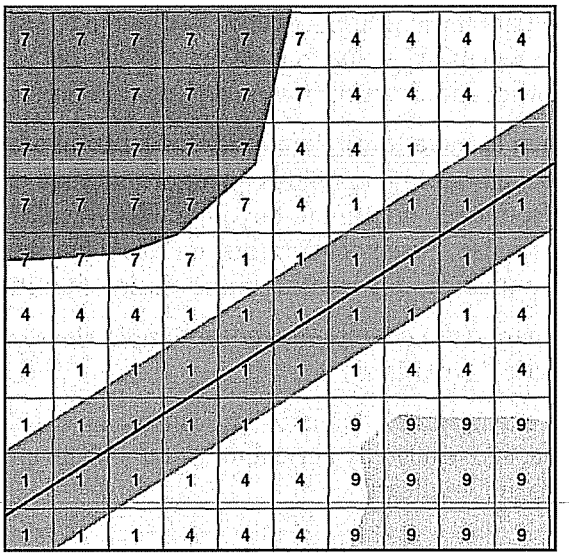
Figure 8 displays an example area that has four features: an existing transmission line through the center of the area, surrounded by agricultural land with an area of steep slopes to the northwest and a floodplain to the southeast.

FIGURE 8: FEATURE MAP OF EXAMPLE AREA



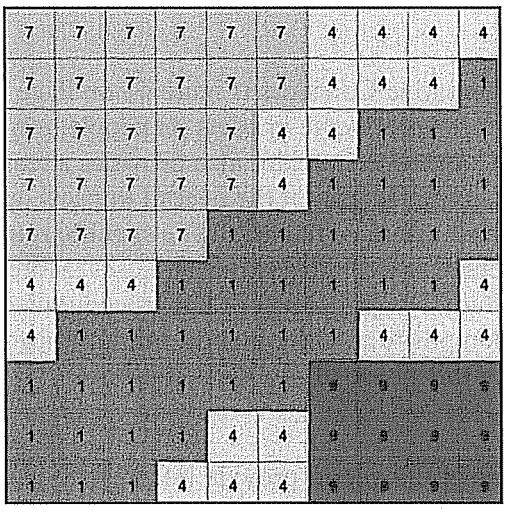
In Figure 9, grid cells are overlain and assigned suitability values based on the features (The suitability values used in this example do not necessarily correspond to the Siting Model.). The area of the existing line is considered highly suitable. Agricultural land is moderately suitable. Steep slopes and floodplains have low suitability values.

FIGURE 9: GRID CELL MAP OF EXAMPLE AREA WITH SUITABILITY VALUES



Finally, Figure 10 (Page 28) shows in green the most suitable corridor through the area for locating a transmission line. Light green areas are moderately suitable. The orange area has a low suitability value and the red area is relatively less suitable. The most suitable corridor from east to west in this example is the one that follows the existing transmission line.

FIGURE 10: SUITABILITY MAP OF EXAMPLE AREA



4. Developing Alternative Corridors

Beginning with a large area around and between the endpoints, the EPRI-GTC methodology analyzes land tracts, or "grid cells," within that area to develop Alternative Corridors. This analysis is based on satellite and GIS information that is readily available from public sources as well as data delineated from aerial photo interpretation. The data is then used to develop the grid cells. The numbers that are applied to the grid cells are taken from the siting model. The corridors developed from the model are the top 3 percent—that is, the most suitable 3 percent—of possible corridors within the study area.

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

Alternative Corridors are generated for each of the three environments. It should be noted that, when generating Alternative Corridors for each environment, data layers from the other two environments are taken into account. While the target environment is weighted much more heavily (5 times), values and weights from the other environments can affect Alternative Corridors generated for that respective environment. The final step in generating Alternative

Corridors is to equally weigh the three environments and generate a Simple Average Alternative Corridor.

The Composite of Alternative Corridors (Figure 43 on Page 96) depicts the area in which a transmission line should minimize adverse impacts on people, environmentally sensitive areas, and cultural resources. The Composite Corridor also provides a reasonable balance between co-location of the proposed line, minimization of the overall impacts, and construction and maintenance of the line in a cost effective manner. The specific routing of a right-of-way within the Corridor will be implemented to avoid sensitive land uses. Moreover, the alternates inherently examined in the Study by application of the proceduralized EPRI-GTC methodology provides assurance that the composite corridor avoids, minimizes and mitigates adverse environmental impacts during this phase of routing activities.

The following sections of this report provide information about features that were found within the study area based on available information, and about the Alternative Corridors that were generated.

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Part V: Co-Location / Engineering Environment

1. Avoidance Areas

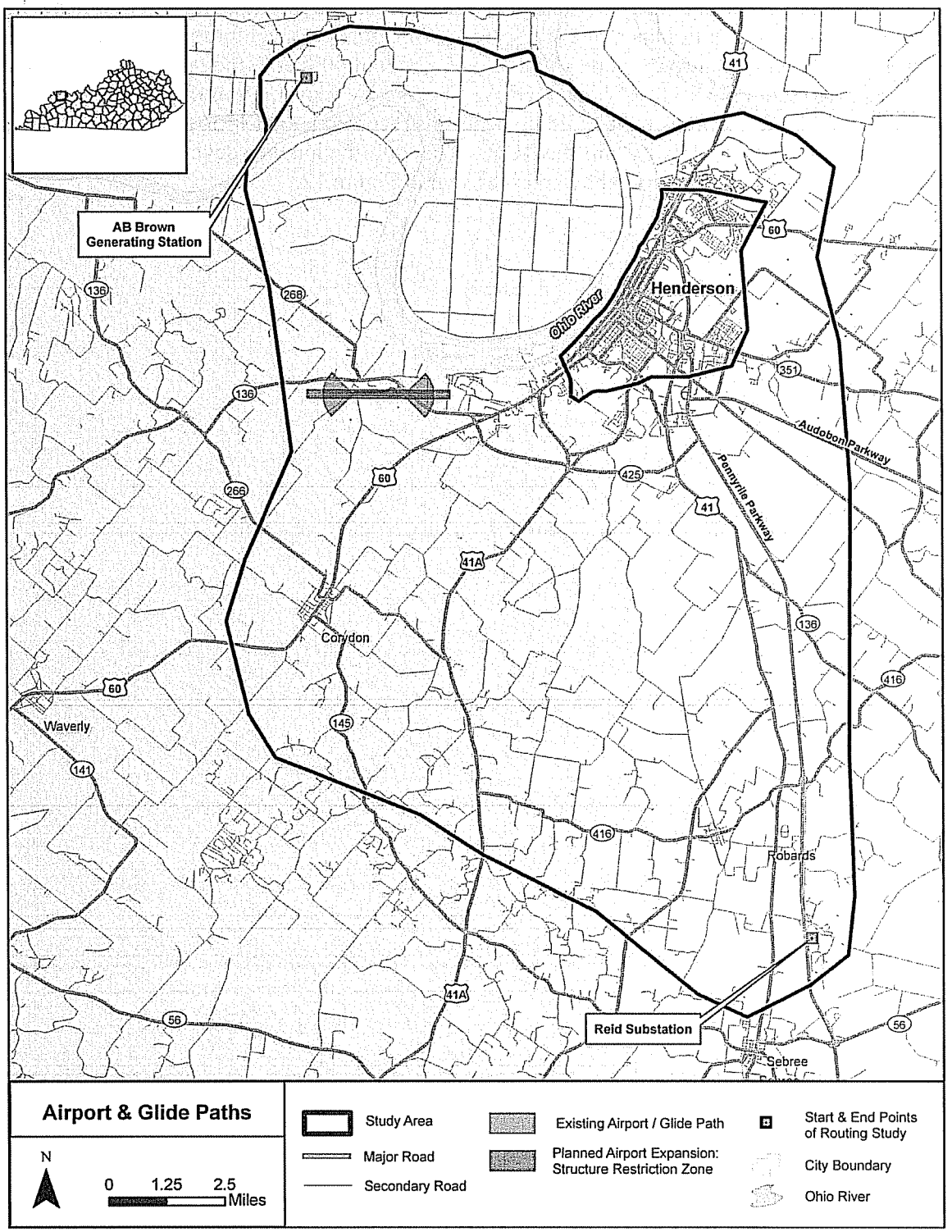
Within the Co-Location / Engineering Environment, there are several avoidance areas. Non-spannable water bodies, mines / active quarries, building centroids / footprints (plus buffer, where appropriate), airports / glide paths, military facilities, and center pivot irrigation fields are the listed avoidance areas within the Co-Location / Engineering Environment. For this project, a portion of the Ohio River was added to avoid multiple crossings of the river.

Within the study area, only airports, buildings, and center pivot irrigation fields were identified. These features were modeled as avoidance areas.

Airports & Glide Paths

As mentioned previously, the only airport in the study area is the Henderson City-County Airport. The airport and the glide paths approaching the runways were designated as avoidance areas. Glide paths were determined by doubling the distance from the end of the runway to the first existing transmission line. In this instance, the transmission line happened to be a 69 kV line. It was deduced that the height of the structures along the 69 kV line would be approximately one half of structures on the 345 kV line, and thus the distance was doubled to accommodate the distance/height ratio typically employed by the FAA. A 45 degree angle was placed on the glide paths, bisected by the centerline of the runway.

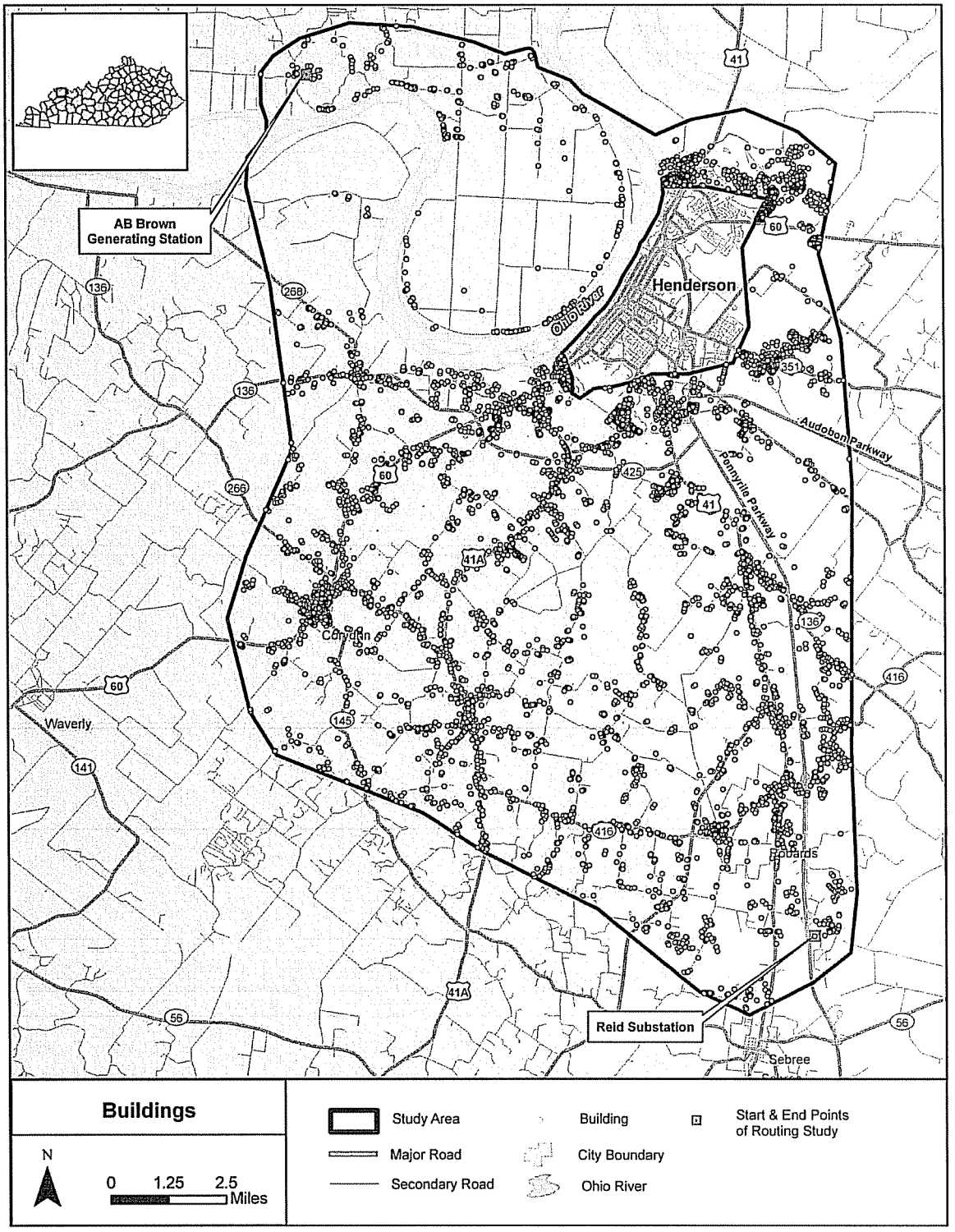
FIGURE 11: AIRPORTS & GLIDE PATHS



Buildings & Building Footprints

Buildings are designated as Avoidance Areas within the Engineering Environment. There are numerous existing buildings in the study area, with notable concentrations around the city of Henderson. Building centroids were buffered by a width of 40 feet to model the building, plus half the transmission line right-of-way (ROW). The 345 kV transmission line will require a 150' right-of-way (ROW), therefore the building centroids received a total 115' foot buffer. Building footprints were buffered only by half the ROW. This information was developed by Photo Science from 2008 aerial photography and is shown in Figure 12.

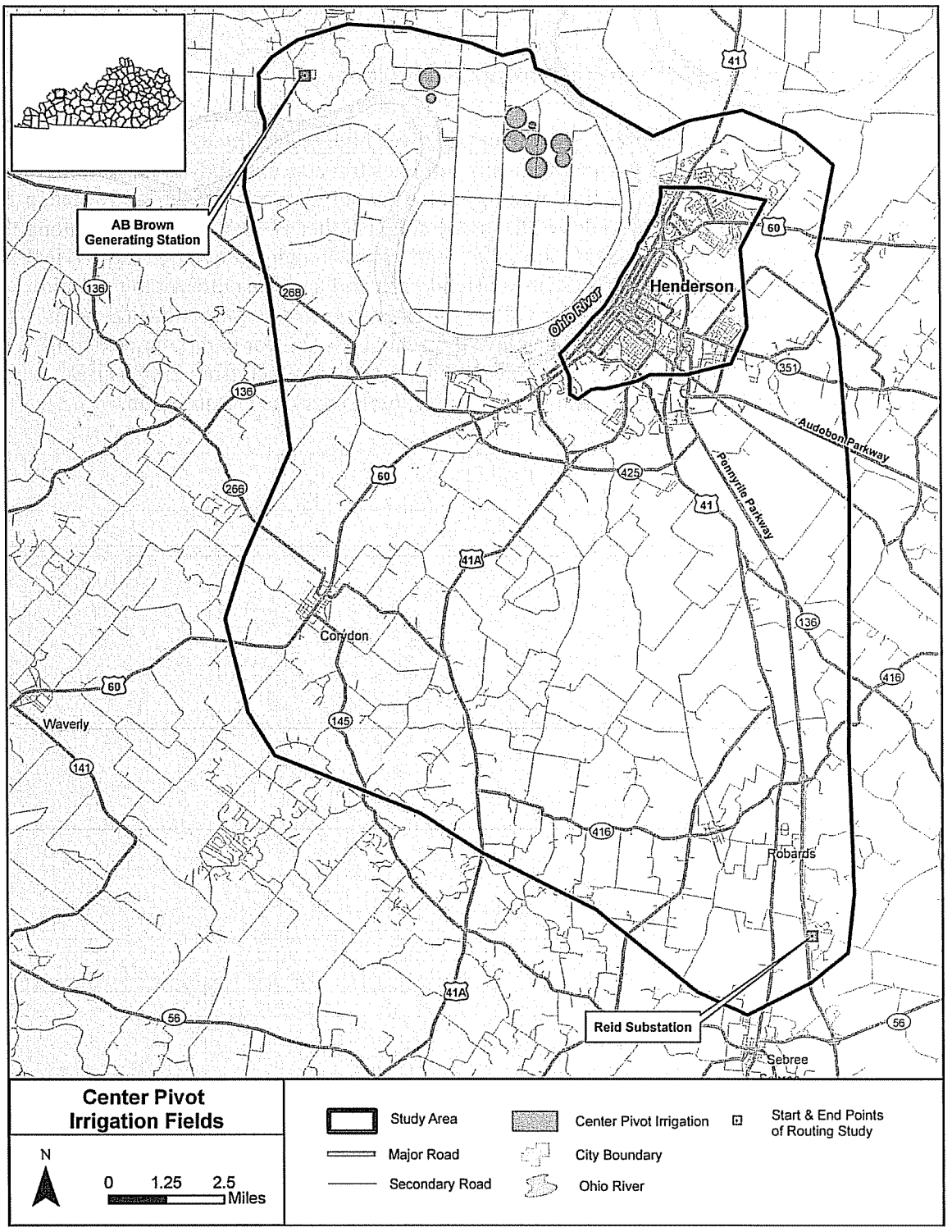
FIGURE 12: BUILDING CENTROIDS



Center Pivot Irrigation Fields

During the interpretation of the aerial photography, 9 center pivot irrigation fields were located. The fields are concentrated in Indiana, in the north-central portion of the study area. This information was developed by Photo Science from 2008 aerial photography and is shown in Figure 13.

FIGURE 13: CENTER PIVOT IRRIGATION FIELDS

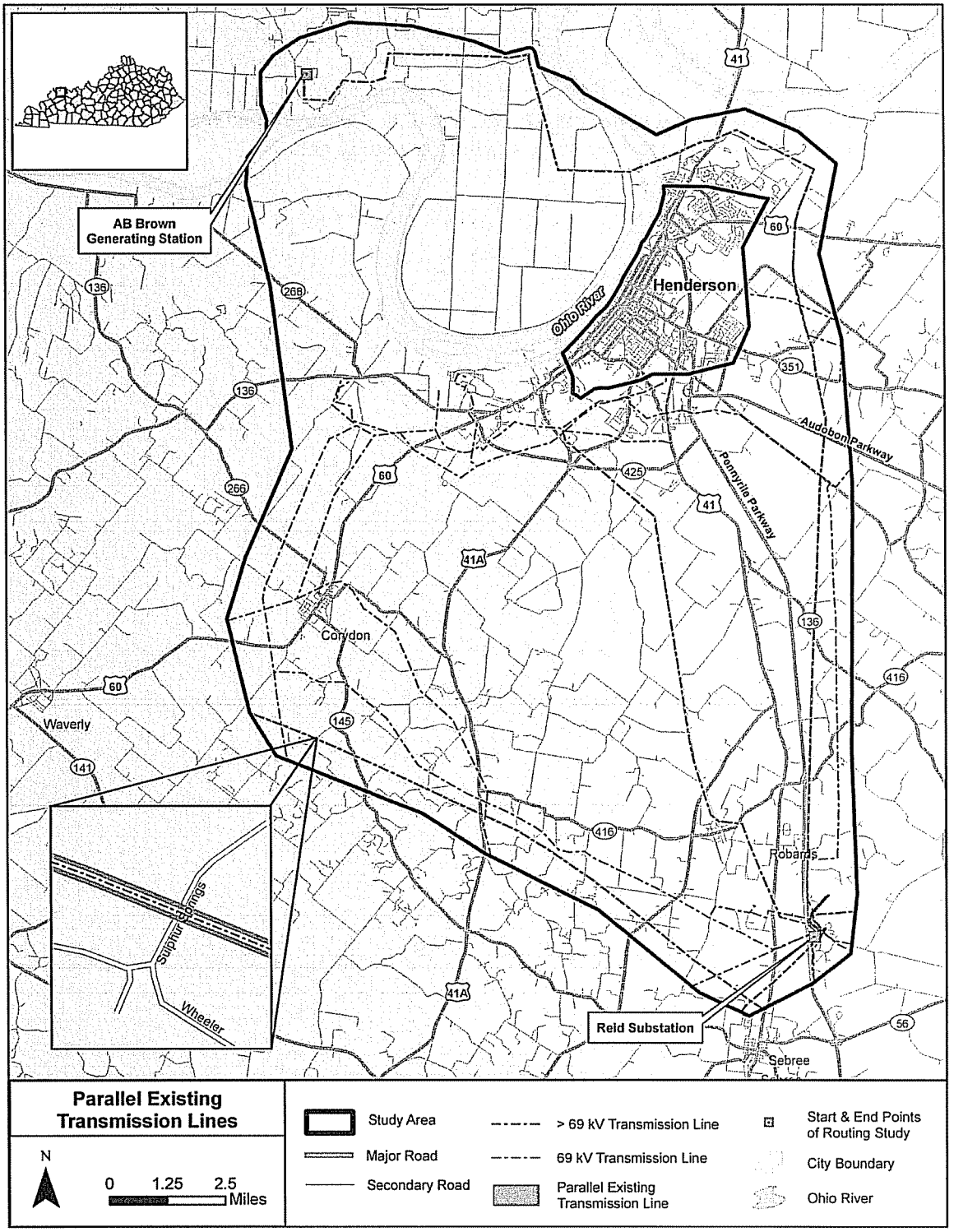


2. Linear Infrastructure Features

High Suitability: Parallel Existing Transmission Lines

In the Engineering Environment, the model gives high suitability to paralleling existing transmission lines. Numerous existing transmission lines traverse the study area. Within the study area, these include a 138 kV line running across the northern edge of the study area, a 161 kV line running along the eastern edge of the study area; another 161 kV line running along the southern edge of the study area, and finally, the Henderson Municipal Power & Light (HMPL) 161 kV line which begins south of the City of Henderson and travels southeast to the Reid substation. Only transmission lines with voltages greater than 69 kV were modeled as on opportunity for co-location. Figure 14 displays the available areas for paralleling existing transmission lines. This information was developed by Photo Science from 2008 aerial photography, Vectren Corporation, and the Kentucky Public Service Commission.

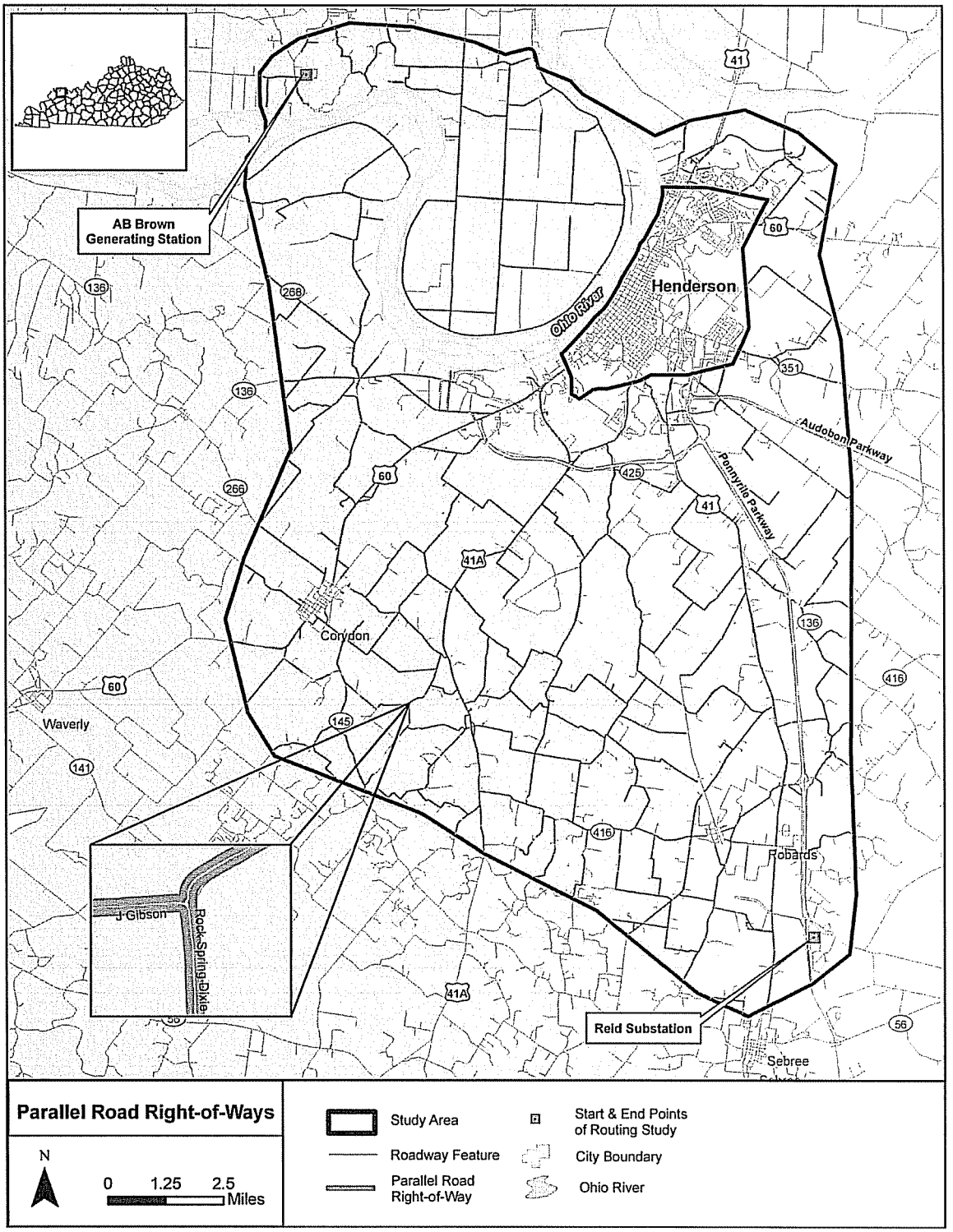
FIGURE 14: PARALLEL EXISTING TRANSMISSION LINES



Moderate Suitability: Parallel Road Right-of-Ways

Paralleling road right-of-ways are given a moderate suitability in the Engineering Environment. The major highways in the study area include US Highways 41, 41 Alt., & 60, and Kentucky Highways 54, 136, 145, 266, 351, 416, & 425. There are also a number of secondary county routes that exist throughout the study area. These highways and secondary roads are modeled and shown in the Figure 15. The data was developed by Photo Science using tax assessor's data from the counties present within the study area.

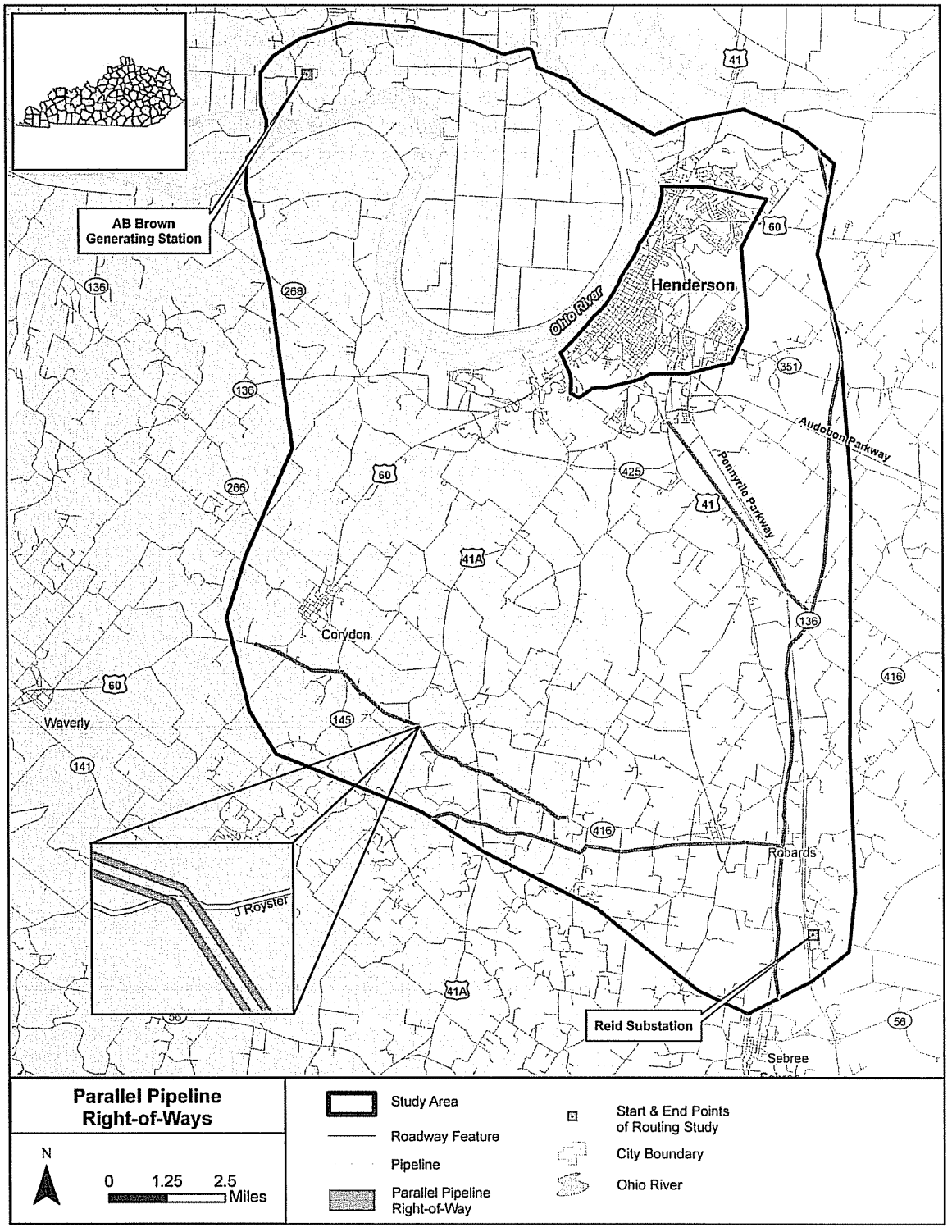
FIGURE 15: PARALLEL ROAD RIGHT-OF-WAYS



Moderate Suitability: Parallel Pipeline Right-of-Ways

Paralleling pipeline right-of-ways are given a moderate suitability right after paralleling road right-of-ways in the Engineering Environment. There are six pipelines that intersect the study area. The pipelines are concentrated in the eastern and southern portions of the study area, none cross into Indiana (See Figure 16). The data was developed by Photo Science using tax assessor's data from the counties present within the study area.

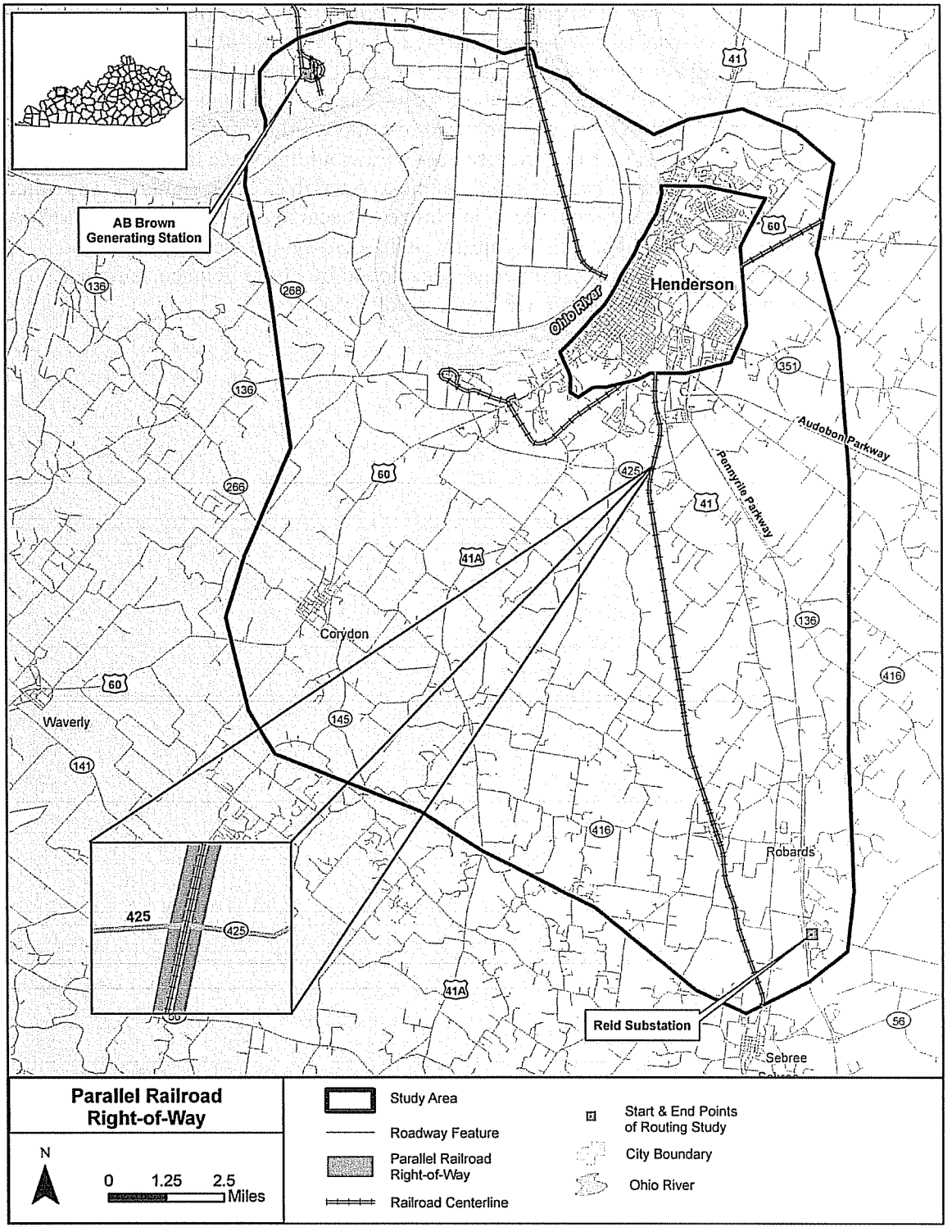
FIGURE 16: PARALLEL PIPELINE RIGHT-OF-WAY



Moderate Suitability: Parallel Railroad Right-of-Way

The Engineering Environment model gives paralleling railroad right-of-ways a moderate suitability right after paralleling pipeline ROW. There are two main railroad lines with ROW in the study area, with a few spur lines that connect to industrial sites and the AB Brown generating station. The railroad centerlines can be found in Figure 17. The data was developed by Photo Science using tax assessor's data from the counties present within the study area.

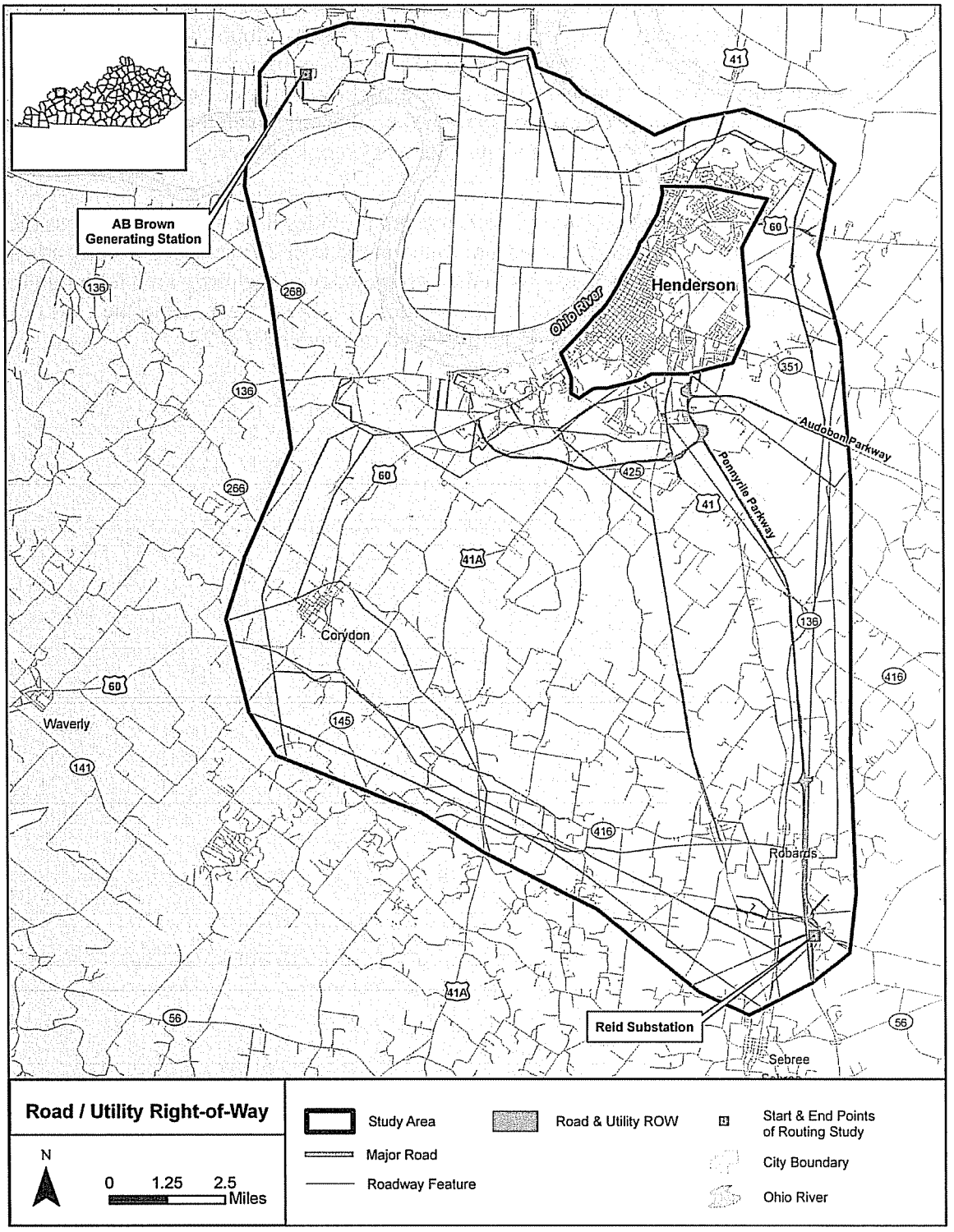
FIGURE 17: PARALLEL RAILROAD ROW



Low Suitability: Road Right-of-Way, Utility Right-of-Way

The Engineering Environment model gives low suitability to locating a new transmission line within a road right-of-way (ROW) or an existing utility (transmission line, gas pipeline, etc.) ROW. In these areas, infrastructure already exists. It could be feasible in some circumstances to rebuild an existing transmission line and use the existing easement and possibly purchase only a minimal amount of additional ROW. Any proposed re-build would require the cooperation and permission of affected utilities, and any proposed re-build would increase the construction and other costs of the project. Vectren has designed its line to overlap existing rights of way where feasible, to reduce the footprint of the project, minimize impacts to property owners, and keep project costs as low as feasible. The existing utility rights-of-way that were modeled as constraints are shown in Figure 18. The data was developed by Photo Science using tax assessor's data from the counties present within the study area.

FIGURE 18: ROAD RIGHT-OF-WAYS / UTILITY RIGHT-OF-WAYS



3. Slope Features

Recognizing the challenges of constructing a transmission line on steep slopes, the Engineering Environment of the Siting Model categorizes slopes. Slopes become less suitable as they become steeper. According to the model, slope from 15 to 30 percent is considered moderate, while slope from 30 to 40 percent is given a slightly higher constraint value. Slopes that are 40 percent and above are considered extreme and they are given the highest constraint value. The source of the slope layer is the United States Geological Survey (USGS) 7.5 minute National Elevation Dataset.

The river basin in which the study area is located provides little to no slope across the extent of the study area. No slope features were found in the over 30% category. Only a few areas were in the 15-30% slope category, with the vast majority of the study area falling in the lowest slope category. It was therefore decided to remove the Slope Layer from the Co-Location / Engineering Submodel. This information is illustrated in Figures 19 & 20.

FIGURE 19: USGS 7.5 MINUTE NATIONAL ELEVATION DATASET (1999)

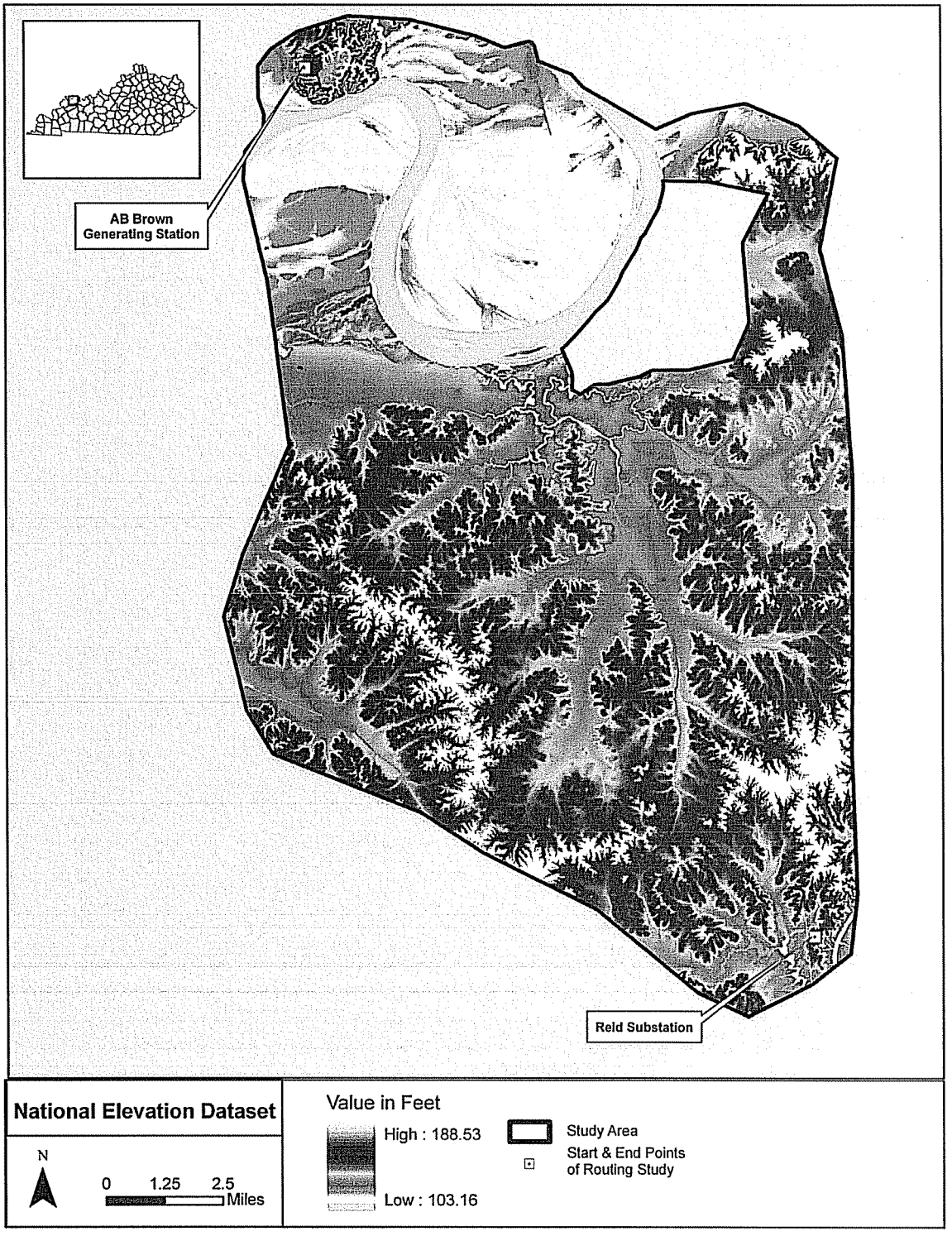
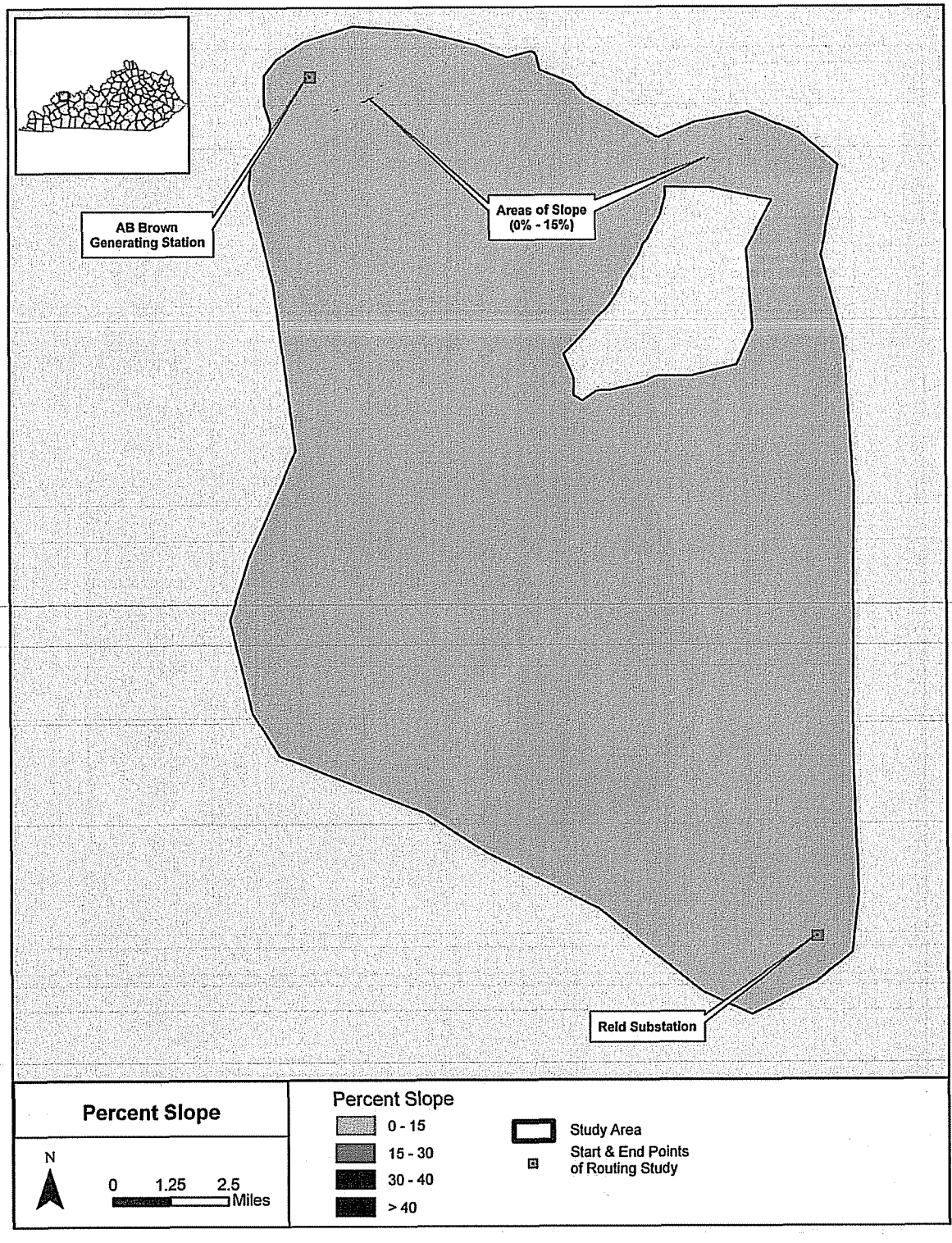


FIGURE 20: DERIVED SLOPE FROM NATIONAL ELEVATION DATASET CLASSIFIED BY PERCENT



4. Engineering Environment Data Layer Weights

The Engineering Environment data layers and their relative weights are summarized in Table 6 below. Items highlighted in gray are not present in the study area unless otherwise discussed.

TABLE 6: ENGINEERING ENVIRONMENT LAYERS AND WEIGHTS

Co-location / Engineering	
Linear Infrastructure	**100.0%**
Parallel Existing Transmission Lines	1
Rebuild Existing Transmission Lines	0
No Linear Infastructure	4.6
Parallel Interstates ROW	0
Parallel Roads ROW	5.6
Parallel Pipelines	5.8
Future DOT Plans	0
Parallel Railway ROW	6.4
Road ROW	7.5
Utility / Railroad ROW	9.0
Scenic Highways ROW	0
Slope	**0.0%**
Slope 0-15%	0
Slope 15-30%	0
Slope 30-40%	0
Slope >40%	0

Although there are transmission lines present within the study area, "Rebuild Existing Transmission Lines" options are not included in the model for this project. Interstates, Future DOT Plans and Railroads do not exist in the study area.

Part VI: Natural Environment

1. Avoidance Areas

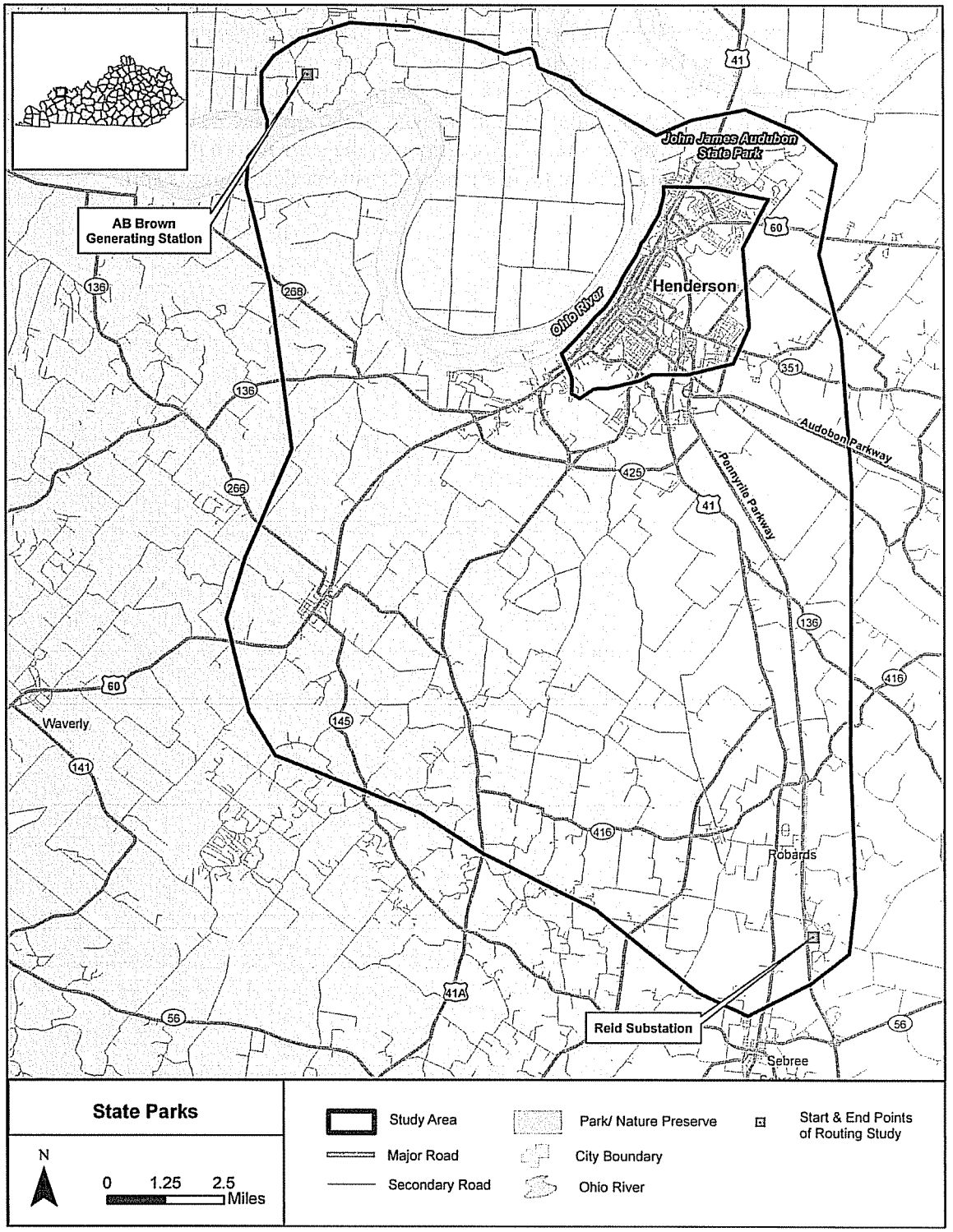
Within the Natural Environment, there are several avoidance area types. EPA superfund sites, state & national parks, USFS wilderness areas, wild / scenic rivers, wildlife refuges, state nature preserves, and designated critical habitats are the listed avoidance areas within the Natural Environment.

Within the study area, only state parks and state nature preserves were identified. These features were modeled as avoidance areas.

State Parks

The John James Audubon State Park is located directly to the north of the city of Henderson. It is adjacent to the John James Audubon State Nature Preserve. The park is approximately 360 acres and contains 6.5 miles of hiking trails. The location is displayed in Figure 21. The data was obtained from the Kentucky Public Service Commision.

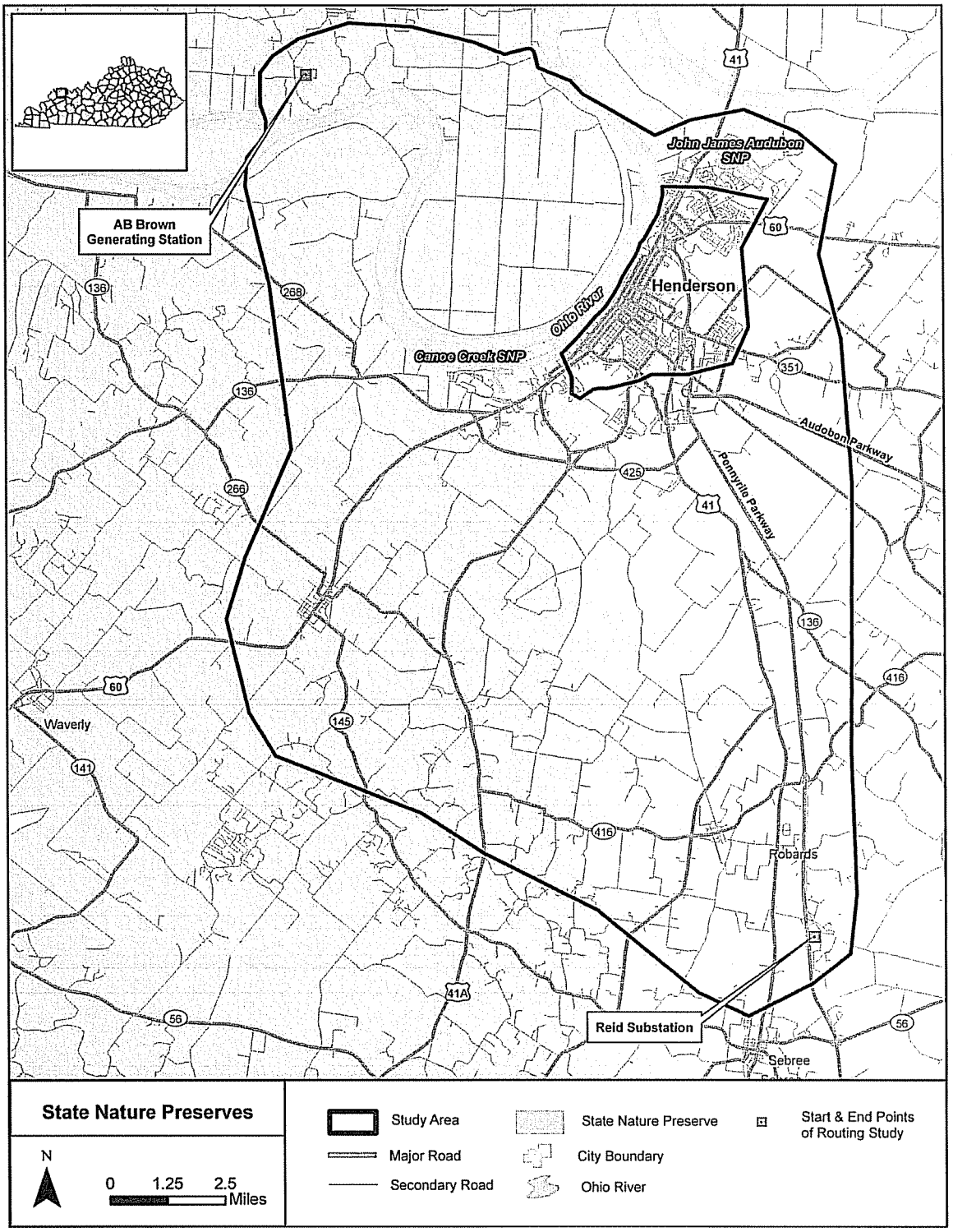
FIGURE 21: STATE PARKS



State Nature Preserves

Within the study area, there are two State Nature Preserves. The first, and largest, is the John James Audubon State Nature Preserve. It is adjacent to the John James Audubon State park, and is approximately 340 acres in size and contains old growth trees and nature trails. The Canoe Creek State Nature Preserve is approximately 72 acres in size, and is located where Canoe Creek empties into the Ohio River. This location contains a population of the endangered Tennessee Leafcup, a rare flower. Due to the sensitivity of the site, access is controlled by The Nature Conservancy, who owns the site. The locations of the state nature preserves is detailed in Figure 22. The data was obtained from the Kentucky Public Service Commission.

FIGURE 22: STATE NATURE PRESERVES

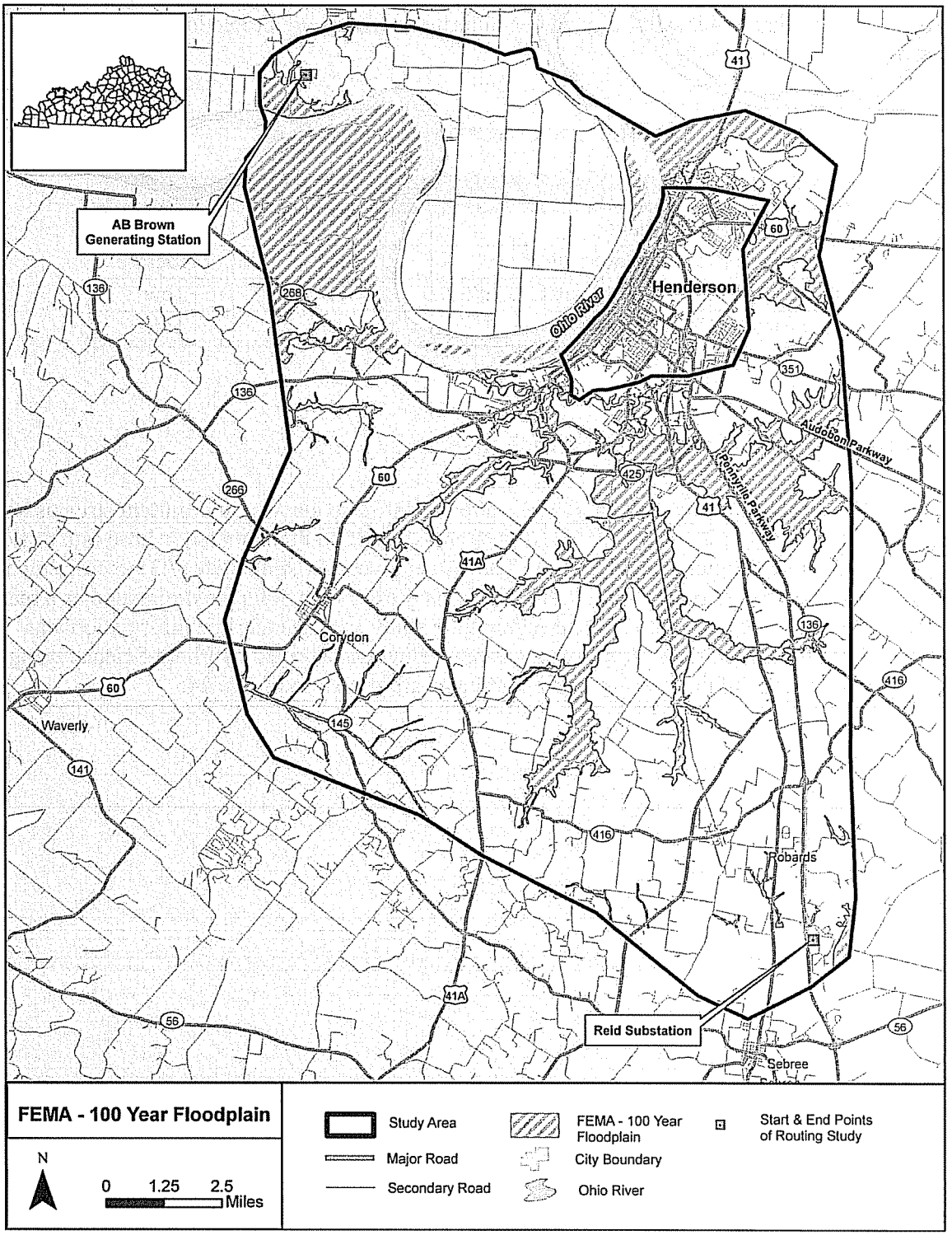


2. Floodplains

Low Suitability: 100-Year Floodplain

The Natural Environment of the Siting Model gives very low suitability to locating T/L in the 100-year floodplain. A high percentage of the study area is within a floodplain due to the location straddling the Ohio River, and low slope presence. Data was obtained from the Federal Emergency Management Agency and is shown in Figure 23.

FIGURE 23: FLOODPLAIN



3. Streams/Wetlands

The features in this category and their corresponding suitability values are shown in Table 7. Recall that lower suitability values indicate relatively preferable locations for transmission line location.

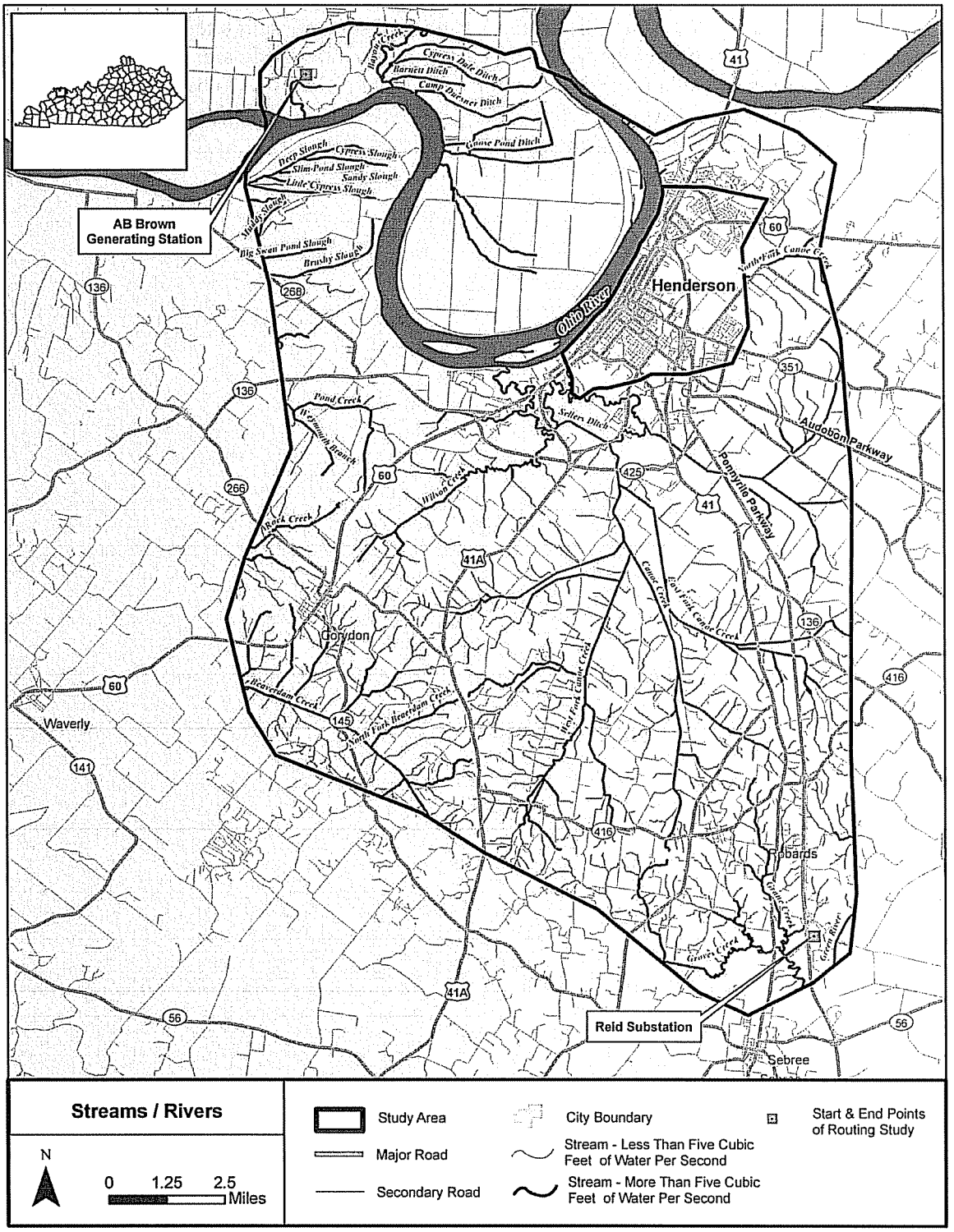
TABLE 7: STREAMS / WETLANDS SUITABILITY

Feature	Suitability Value	Suitability
No Streams and Wetlands	1	High
Streams < 5cf/s+ Regulatory Buffer	6.4	Moderate
Rivers/Streams > 5cf/s+ Regulatory Buffer	7.3	Low
Wetlands + 30' Buffer	9	Low

Moderate to Low Suitability: Streams & Rivers

The Natural Environment categorizes streams into two classes: intermittent streams and major streams. It is moderately suitable (6.4) to cross an intermittent stream, whose rate of flow is less than 5 cubic feet per second (5cf/s). The model gives low suitability (7.3) to crossing a major stream or river. Streams whose rate of flow is greater than 5cf/s are designated as a major stream. There are numerous streams throughout the study area. Centerline information was obtained from the USGS data. Approximate stream flow was derived by Photo Science using watershed average rainfall. The categorized streams are shown in Figure 24.

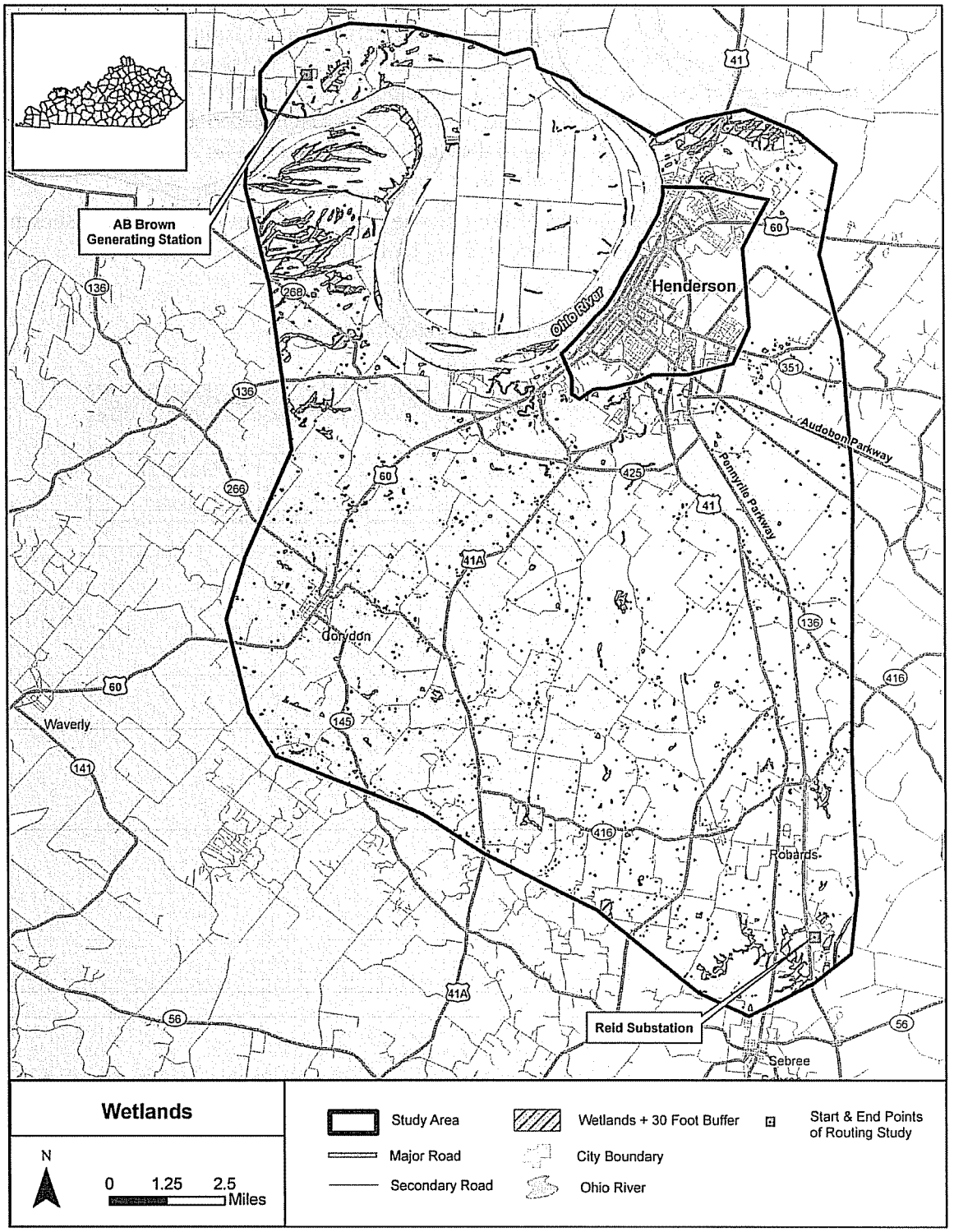
FIGURE 24: STREAMS AND RIVERS



Low Suitability: Wetlands

Wetlands have a low suitability value for locating transmission lines in the Natural Environment. There are numerous wetland areas throughout the study area. However, there is a strong concentration of wetland areas just south of the Ohio River in two bends, on the eastern and western sides of the study area. The source of the wetland information is the National Wetland Inventory (NWI) and the data is shown in Figure 25.

FIGURE 25: WETLANDS



4. Land Cover

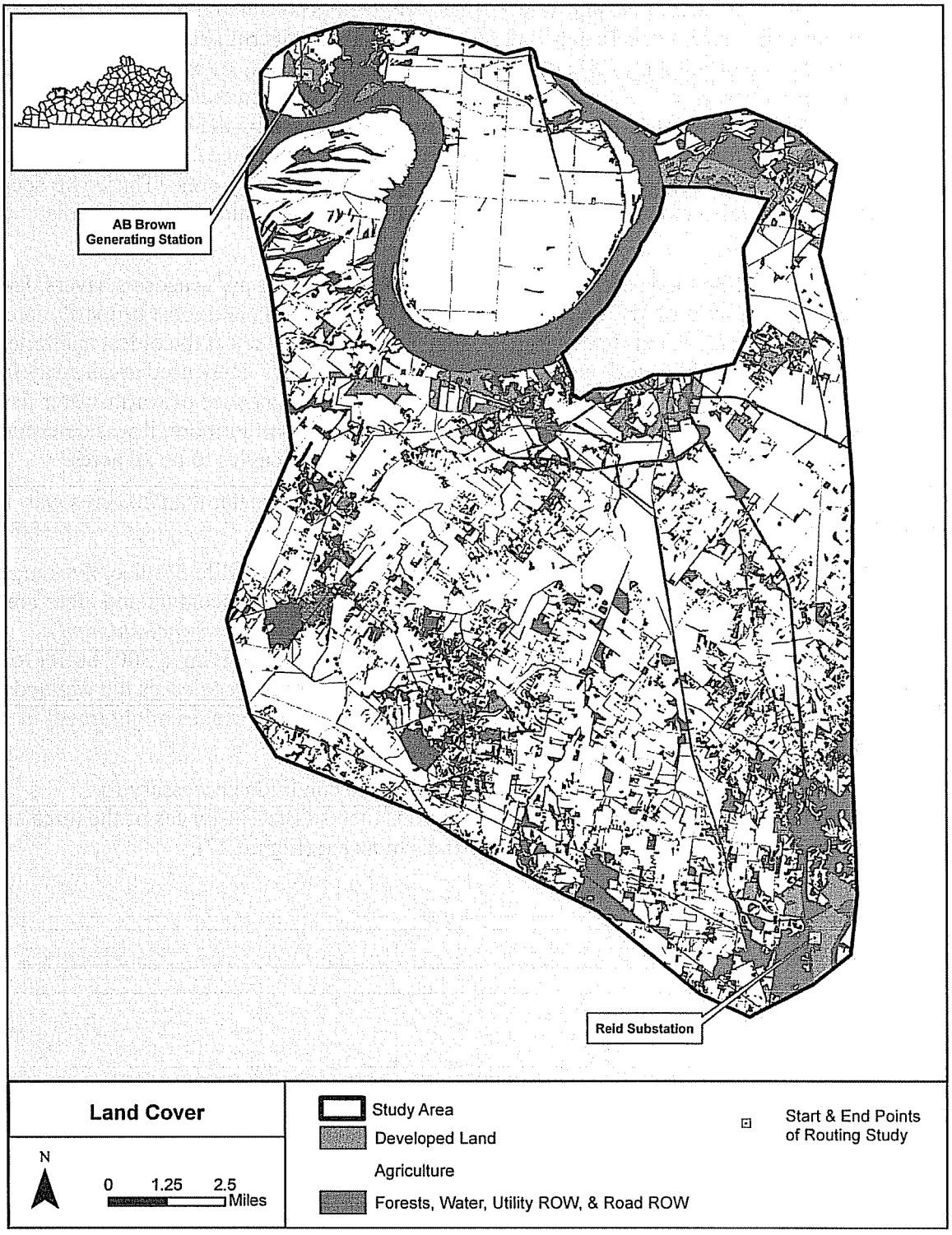
The Natural Environment is concerned with protecting water resources, plants and animals and therefore finds Developed Land to be highly suitable for transmission lines. Agriculture, open land (pastures), and forests are considered less suitable. This region is largely rural, with developed land concentrated in and near the city of Henderson. Forested Land constitutes the lowest suitability according to the Land Cover Layer. The land cover categories and their suitability are summarized in Table 8.

This information is developed by Photo Science from orthophotography and is shown in Figure 26. The aerial imagery was captured in 2008 by Photo Science.

TABLE 8: LAND COVER SUITABILITY

Land Cover	Suitability Value	Suitability
Developed Land	1	High
Agriculture, Pine Plantation, Open Land	2.2	Moderate
Forests	9	Low

FIGURE 26: LAND COVER



5. Wildlife Habitat

According to the U.S. Fish and Wildlife Service, factors considered in the decision to list a species include the present or threatened destruction of habitat, overutilization of the species for commercial or other purposes, disease or predation, the inadequacy of existing regulatory mechanisms, and other natural or manmade factors affecting continued existence. The Kentucky Department of Fish and Wildlife Resources lists those species listed by the U.S. Fish and Wildlife Service and found on the Federal Endangered Species Act by the county in which they appear. Two threatened species have habitat occurring within the study area. These two species are the Bald Eagle (Haliaeetus leucocephalus) and the Copperbelly Water Snake (Nerodia erythrogaster neglecta).

The US Forest Service describes the habitat of the Bald Eagle as "seacoasts, rivers, large lakes, and other large areas of open water. They prefer to nest, perch, and roost primarily in old-growth and mature stands of conifers or hardwoods. Eagles usually select the oldest and tallest trees that have good visibility, and open structure, and are near prey. They used areas away from human disturbance and selected nesting sites near lakes with an abundance of warm-water fishes (*http://www.fs.fed.us/database/feis/animals/bird/hale/all.html*)." Furthermore, it was determined that the smallest body of water that could support a nesting pair of eagles to be 20 acres.

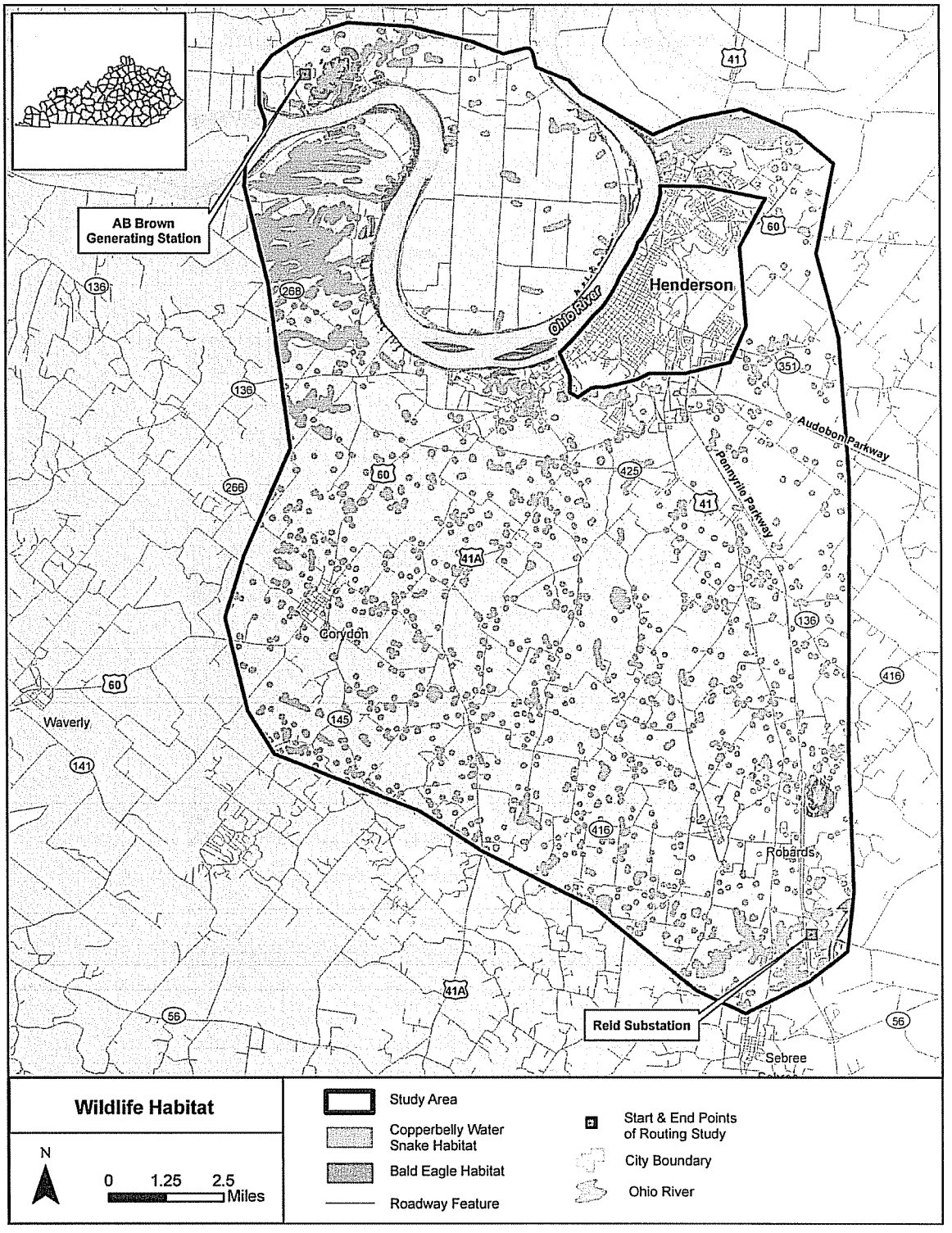
All forested areas with one quarter mile of a body of water greater than 20 acres was modeled as the habitat of the Bald Eagle.

The Copperbelly Water Snake, according to the US Fish & Wildlife Service, lives in a habitat consisting of lowland swamps and other warm-water areas. Adjacent upland areas are used for hibernation (*http://www.fws.gov/midwest/Endangered/reptiles/cws-fact-sht.html*).

The habitat of the Copperbelly Water Snake was mapped by applying a 300' buffer to the NWI wetlands persistent in the study area. This distance, it was noted, coalesces the wetlands in areas where they are prevalent, and created corridors through with the snakes might travel in between wetland areas for purposes of mating and prey.

It should be noted that this methodology only locates conditions necessary for populations of the listed species, and not the populations themselves. Instances of the threatened species may or may not exist within the selected areas modeled (Figure 27).

FIGURE 27: WILDLIFE HABITAT



6. Natural Environment Data Layer Weights

The Natural Environment data layers and their relative weights are summarized in Table 9 below. Items highlighted in gray are not present in the study area unless otherwise discussed.

TABLE 9: NATURAL ENVIRONMENT DATA LAYERS AND WEIGHTS

Natural Environment	
Floodplain	**5.6%**
No Floodplain	1
100 Year Floodplain	9
Streams / Wetlands	**35.5%**
No Streams / Wetlands	1
Streams < 5cfs+ Regulatory Buffer	6.4
Rivers/Streams > 5cfs+ Regulatory Buffer	7.3
Wetlands + 30' Buffer	9
Outstanding State Resource Waters	0
Public Lands	**0.0%**
No Public Lands	0
WMA - Not State Owned	0
USFS (proclamation area)	0
Other Conservation Land	0
USFS (actually owned)	0
State Owned Conservation Land	0
Land Cover	**24.1%**
Developed Land	1
Agriculture	4.6
Forests	9
Wildlife Habitat	**34.9%**
No Species of Concern Habitat	1
Species of Concern Habitat	9

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Part VII: Built Environment

1. Avoidance Areas

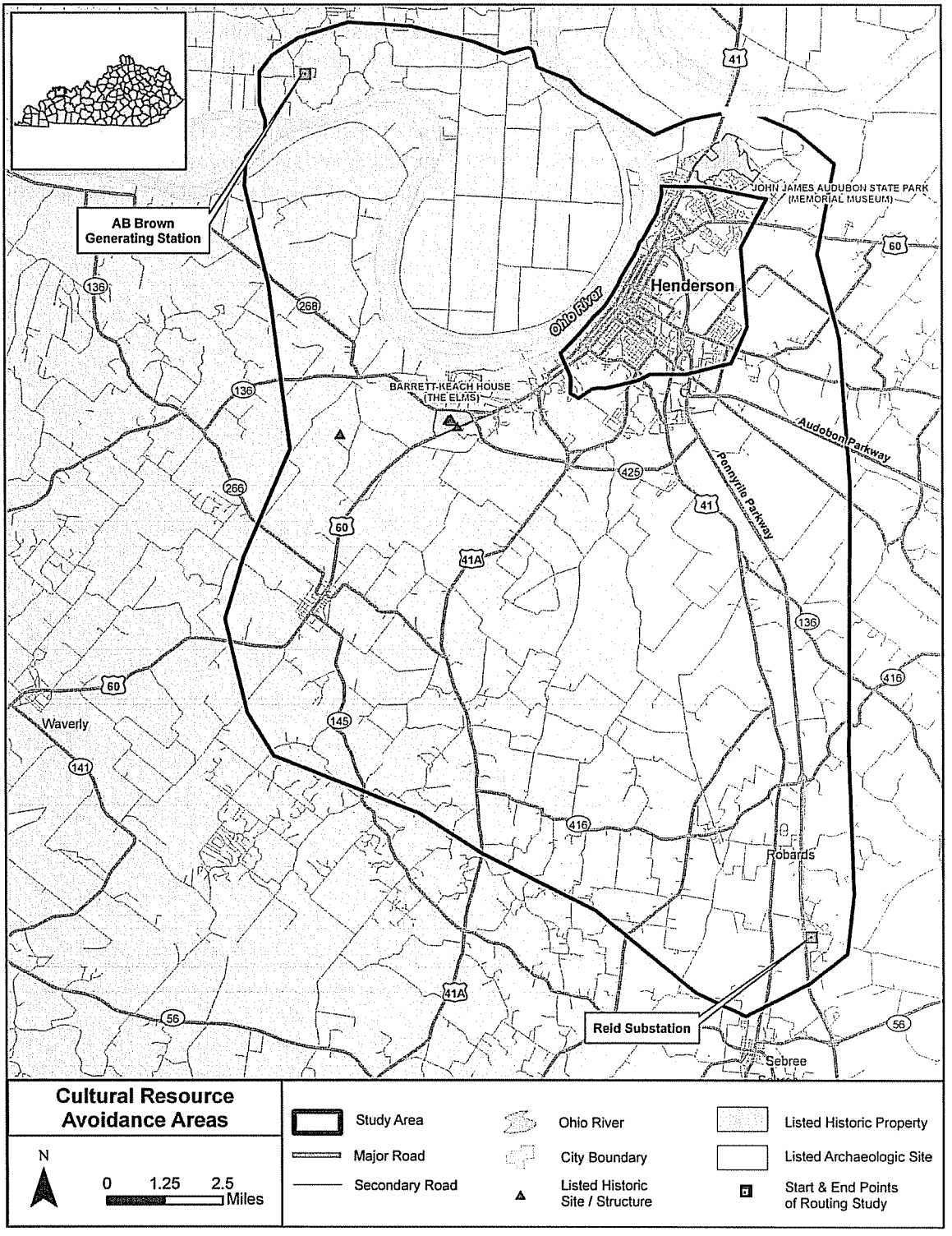
Within the Built Environment, there are several avoidance area types. Listed archaeological sites & districts, listed NRHP districts & buildings / structures, city / county parks, daycare parcels, cemetery parcels, school parcels, and church parcels are the listed avoidance areas within the Built Environment.

Within the study area, at least one instance of every type of Built Environment avoidance occurred. These features were modeled as avoidance areas.

Listed NRHP Buildings and Listed Archaeology Sites

There are 10 listed NRHP historic structures in the study area, 2 listed NRHP historic properties, and 1 NRHP listed property that is also an archaeological site. The 10 listed sites are all associated with one of the historic properties, the Barrett-Keach House (Forest Grove) and surrounding farm. The Barrett-Keach House is located to the southwest of Henderson, near the center of the study area. The other NRHP property is the John James Audubon State Park Museum. The state park is located directly to the northeast of Henderson. Finally, the NRHP listed archaeological site is located within the John James Audubon State Park. This information is displayed graphically in Figure 28. Listed sites / structures receive a buffer of 1500' for avoidance; the properties themselves are also avoidance areas. This data was acquired from the Kentucky Heritage Council, and the Kentucky Archaeological Survey.

FIGURE 28: CULTURAL RESOURCE AVOIDANCE AREAS

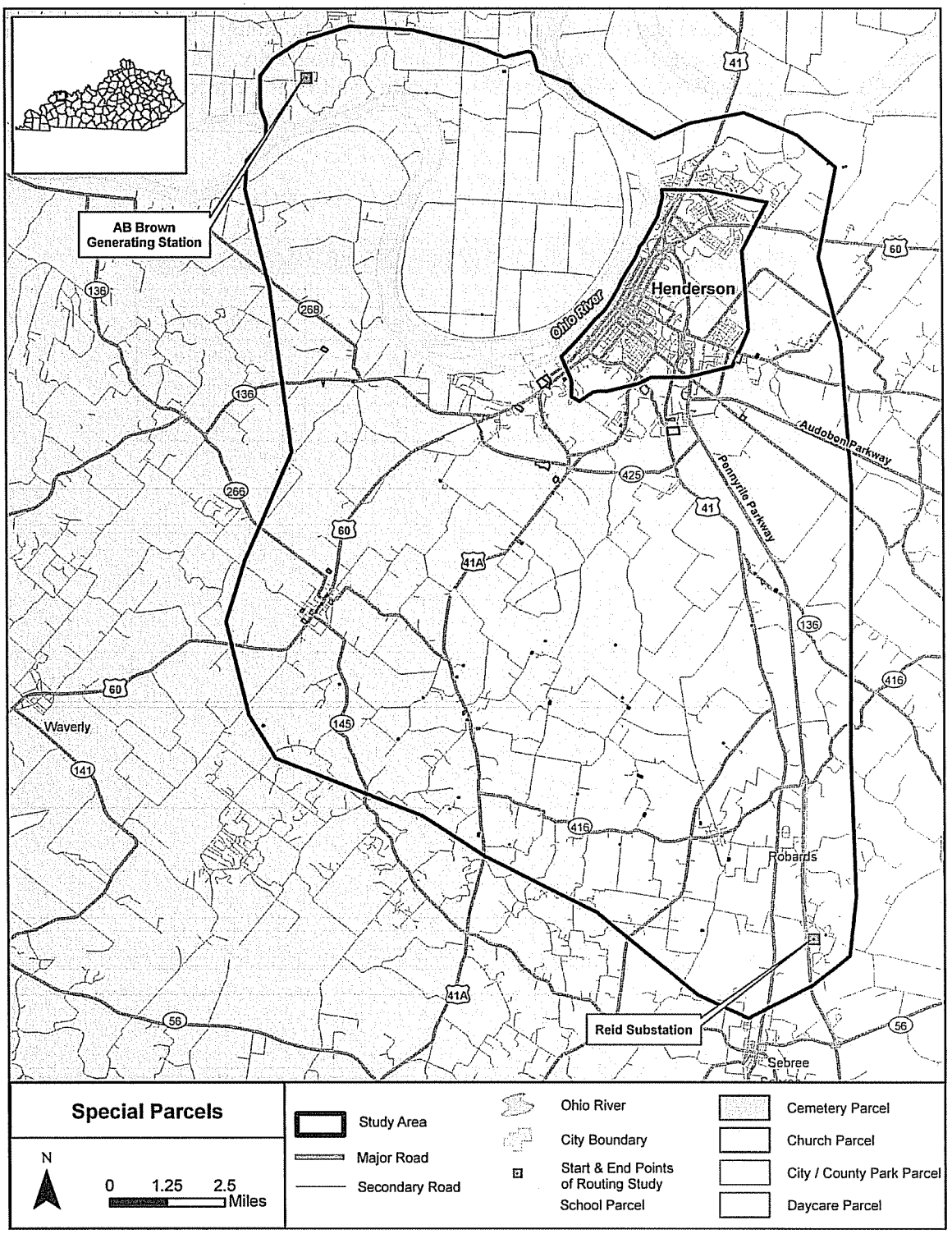


Special Parcels

Special Parcels are those which require additional consideration with respect to transmission line construction and operation. Cemeteries, school facilities, daycare facilities, churches / religious institutions, parks, and other specialty parcels are all considered "Special Parcels" and are excluded from the analysis.

A variety of data sources provide the locations of special parcels. USGS topographic maps, field survey, ESRI data, tax assessor's data, and 2008 aerial photography interpretation are just a few of the datasets used to derive the location of special parcel sites. These sites are shown in Figure 29.

FIGURE 29: SPECIAL PARCELS AVOIDANCE AREAS



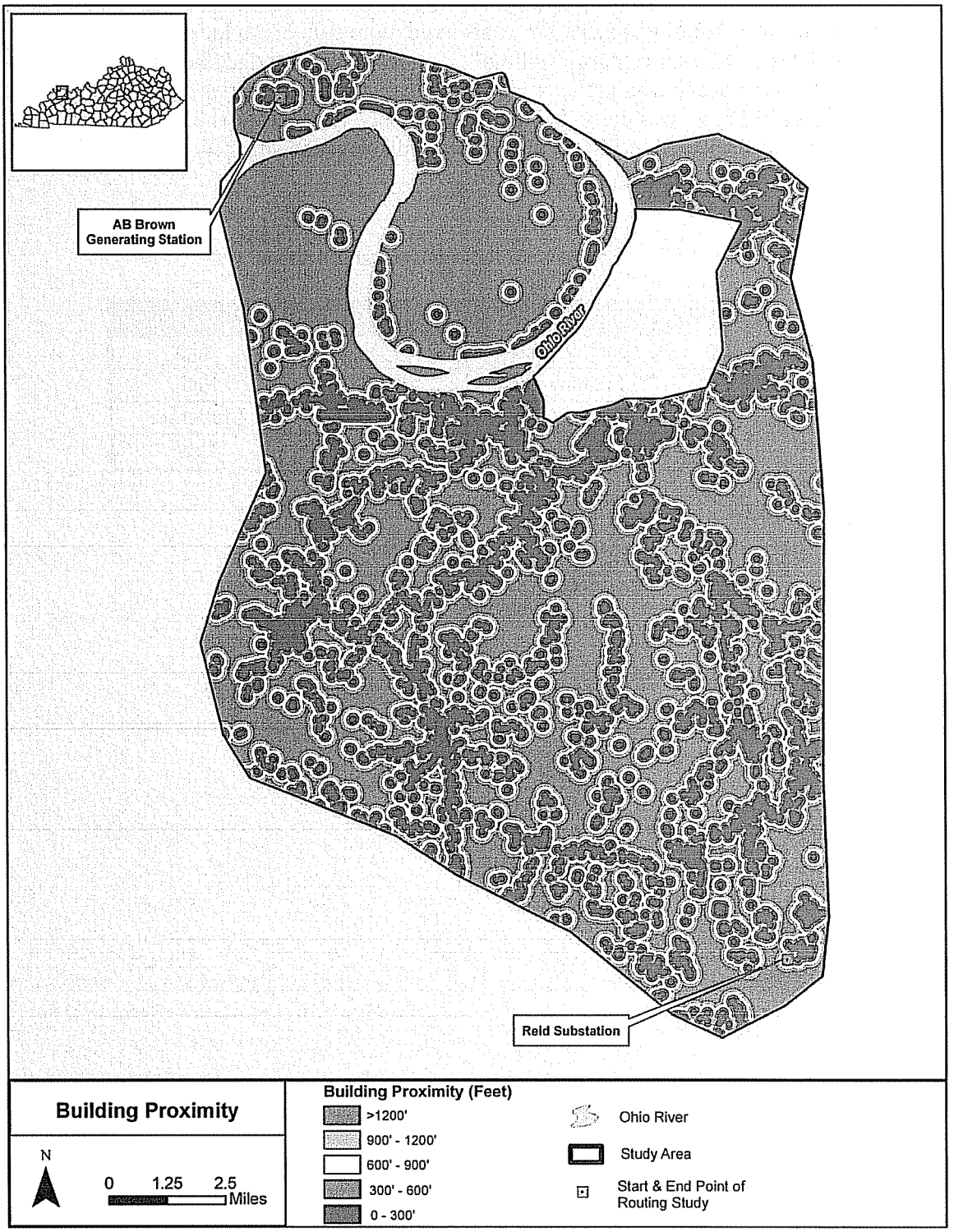
2. Proximity to Buildings

In the Built Environment, it is more suitable to locate a transmission line farther away from buildings. The model has five categories for proximity to buildings. This information was developed by Photo Science, from analysis of 2008 aerial photography, and can be viewed in Figure 30. Table 10 displays the siting model's suitability values associated with the proximity to buildings.

TABLE 10: PROXIMITY TO BUILDING SUITABILITY

Distance from Building (Feet)	Suitability Value	Suitability
0-300 feet	9	Low
300-600 feet	8	Moderate
600-900 feet	5.7	Moderate
900-1,200 feet	3.4	Moderate
>1,200 feet	1	High

FIGURE 30: PROXIMITY TO BUILDINGS



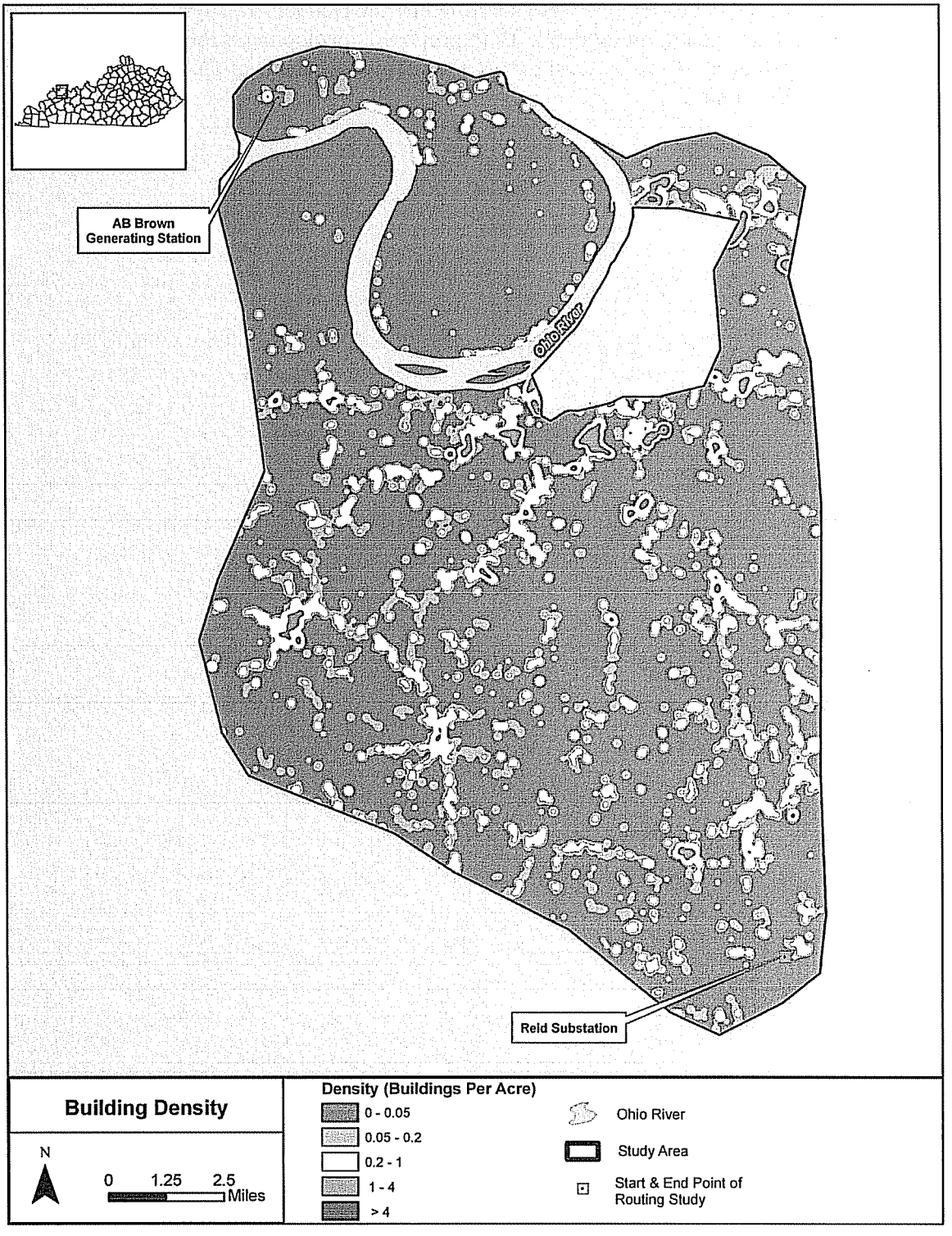
3. Building Density

Areas of lower building density are considered more suitable to locate a transmission line. The model features four categories of building density, summarized below. Areas of higher density tend to occur around the city of Henderson, and in the cities of Corydon and Robards. This information was compiled by Photo Science from analysis of 2008 aerial photography, and is displayed in Figure 31. Table 11 displays the siting model's suitability values associated building density categories.

TABLE 11: BUILDING DENSITY SUITABILITY

Building Density	Suitability Value	Suitability
0 - 0.05 buildings/acre	1	High
0.05 - 0.2 buildings/acre	3.1	High
0.2 - 1.0 building/acre	5.9	Moderate
1 - 4 buildings/acre	9	Low

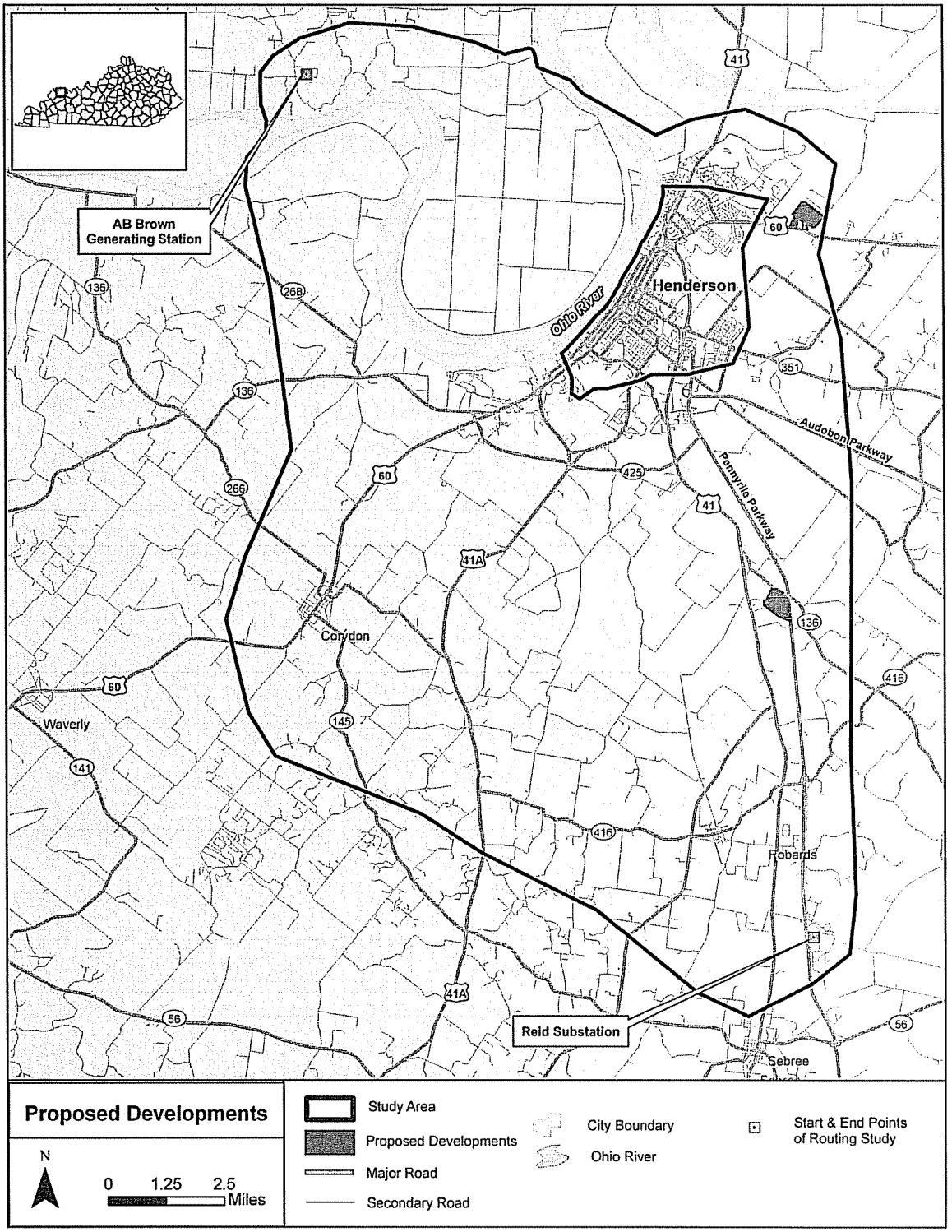
FIGURE 31: BUILDING DENSITY



4. Proposed Developments

Two proposed developments were identified by the Henderson City-County Planning Commission, and are shown in Figure 32. Both proposed developments are residential subdivisions. Both occur on the eastern side of the study area, one near the northern boundary and the other in the center.

FIGURE 32: PROPOSED DEVELOPMENTS

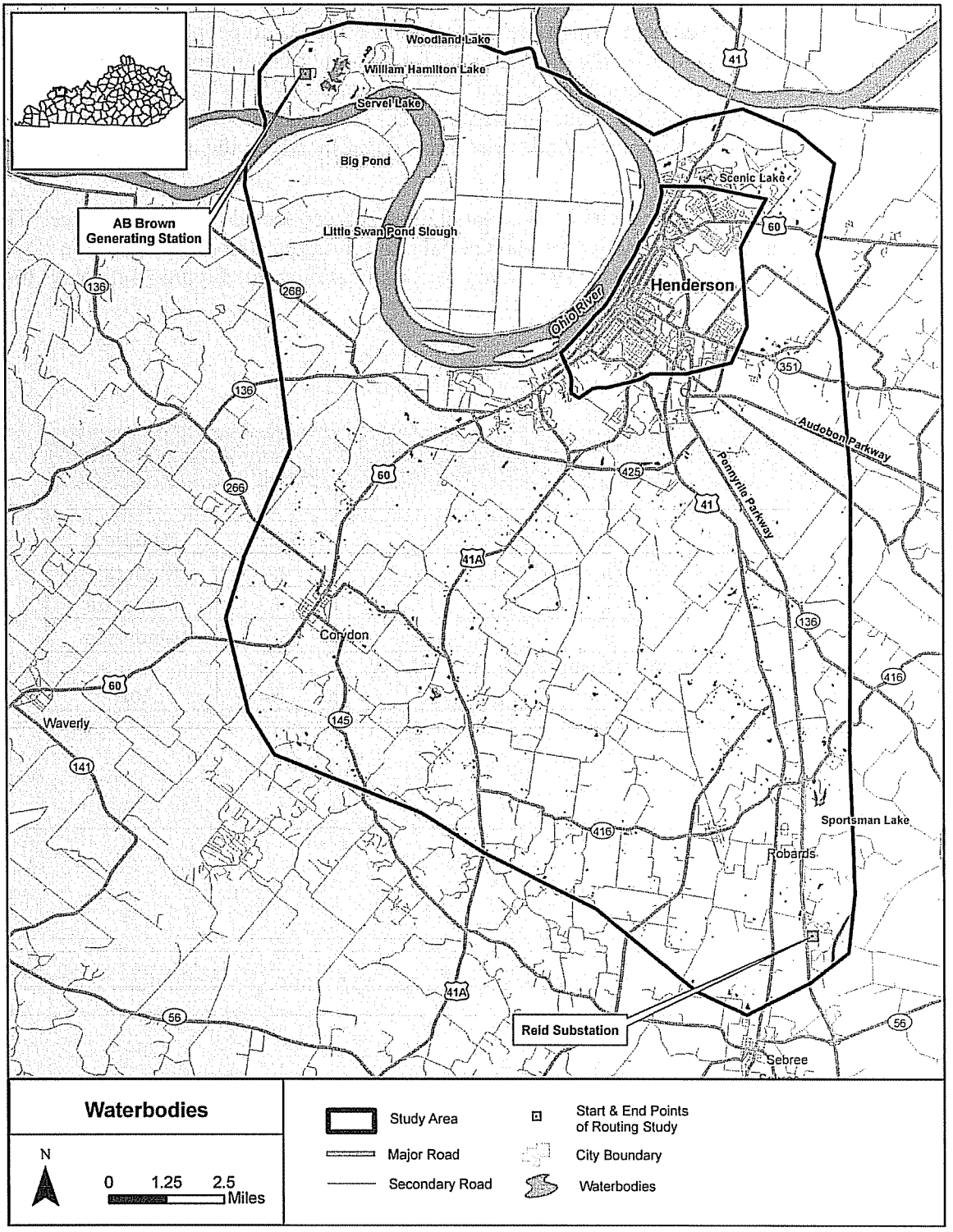


5. Lakes and Ponds

Low Suitability: Lakes and Ponds

Lakes and ponds are designated less suitable for locating transmission lines. There are numerous lakes and ponds dispersed throughout the study area. The data was retrieved from 2008 aerial photography interpretation, and USGS databases (Figure 33).

FIGURE 33: LAKES AND PONDS



6. Land Use

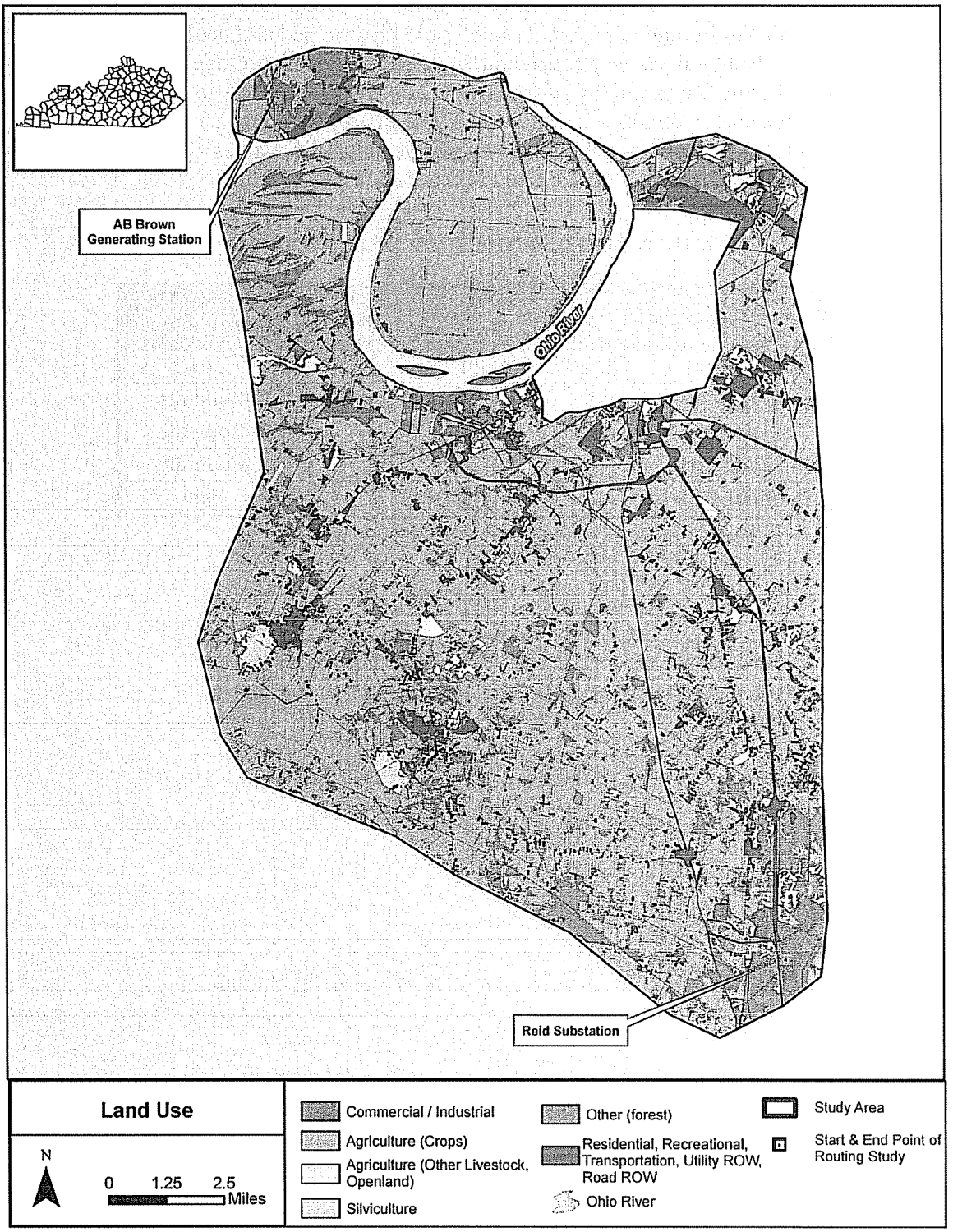
In the Built Environment, which seeks to minimize impacts to people, the Siting Model considers undeveloped land to be the most suitable for locating transmission lines, whereas residential, recreational, transportation, utility ROW and road ROW are least suitable. Row crops make up the majority of the study area. Residential areas exist mainly in and around the cities and towns in this region. Commercial/industrial tracts occur mostly in the outskirts of Henderson.

The basis for this layer is the 2008 aerial photography collected by Photo Science. The Land Use data was developed by way of 2008 aerial photo interpretation. Below, Table 12 summarizes the suitability values for each land use classification while Figure 34 displays the data graphically.

TABLE 12: LAND USE SUITABILITY

Land Use	Suitability Value	Suitability
Commercial / Industrial	1	High
Agriculture (Crops)	3.5	Moderate
Agriculture (Other Livestock), Open Land	4.6	Moderate
Silviculture	6	Moderate
Other (Forest)	6.7	Moderate
Residential, Recreational, Transportation, Utility ROW, Road ROW	9	Low

FIGURE 34: LAND USE



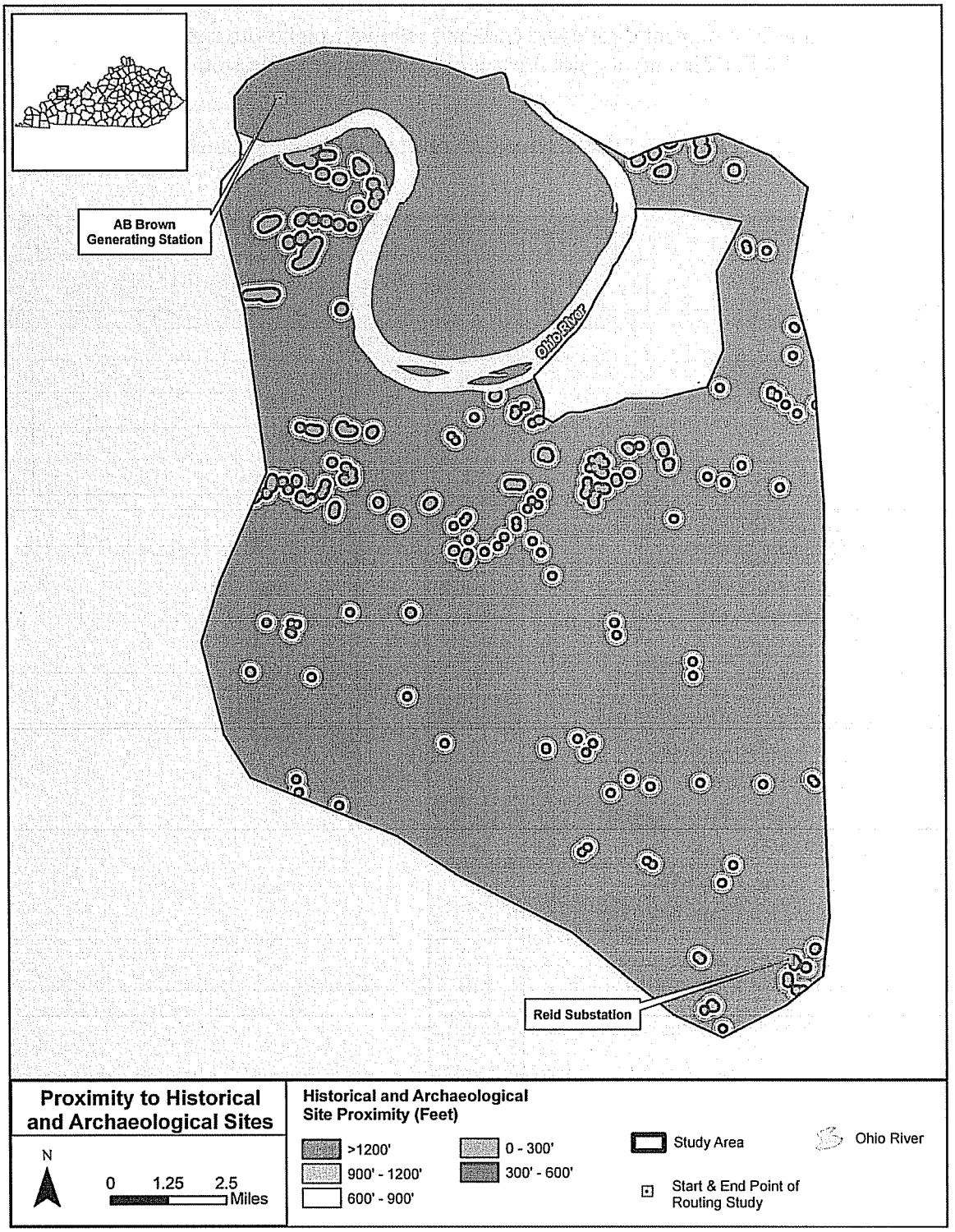
7. Eligible Historic and Archaeological Sites

In the Built Environment, proximity to eligible historic and archaeological sites are important factors. Both have a very considerable weight in the siting model. It is more suitable to place a transmission line farther away from these eligible historic and archaeological sites. The model has five categories for proximity to eligible historic and archaeological sites. These are listed in Table 13 below, along with their respective suitability values. This information was developed by Kentucky Heritage Council and is shown in Figure 35.

TABLE 13: PROXIMITY TO ELIGIBLE HISTORIC AND ARCHAEOLOGICAL SITES IN KENTUCKY

Distance from Eligible Historic & Archaeological Sites (Feet)	Suitability Value	Suitability
300-600 feet	9	Low
0-300 feet	8.6	Moderate
600-900 feet	7.9	Moderate
900-1,200 feet	4.6	Moderate
>1,200 feet	1	High

FIGURE 35: PROXIMITY TO ELIGIBLE HISTORIC AND ARCHAEOLOGICAL SITES IN KENTUCKY



8. Built Environment Data Layer Weights

The Built Environment data layers and their relative weights are summarized in Table 14 below. Item highlighted in gray are not present in the study area unless otherwise discussed.

TABLE 14: BUILT ENVIRONMENT DATA LAYERS AND WEIGHTS

Built Environment			
Proximity to Buildings	**16.8%**	**Proximity to Eligible Historic and Archeological Sites**	**31.0%**
> 1200	1	> 1200	1
900-1200	3.4	900-1200	4.6
600-900	5.7	600-900	7.9
300-600	8	0-300	8.6
0-300	9	300-600	9
Building Density	**8.4%**		
0 - 0.05 Buildings/Acre	1		
0.05 - 0.2 Buildings/Acre	3		
0.2 - 1 Buildings/Acre	5.6		
1 - 4 Buildings/Acre	8.5		
> 4 Buildings/Acre	9		
Proposed Development	**3.9%**		
No Proposed Development	1		
Proposed Development	9		
Spannable Lakes and Ponds	**4.0%**		
No Lakes / Ponds	1		
Spannable Lakes / Ponds	9		
Land Use	**35.9%**		
Commercial/Industrial	1		
Agriculture (Crops), Open Land	3.5		
Agriculture (Other Livestock)	4.6		
Silviculture	6		
Other (Forest)	6.7		
Equine Agri - Tourism	0		
Residential, Recreational, Transportation, Utility ROW, Road ROW	9		

Part VIII: Suitability Surfaces

After combining all the data layers described in the previous sections, four suitability surfaces (Figures 36, 37, 38 and 39) were created in order to perform the routing analysis. The routing algorithm is applied to each surface to develop four alternative corridors.

- **Engineering Concerns Surface,** the data layers in this group are given five times emphasis over the other two groups.
- **Natural Environment Surface,** the data layers in this group are given five times emphasis over the other two groups.
- **Built Environment Surface,** the data layers in this group are given five times emphasis over the other two groups.
- **Simple Average Surface,** no emphasis is applied on any one of three groups. A simple average is taken opposed to a weighted average, as applied to the surfaces above.

FIGURE 36: CO-LOCATION / ENGINEERING ENVIRONMENT SUITABILITY SURFACE

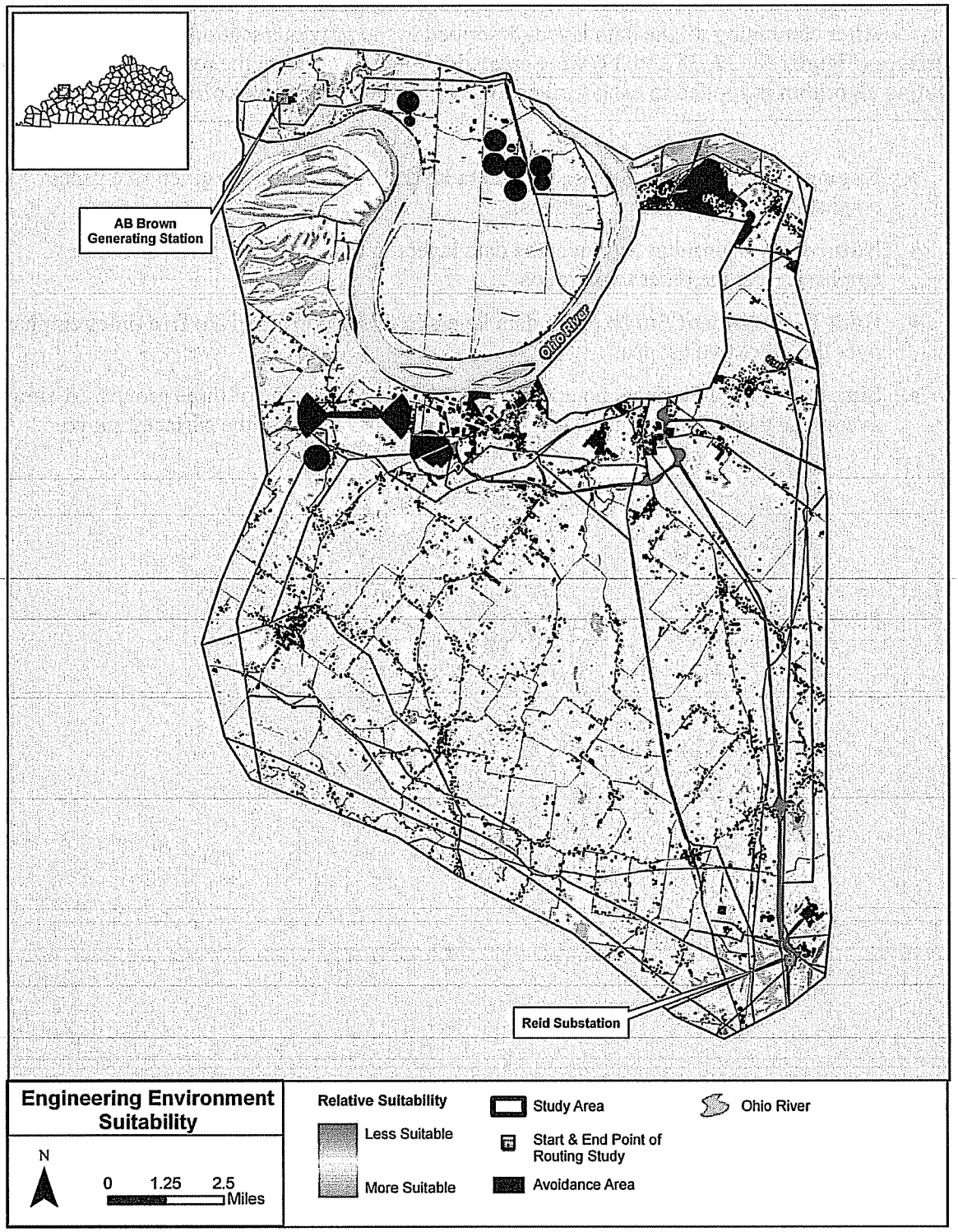


FIGURE 37: NATURAL ENVIRONMENT SUITABILITY SURFACE

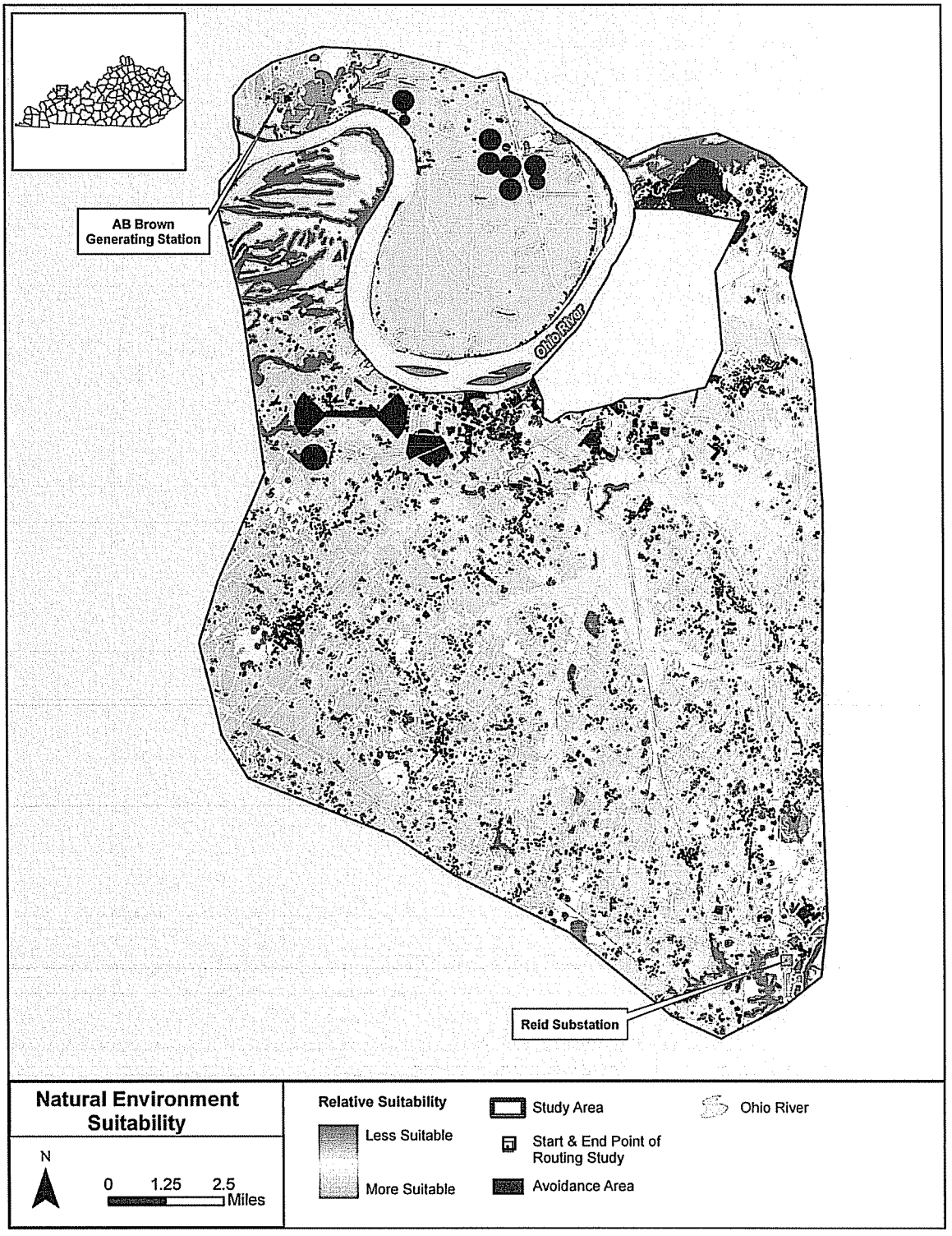


FIGURE 38: BUILT ENVIRONMENT SUITABILITY SURFACE

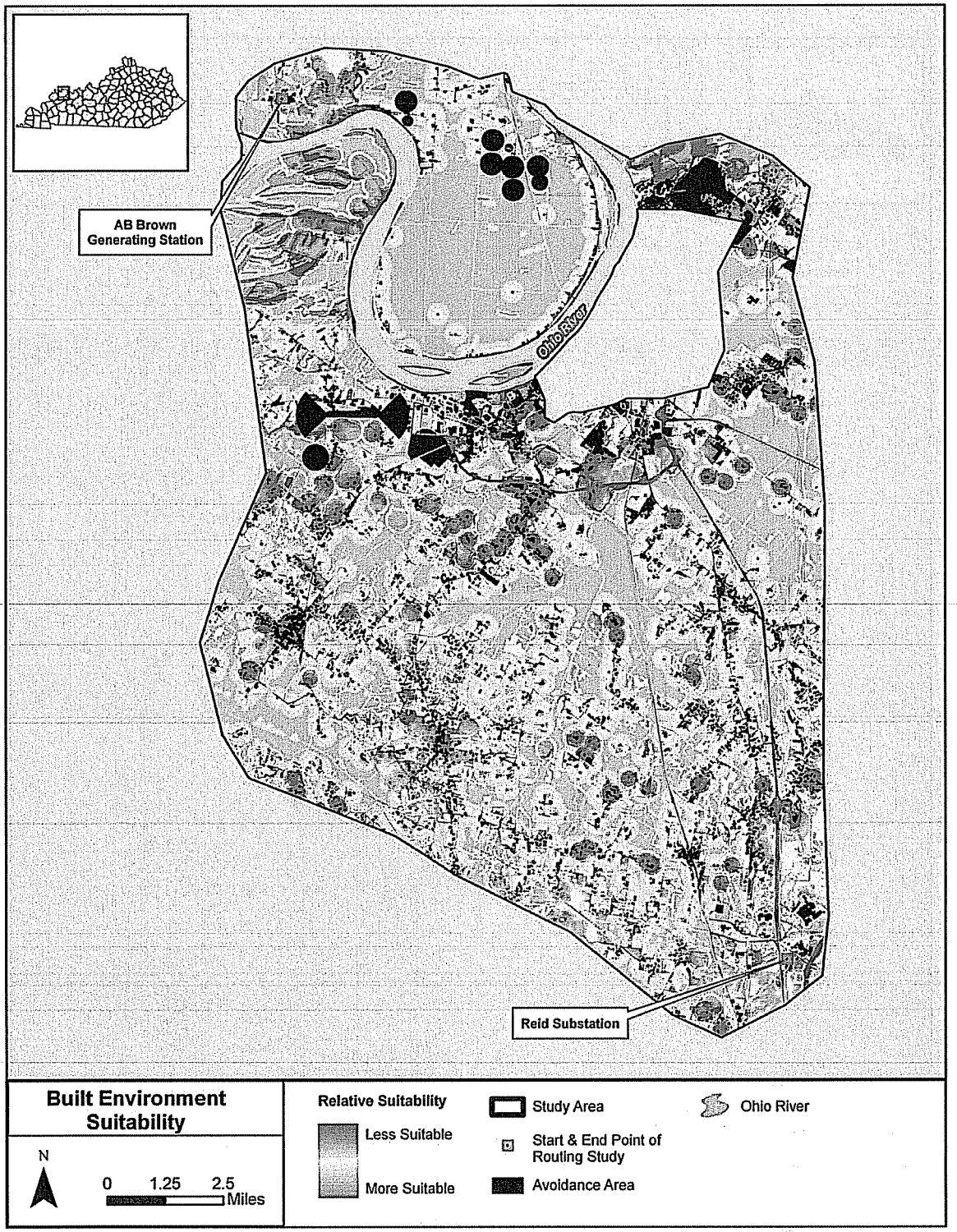
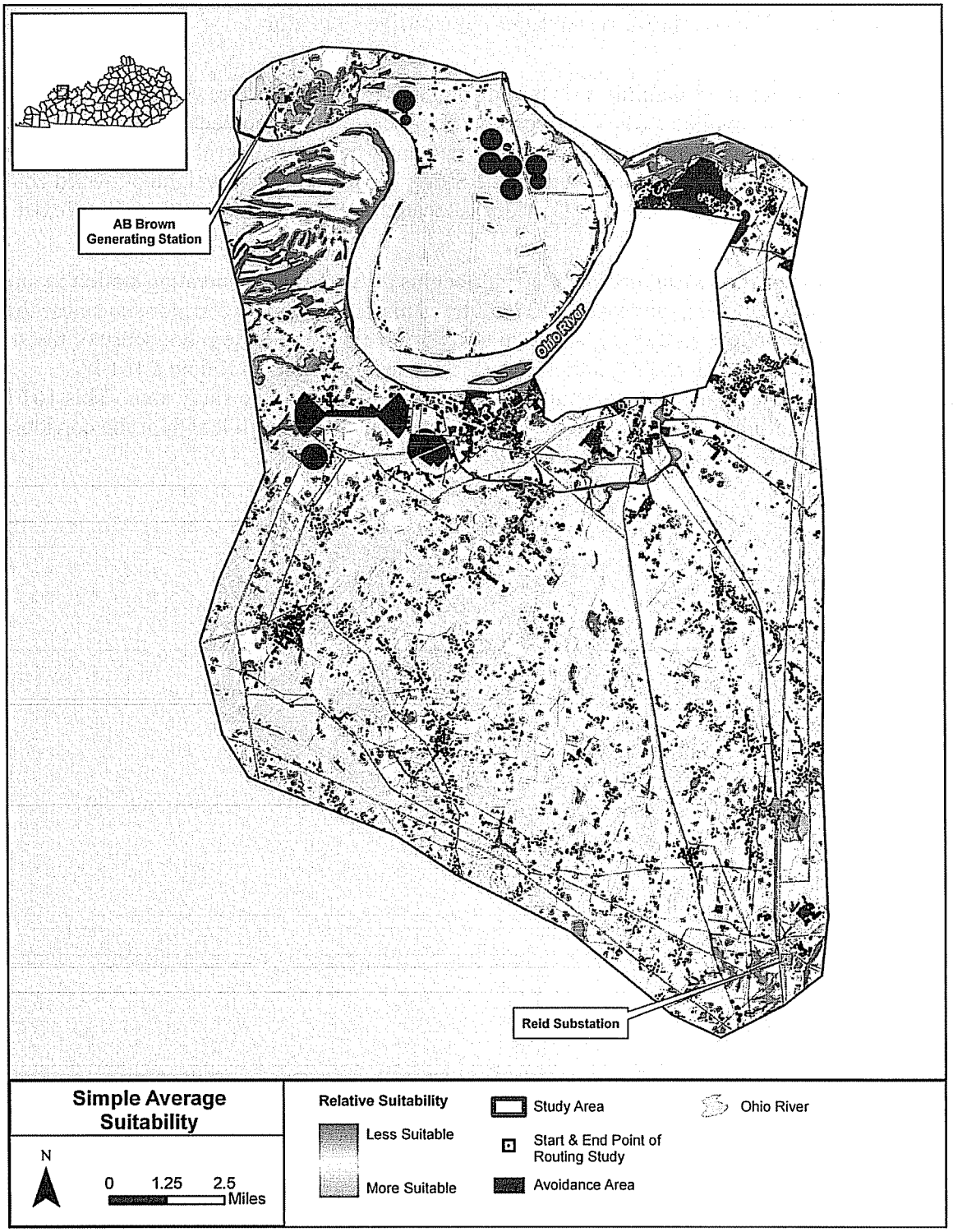


FIGURE 39: SIMPLE AVERAGE SUITABILITY SURFACE



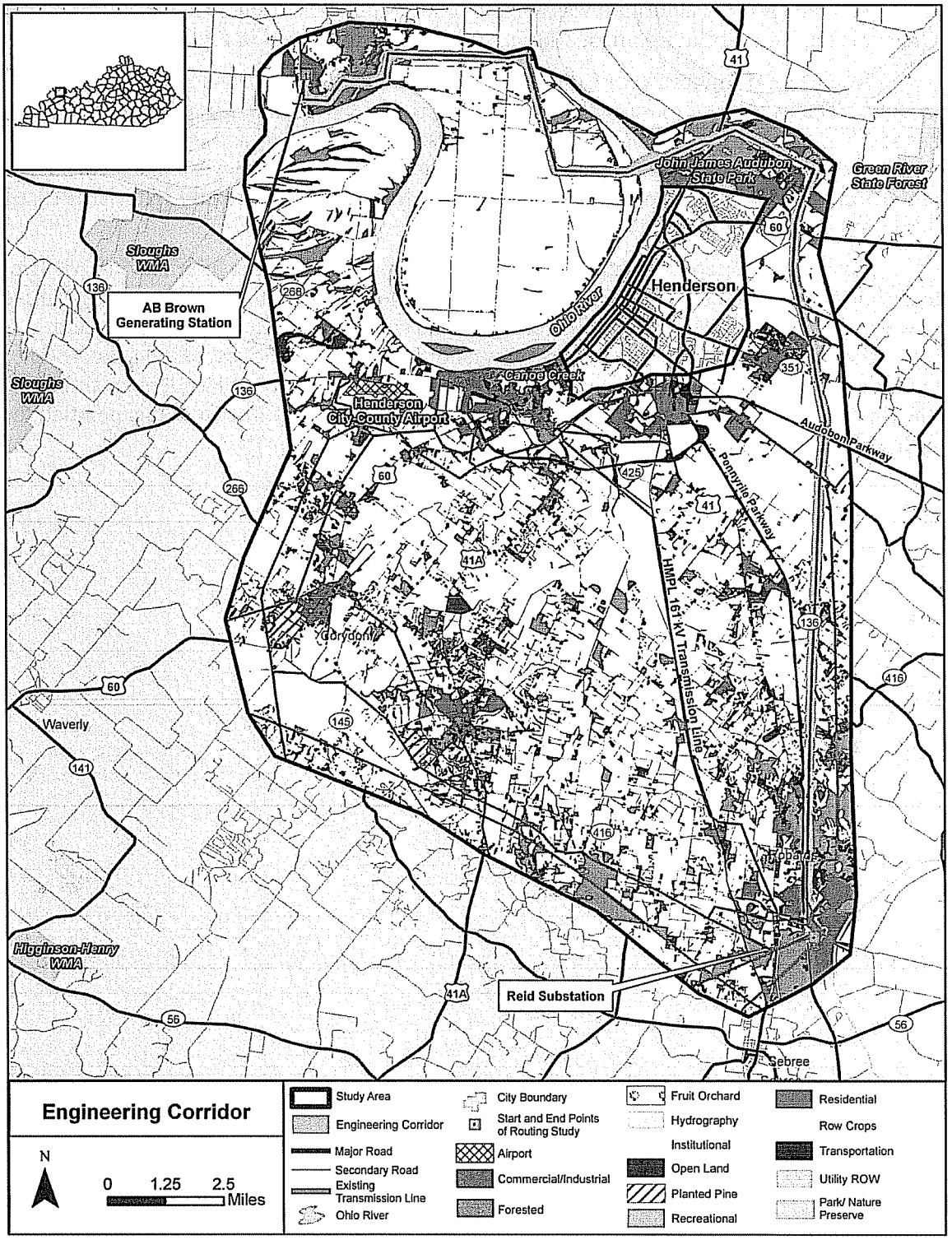
Part IX: Alternative Corridor Generation

1. Co-Location / Engineering Environment Alternative Corridor

When the feature suitability values and data layer weightings were combined and the siting algorithm was applied to the Co-Location / Engineering Environment Suitability Surface, the result is the Co-Location / Engineering Environment Alternative Corridor displayed in Figure 40 below. The Engineering Environment of the Siting Model is heavily weighted toward co-location. As a result, the Engineering Corridor is located exclusively along the paths of existing transmission lines.

The Co-Location / Engineering Corridor begins at AB Brown generating station in an easterly direction, following an existing 138 kV transmission line. The corridor stays near the northern boundary of the study area, and then turns south along the eastern boundary of the study area. The 138 kV line enters a substation, where the corridor begins to follow a 161 kV transmission line that continues due south along the eastern edge of the study area. This 161 kV line continues due south all the way to the Reid substation. The overall length of the corridor is approximately 30.8 miles.

FIGURE 40: ENGINEERING ENVIRONMENT ALTERNATIVE CORRIDOR



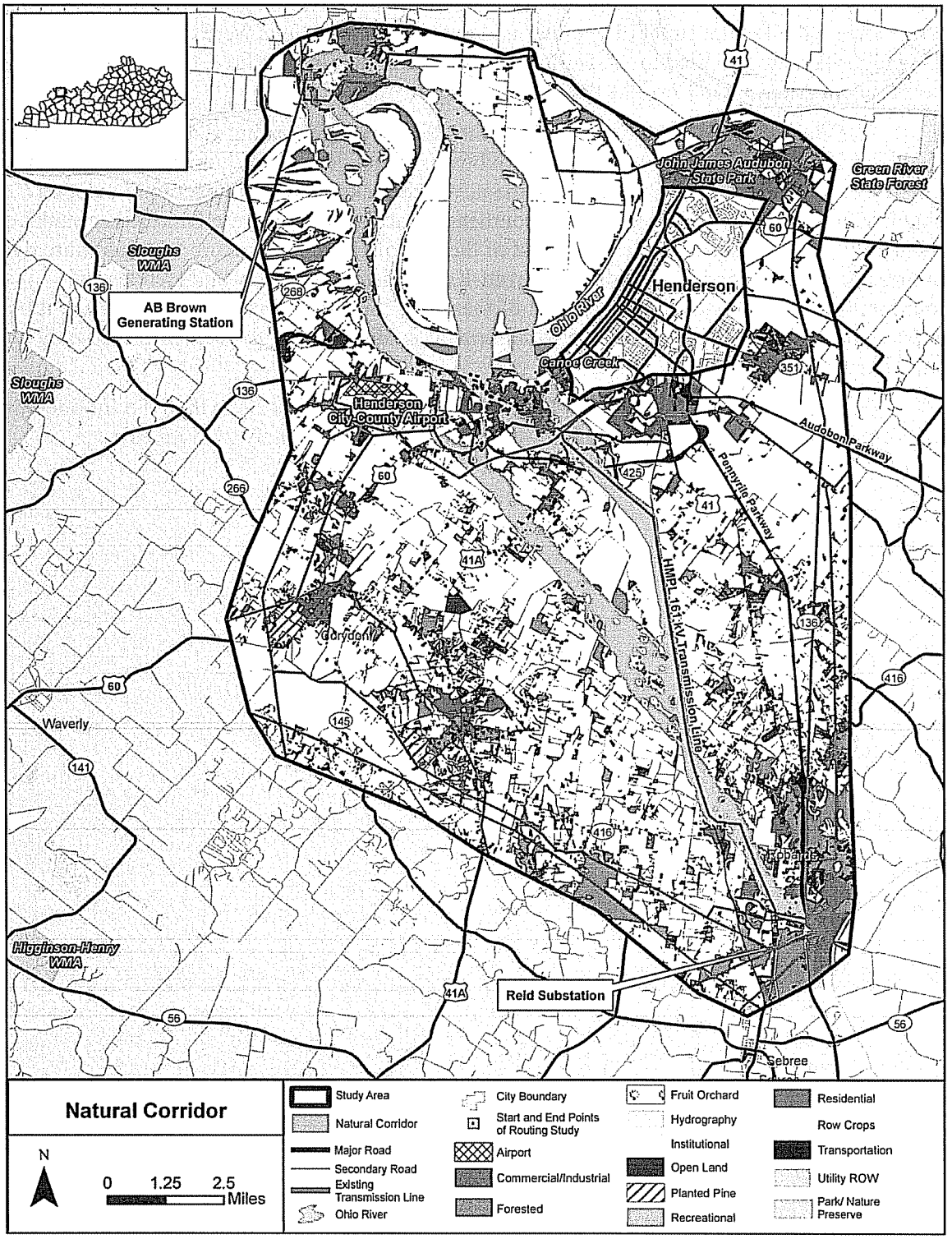
2. Natural Environment Alternative Corridor

When the routing algorithm was applied to the Natural Environment Suitability Surface, the result is the Natural Environment Alternative Corridor displayed in Figure 41 below.

The Natural Environment Corridor's northern and center portions have two sub-corridors. The western of these two sub-corridors crosses the Ohio River to the south of Brown, turns southeast and passes through a rural area just south of the river, and then an industrial district where part of it rejoins the eastern sub-corridor. The rest of the western subcorridor continues cross-country, joining with the (Henderson Municipal Power and Light (HMPL) 161 kV line and paralleling into the Reid substation.

The eastern sub corridor utilizes the oxbow peninsula in Indiana after leaving AB Brown generating station headed southeast. The subcorridor then turns south, crossing the Ohio River just west of downtown Henderson. There, part of the subcorridor meets with the western subcorridor in the industrial area to the southwest of Henderson. The rest of the subcorridor locates the HMPL line, which has one terminus southwest of the city of Henderson, and the other at the Reid substation. The eastern subcorridor parallels the HMPL line from this point all the way to the Reid substation.

FIGURE 41: NATURAL ENVIRONMENT ALTERNATIVE CORRIDOR



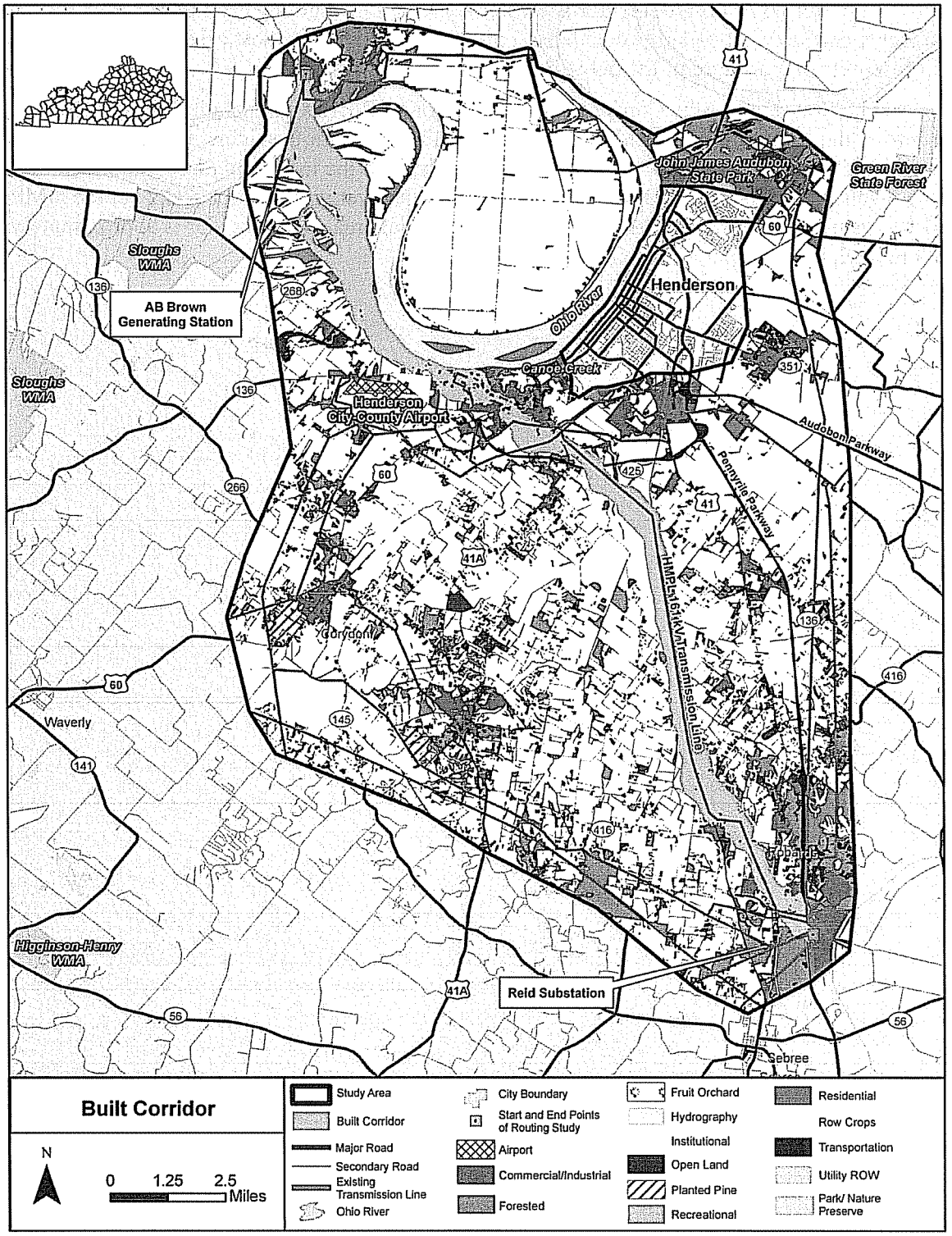
3. Built Environment Alternative Corridor

When the feature suitability values and data layer weightings were combined and the siting algorithm was applied to the Built Environment Suitability Surface, the result is the Built Environment Alternative Corridor displayed in Figure 42.

The Built Environment Corridor exits the AB Brown generating station and heads south across the Ohio River into an oxbow. This oxbow is largely devoid of human development and is therefore appealing to the Built Environment, which seeks to avoid impact to developed / urbanized areas. The corridor heads in a southeast direction, hugging the Ohio River banks. It enters an industrial district to the southwest of the city of Henderson before taking a more direct southeast trek. The corridor avoids the Barrett-Keach historic property and Henderson Community College by staying to the east of them. As the corridor continues southeast, it begins to travel along the HMPL 161 kV line which travels southeast from the center of the study area to the Reid substation.

Overall, the Built Environment Corridor takes a more direct route than the Engineering Corridor. In general, the length of the Built Corridor is approximately 22.5 miles

FIGURE 42: BUILT ENVIRONMENT ALTERNATIVE CORRIDOR

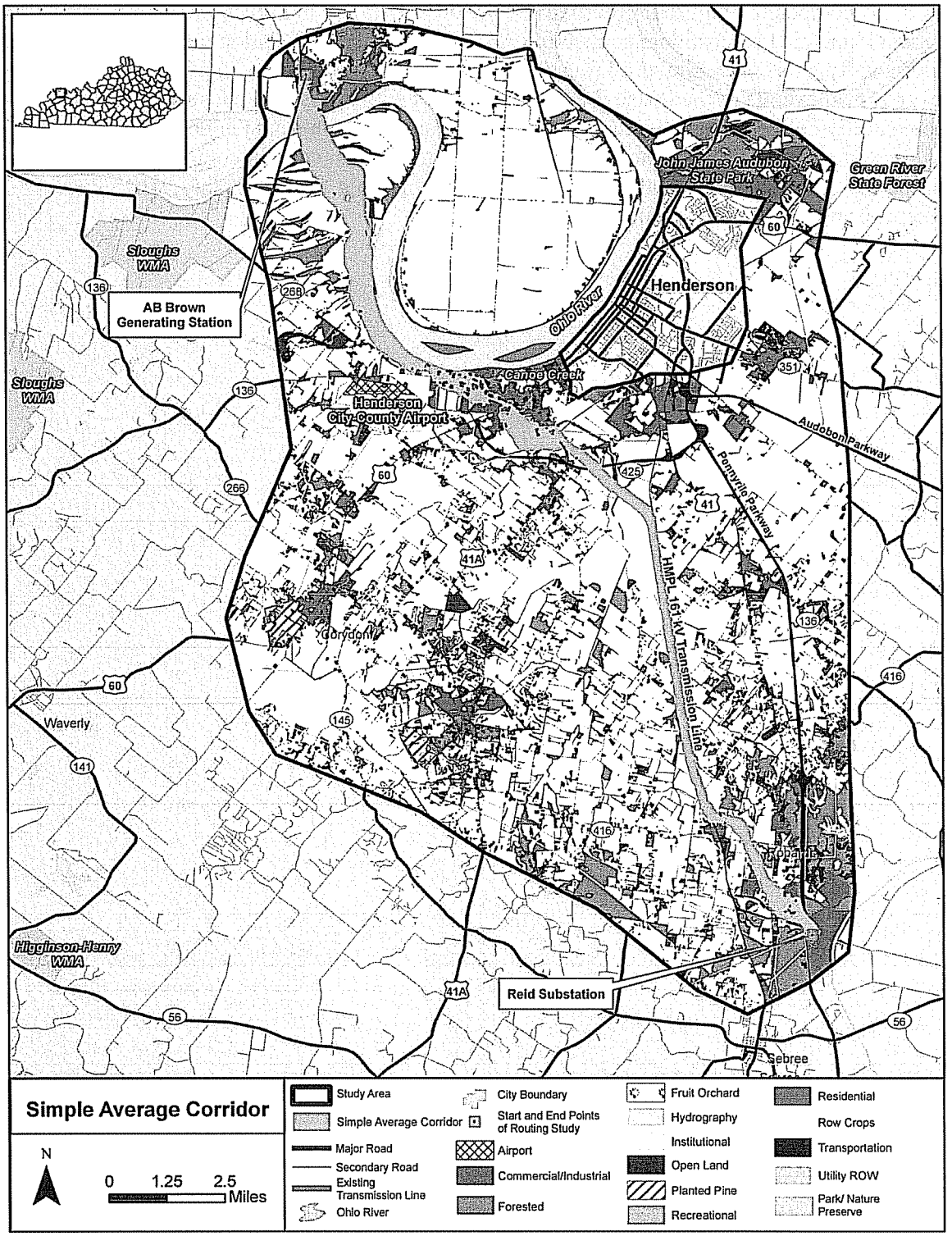


4. Simple Average Alternative Corridor

The Simple Average Corridor is created by equally weighting each perspective to produce a corridor that equally considers all three perspectives. In most cases the simple corridor will resemble one or more of the preceding perspective corridors.

The Simple Average Corridor (Figure 43) from AB Brown generating station most resembles the southern sub-corridor of the Natural Environment Corridor. The corridor crosses the Ohio River after leaving Brown, and navigates through the industrial district in much the same manner. Similar to the Built Corridor, the Simple Average Corridor seeks out the HMPL 161 kV transmission line as soon as it exits the industrial area. The corridor is approximately 23.3 miles long.

FIGURE 43: SIMPLE AVERAGE ALTERNATIVE CORRIDOR



5. Composite and Comparison of Alternative Corridors

A composite of all four Alternative Corridors is shown in Figure 44. These corridors identify three distinct corridors connecting AB Brown generating station to the Reid substation. Additionally, this composite of all four Alternative Corridors provides the foundation for the geographical extents of the Phase II Study Area. It is within this narrower study area that the more strictly defined Phase II data is developed. Data within this area is field verified and buildings are classified into categories including: agricultural, church, commercial, government, industrial, occupied house, outbuilding, recreational building, school facility, specialized structure, and unutilized building.

FIGURE 44: COMPOSITE OF ALTERNATIVE CORRIDORS

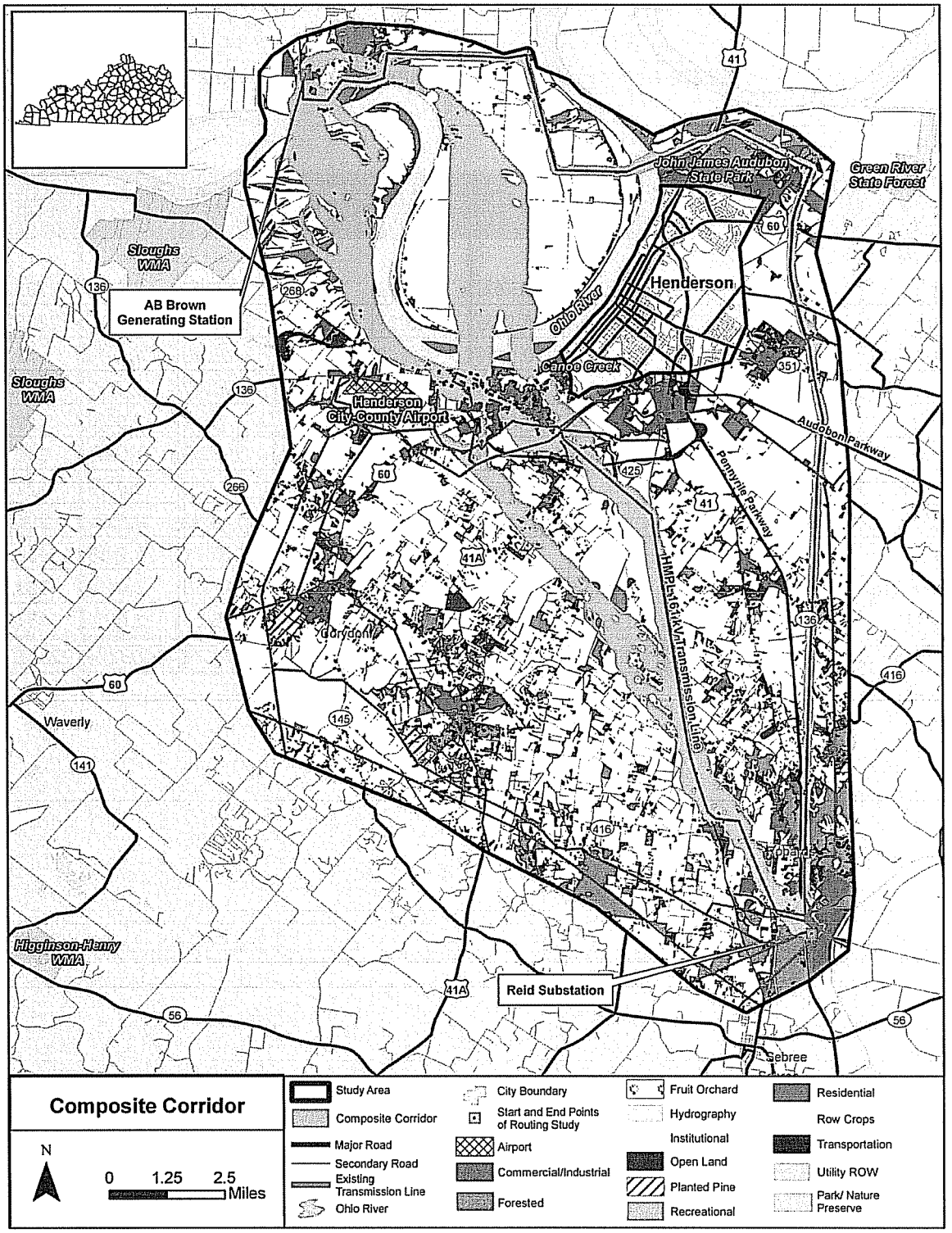


Table 15 illustrates the land use acerage that falls under each corridor and the overall percentages. By looking at the percentages, it is easy to determine the highest land use coverage that each corridor will affect.

TABLE 15: ALTERNATIVE CORRIDOR LAND USE ACREAGE

Land Use	Average Corridor Acres		Built Corridor Acres		Engineering Corridor Acres		Natural Corridor Acres		Composite Corridor Acres	
Commercial / Industrial	442.07	*7.76%*	486.39	*5.76%*	146.71	*3.25%*	582.37	*3.82%*	702.17	*3.07%*
Forested	843.58	*14.80%*	1287.07	*15.25%*	785.37	*17.42%*	1302.97	*8.54%*	2695.26	*11.78%*
Fruit Orchard	0	*0.00%*	0	*0.00%*	0	*0.00%*	21.42	*0.14%*	21.42	*0.09%*
Water	145.63	*2.56%*	158.08	*1.87%*	133.19	*2.95%*	677.47	*4.44%*	918.04	*4.01%*
Institutional	0	*0.00%*	0	*0.00%*	0	*0.00%*	9.19	*0.06%*	9.19	*0.04%*
Open Land	146.08	*2.56%*	149.89	*1.78%*	154.4	*3.42%*	195.49	*1.28%*	394.91	*1.73%*
Planted Pine	0	*0.00%*	0	*0.00%*	21.64	*0.48%*	0	*0.00%*	21.64	*0.09%*
Residential	51.27	*0.90%*	41.98	*0.50%*	156.97	*3.48%*	148.42	*0.97%*	296.73	*1.30%*
Row Crops	3769.24	*66.13%*	5990.98	*71.00%*	2654.26	*58.87%*	11930.81	*78.24%*	16989.47	*74.23%*
Transportation	158.22	*2.78%*	179.86	*2.13%*	156.12	*3.46%*	215.56	*1.41%*	383.56	*1.68%*
Utility ROW	143.56	*2.52%*	143.43	*1.70%*	299.85	*6.65%*	166.04	*1.09%*	454.08	*1.98%*
Total:	**5699.65**	100.00%	**8437.68**	100.00%	**4508.51**	100.00%	**15249.74**	100.00%	**22886.47**	100.00%

Part X: Alternative Routes

Using the results of the Alternate Corridor Analysis, the Vectren routing team analyzed these corridors and developed possible routes. The process resulted in the creation of 8 alternate routes. Photo Science then analyzed the routes using the Alternative Route Evaluation Model. The criteria consist of elements from the Built, Engineering, and Natural environments. Construction, maintenance, and other costs were also input to the analysis. As with the suitability grids, the analysis is weighted for Built, Engineering, Natural, and Simple Average scenarios.

1. Alternative Routes

The Vectren siting team identified 8 routes after studying the alternative corridors. These routes are shown with and without the Alternate Corridors in Figures 45 and 46, respectively.

Route A:

Route A is the easternmost route, completely paralleling existing transmission lines. From the Brown generating station, the route parallels a 138kV line and crosses from Indiana to Kentucky before arriving at a substation, and then begins southeast along a 161kV line to the Reid substation. Route A is approximately 31 miles long, and stays entirely within the Engineering Alternate Corridor.

Route B:

Route B follows a similar path as Route A for approximately 5.2 miles leaving Brown generating station, and paralleling the existing 138kV transmission line before turning due south. When the route turns south, it leaves the Engineering Alternate Corridor, briefly, and joins the Natural Alternate Corridor. The route continues south, slightly bending to the east before crossing the Ohio River from Indiana to Kentucky, just south of the city of Henderson. Route B then maneuvers through the industrial district before joining an existing Henderson Municipal Power & Light (HMPL) 161kV transmission line and traveling southeast to Reid substation. Route B is approximately 26.8 miles long.

Route C:

Leaving AB Brown generating station, Route C is similar to routes A & B in that it initially parallels the same 138 kV transmission line for approximately 2.5 miles, but on the north side of the line whereas Routes A & B parallel on the south side. After 2.5 miles, Route C continues southeast utilizing a cross-country route, and briefly parallels an existing road before arriving at the Ohio River. Route C uses Henderson Island to cross the Ohio River into Kentucky. Route C travels to the southwest of downtown Henderson, before bending southeast and beginning to parallel the existing HMPL line. Route C continues to parallel the HMPL line for the remaining 10 miles to the Reid substation. Route C is approximately 25.8 miles long.

Route D:

Route D leaves the Brown generating station headed due south, crossing over the Ohio River from Indiana into Kentucky less than a mile from Brown. After crossing the Ohio River, the route bends southeast before turning due south in order to avoid wetland areas. Route D stays within the Built Alternate Corridor, and follows the course of the river to the industrial district to the southwest of the city of Henderson. Here Route D, similarly to Routes B & C, begins to co-locate with the existing HMPL line headed southeast all the way to the Reid substation. The route stays entirely within the Built Alternate Corridor, and nearly stays completely within a subcorridor of the Natural Alternate Corridor. Route D is approximately 23.9 miles long.

Route E:

Route E is identical to Route D with one exception. Approximately 6.3 miles after crossing the Ohio River into Kentucky, Route E turns south, out of the Alternate Corridors. Route E threads its way between Henderson Airport to the west and a historic property to the east. After turning east just south of the historic property, Route E bends east and rejoins Routes B-D in the Natural & Built Alternate Corridors, and joins the existing HMPL transmission line headed southeast to the Reid substation. Route E is approximately 24.9 miles long.

Route F:

Route F follows a similar path as Route E until 2.6 miles after leaving the Alternate Corridors. Where Route E bent eastward to rejoin the Alternate Corridors, Route F continues, cross-country, southeast until it meets up with the existing HMPL 161kV transmission line that heads southeast to Reid substation. This junction occurs approximately 5.4 miles southeast of the junction used by the other Alternate Routes. Route F is approximately 23.4 miles in overall length.

Route G:

Route G is a hybrid between Route F and Route H. Route G is identical to Route F until 3.9 miles northwest of the junction with the existing transmission line heading southeast into the Reid substation. At this junction, Route G bends more sharply to the southeast for approximately 2 miles and joins Route H. Route G is 23.3 miles long.

Route H:

Route H heads due south out of Brown generating station, similar to Routes D-G, and crosses the Ohio River into Indiana slightly west of the other Alternate Routes and Alternate Corridors. Route H travels roughly south, cross-country, for approximately 6.9 miles before bending southeast for approximately 7 miles before joining Route G and eventually linking with the existing HMPL transmission line headed southeast to the Reid substation. Route H is approximately 24.2 miles long.

FIGURE 45: ALTERNATIVE ROUTES WITH COMPOSITE CORRIDOR

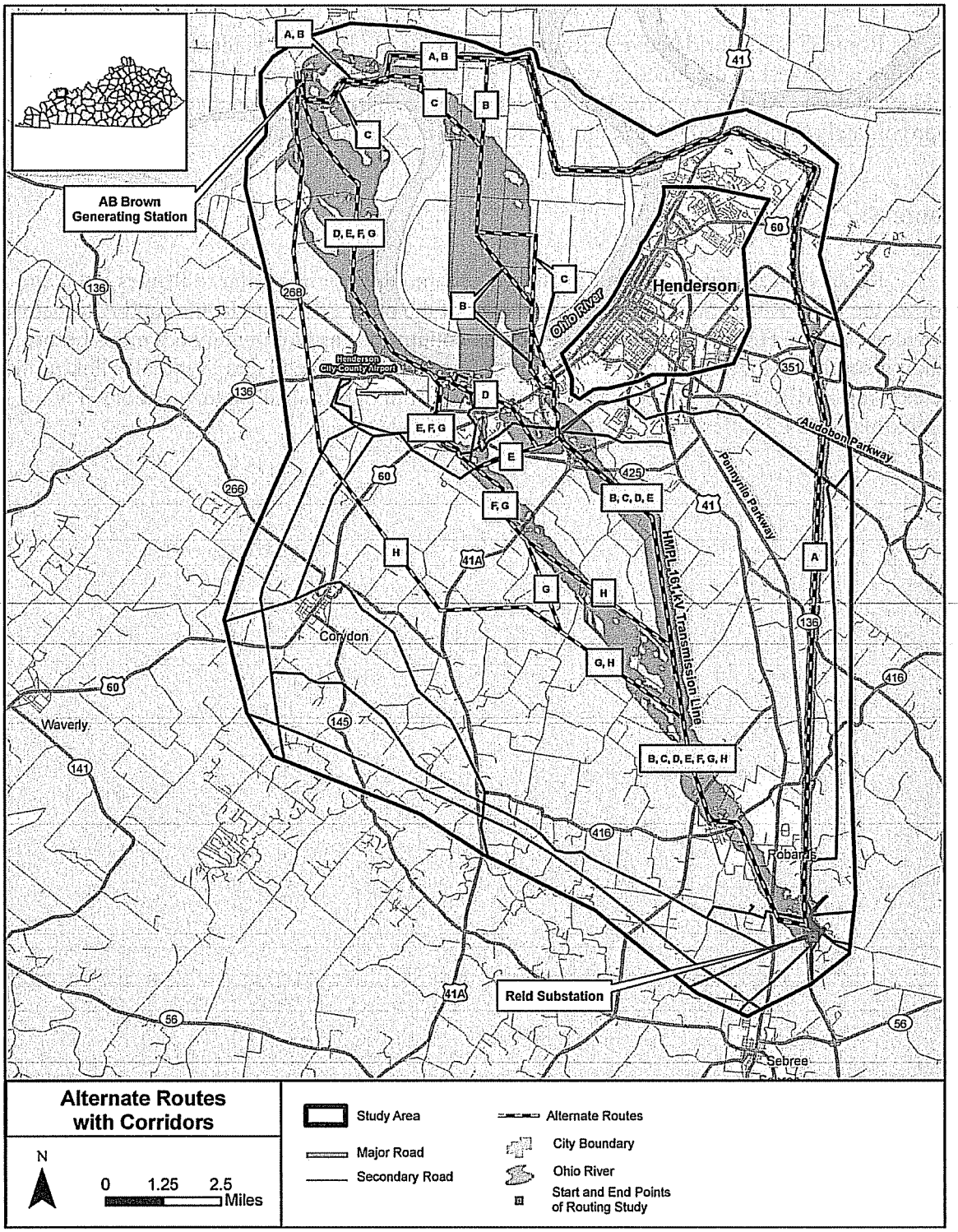
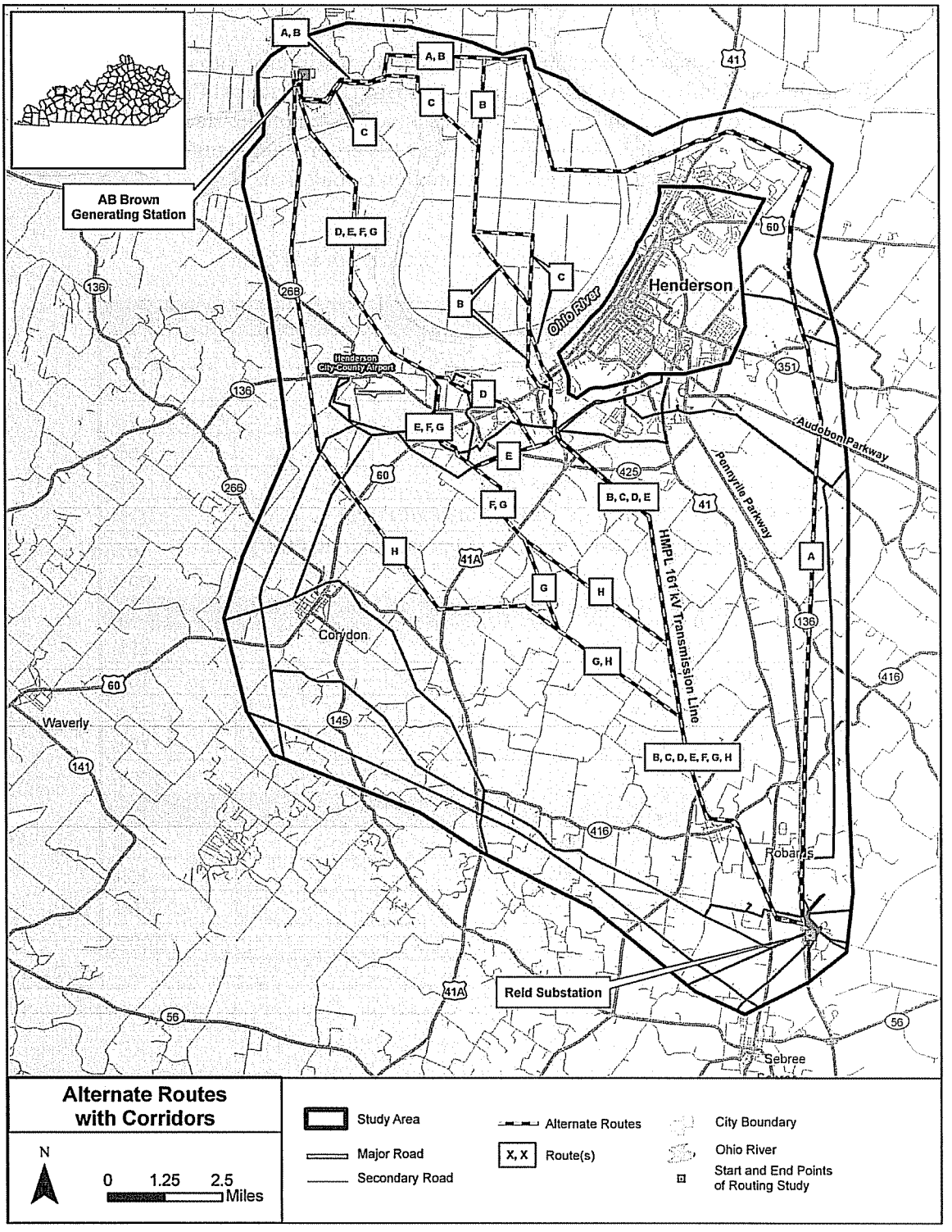


FIGURE 46: ALTERNATIVE ROUTES



2. Alternative Route Evaluation

Statistics were collected for each route alternative and divided into three categories that are similar to the Alternative Corridor perspectives of Built, Natural, and Engineering. The statistics were then normalized and weights were assigned based on the standardized weights developed by the Vectren project team. Table 16 lists the criteria and weights for each perspective with respect to the alternate route evaluation calculations.

TABLE 16: ALTERNATE ROUTE CRITERIA & WEIGHTS

Built	Weight
Residences within the ROW	55 %
Proximity to Residences (300' of ROW)	15%
Proposed Residential Developments	4%
Proximity to Commercial Buildings (300')	6%
Proximity to Industrial Buildings (300')	2%
School, Daycare, Church, Cemetery, Park Parcels (#)	12%
NRHP Listed/Eligible Structures or Districts (1500' from ROW)	6%
Total	**100%**
Natural	
Natural Forests (Acres)	25%
Stream/River Crossings	10%
Wetland Areas (Acres)	55%
Floodplain Areas (Acres)	10%
Total	**100%**
Engineering	
Miles of Rebuild with Existing T/L	0%
Miles of Co-Location with Existing T/L	40%
Total Project Costs	60%
Total	**100%**

2.1. Raw Statistics and Normalized Statistics:

Tables 17 & 18 show the raw and normalized statistics for each route. The statistics were normalized to provide a method of comparison between each of the categories. Miles of co-location with existing utilities and miles of co-location with roads were the only values that were inverted since a higher value in this category is viewed as desirable. Normalized values have a range from 0 to 1. The lower scores represent higher relative suitability.

TABLE 17: RAW STATISTICS AND NORMALIZED STATISTICS (BY STATE)

FOR ALL ROUTES BY STATE								
	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Built								
Relocated Residences (within 75' Corridor)	1	0	0	0	0	0	0	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	1	0	0	0	0	0	0	0
Proximity to Residences (300')	38	16	11	5	8	10	9	11
Indiana:	5	4	2	0	0	0	0	1
Kentucky:	33	12	9	5	8	10	9	10
Proposed Developments	1	0	0	0	0	0	0	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	0	0	0	0	0	0	0	0
Proximity to Commercial Buildings (300')	1	2	5	1	1	0	0	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	1	2	5	1	1	0	0	0
Proximity to Industrial Buildings (300')	0	6	0	24	9	9	9	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	0	6	0	24	9	9	9	0
School, DayCare, Church, Cemetery, Park Parcels (#)	0	1	0	0	0	0	0	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	0	0	0	0	0	0	0	0
NRHP Listed/Eligible Strucs./Districts (1500' from edge of R/W)	1	0	0	0	1	1	1	0
Indiana:	0	0	0	0	0	0	0	0
Kentucky:	1	0	0	0	1	1	1	0
Natural								
Natural Forests (Acres)	70.6	49.0	67.1	40.8	36.9	49.0	45.6	62.9
Indiana:	22.30	21.66	36.23	4.52	4.52	4.52	4.52	1.00
Kentucky:	48.30	27.34	30.87	36.28	32.38	44.48	41.08	61.90
Stream/River Crossings	38	29	27	26	29	33	39	38
Indiana:	7	12	11	1	1	1	1	1
Kentucky:	31	17	16	25	28	32	38	37
Wetland Areas (Acres)	40.9	18.7	22	17.8	17.4	20.8	17.7	40.3
Indiana:	4.44	7.21	2.29	0.31	0.31	0.31	0.31	1.10
Kentucky:	36.46	11.49	19.71	17.49	17.09	20.49	17.39	39.20
Floodplain Areas (Acres)	139.1	134.1	131.9	205.5	220.0	161.0	130.4	123.8
Indiana:	4.60	4.60	2.29	9.28	9.28	9.28	9.28	14.80
Kentucky:	134.50	129.50	129.61	196.22	210.72	151.72	121.12	109.00
Engineering								
Length (Miles)	31.06	26.85	25.80	23.87	24.93	23.39	23.26	24.23
Indiana:	10.15	11.51	10.56	0.93	0.93	0.93	0.93	0.99
Kentucky:	20.91	15.34	15.24	22.94	24	22.46	22.33	23.24
Miles of Rebuild with Existing T/L								
Indiana:								
Kentucky:								
Miles of Co-location with Existing Utility	31.06	17.79	14.87	13.7	16.34	9.06	7.5	5.68
Indiana:	10.00	5.07	2.37	0.43	0.43	0.43	0.43	0.00
Kentucky:	21.06	12.72	12.5	13.27	15.91	8.63	7.07	5.68
Percent of Co-location with Roads	6.43	6.64	6.64	10.63	8.32	4.93	3.37	2.58
Indiana:	0	0	0	0	0	0	0	0.33
Kentucky:	6.43	6.64	6.64	10.63	8.32	4.93	3.37	2.25
Number of Parcels	156	142	122	96	95	90	95	105
Indiana:	67	76	65	8	8	8	8	6
Kentucky:	89	66	57	88	87	82	87	99
Total Project Costs	$48,720,045	$42,434,985	$40,808,298	$38,639,390	$39,101,220	$36,867,787	$36,731,943	$36,044,810
Indiana:	$15,144,003	$16,877,659	$15,937,440	$ 1,409,218	$ 1,412,833	$ 1,412,833	$ 1,412,833	$ 1,406,572
Kentucky:	$33,576,042	$25,557,326	$24,870,858	$37,230,172	$37,688,387	$35,454,954	$35,319,110	$34,638,238

TABLE 18: RAW STATISTICS AND NORMALIZED STATISTICS (TOTAL)

DATA FOR ALL ROUTES								
Built	Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Feature	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences Within the ROW	1	0	0	0	0	0	0	0
Normalized	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proximity to Residences (Within 300' of ROW Corridor)	38	16	11	5	8	10	9	11
Normalized	1.0	0.3	0.2	0.0	0.1	0.2	0.1	0.2
Proposed Developments	1	0	0	0	0	0	0	0
Normalized	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proximity to Commercial Buildings (300')	1	2	5	1	1	0	0	0
Normalized	0.2	0.4	1.0	0.2	0.2	0.0	0.0	0.0
Proximity to Industrial Buildings (300')	0	6	0	24	9	9	9	0
Normalized	0.0	0.3	0.0	1.0	0.4	0.4	0.4	0.0
School, DayCare, Church, Cemetery, Park Parcels (#)	0	1	0	0	0	0	0	0
Normalized	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Listed Historic Structures/Districts (1500' from edge of ROW)	1	0	0	0	1	1	1	0
Normalized	1.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0
Natural								
Natural Forests (Acres)	70.6	49.0	67.1	40.8	36.9	49.0	45.6	62.9
Normalized	1.0	0.4	0.9	0.1	0.0	0.4	0.3	0.8
Stream/River Crossings	38	29	27	26	29	33	39	38
Normalized	0.9	0.2	0.1	0.0	0.2	0.5	1.0	0.9
Wetland Areas (Acres)	40.9	18.7	22.0	17.8	17.4	20.8	17.7	40.3
Normalized	1.0	0.1	0.2	0.0	0.0	0.1	0.0	1.0
Floodplain Areas (Acres)	139.1	134.1	131.9	205.5	220.0	161.0	130.4	123.8
Normalized	0.2	0.1	0.1	0.8	1.0	0.4	0.1	0.0
Engineering								
Length (Miles)	31.06	26.85	25.80	23.87	24.93	23.39	23.26	24.23
Normalized	1.0	0.5	0.3	0.1	0.2	0.0	0.0	0.1
Miles of Rebuild with Existing T/L*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Normalized	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inverted	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miles of Co-location with Existing Utility*	31.06	17.79	14.87	13.70	16.34	9.06	7.50	5.68
Normalized	1.0	0.5	0.4	0.3	0.4	0.1	0.1	0.0
Inverted	0.0	0.5	0.6	0.7	0.6	0.9	0.9	1.0
Miles of Co-location with Roads/Railroads*	6.43	6.64	6.64	10.63	8.32	4.93	3.37	2.58
Normalized	0.5	0.5	0.5	1.0	0.7	0.3	0.1	0.0
Inverted	0.5	0.5	0.5	0.0	0.3	0.7	0.9	1.0
Number of Parcels	156	142	122	96	95	90	95	105
Normalized	1.0	0.8	0.5	0.1	0.1	0.0	0.1	0.2
Total Project Costs	$48,720,045	$42,434,985	$40,808,298	$38,639,390	$39,101,220	$36,867,787	$36,731,943	$36,044,810
Normalized	1.0	0.5	0.4	0.2	0.2	0.1	0.1	0.0

The relative cost calculations were determined based on easement acquisition, construction, line angles, construction cost associated with Ohio River crossing, and clearing costs. Easement costs were calculated by using 125% of county PVA (Property Value Assessor) assessed value per acre. Construction costs were calculated on a per mile basis for each route. Line angle costs were calculated based on the size of the angle (0° to 30° were considered small angle structures, greater than 30° were considered large. Clearing costs were based on the acreage of forested land that each route easement crossed. Land, angle, clearing and construction costs were added together and the sum for each Route was listed (See Table 19). These values are approximate, and are not meant to define the exact cost of a route. For example, angles can be adjusted, and individual property owners will negotiate sales. The generalized values were incorporated to the analysis to provide a generalized idea of construction and easement acquisition.

Tables 20, 21, 22 and 23 illustrate the Alternative Route Evaluation Model Emphasis on the Built, Engineering, Natural and Simple Average Environments, respectively. The tables show each environment and their weighted values. Weights for each feature that is present are shown in blue. If there are no occurrences of any one feature, the rows show gray color. The Built, Natural, and Engineering models emphasize their namesake category by 5 times when compared to the other categories. The Simple Average Model places equal emphasis on each category.

TABLE 19: COST CALCULATIONS

ENTIRE ROUTE								
	ROUTE A	ROUTE B	ROUTE C	ROUTE D	ROUTE E	ROUTE F	ROUTE G	ROUTE H
LENGTH								
Length	31.06	26.85	25.80	23.87	24.93	23.39	23.26	24.23
Construction Cost	$40,376,700	$34,901,100	$33,540,000	$31,031,000	$32,409,000	$30,407,000	$30,238,000	$31,499,000
Angles								
<= 30 Degrees	39	18	15	18	17	15	12	10
Cost	$3,120,000	$1,440,000	$1,200,000	$1,440,000	$1,360,000	$1,200,000	$960,000	$800,000
> 30 Degrees	12	17	17	10	15	14	17	8
Cost	$1,416,000	$2,006,000	$2,006,000	$1,180,000	$1,770,000	$1,652,000	$2,006,000	$944,000
Total Angle Costs	$4,536,000	$3,446,000	$3,206,000	$2,620,000	$3,130,000	$2,852,000	$2,966,000	$1,744,000
Ohio River Crossing								
	$1,000,000	$2,000,000	$2,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Clearing Cost								
Forested Acres	70.63	49.00	67.10	40.75	36.89	48.95	45.60	62.90
Clearing Cost	$918,190	$637,000	$872,300	$529,750	$479,570	$636,350	$592,800	$817,700
ROW Acquisition Cost								
125% PVA Property Cost	$1,889,155.00	$1,450,885.00	$1,189,998.44	$3,458,640.00	$2,082,650.00	$1,972,437.00	$1,935,143.00	$984,110.00
Total	**$48,720,045**	**$42,434,985**	**$40,808,298**	**$38,639,390**	**$39,101,220**	**$36,867,787**	**$36,731,943**	**$36,044,810**
INDIANA PORTION								
	ROUTE A	ROUTE B	ROUTE C	ROUTE D	ROUTE E	ROUTE F	ROUTE G	ROUTE H
LENGTH								
Length	10.15	11.51	10.56	0.93	0.93	0.93	0.93	0.99
Construction Cost	$13,193,700	$14,964,300	$13,728,000	$1,209,000	$1,209,000	$1,209,000	$1,209,000	$1,287,000
Angles								
<= 30 Degrees	8	9	5	0	0	0	0	1
Cost	$640,000	$720,000	$400,000	$0	$0	$0	$0	$80,000
> 30 Degrees	7	6	9	1	1	1	1	0
Cost	$826,000	$708,000	$1,062,000	$118,000	$118,000	$118,000	$118,000	$0
Total Angle Costs	$1,466,000	$1,428,000	$1,462,000	$118,000	$118,000	$118,000	$118,000	$80,000
Clearing Cost								
Forested Acres	22.30	21.66	36.23	4.52	4.52	4.52	4.52	1.00
Clearing Cost	$289,900	$281,580	$470,990	$58,760	$58,760	$58,760	$58,760	$13,000
ROW Acquisition Cost								
125% PVA Property Cost	$194,341	$203,733	$276,450	$27,333	$27,333	$27,333	$27,333	$26,572
Total	**$15,143,941**	**$16,877,613**	**$15,937,440**	**$1,413,093**	**$1,413,093**	**$1,413,093**	**$1,413,093**	**$1,406,572**
KENTUCKY PORTION								
	ROUTE A	ROUTE B	ROUTE C	ROUTE D	ROUTE E	ROUTE F	ROUTE G	ROUTE H
LENGTH								
Length	20.91	15.34	15.24	22.94	24.00	22.46	22.33	23.24
Construction Cost	$27,183,000	$19,936,800	$19,812,000	$29,822,000	$31,200,000	$29,198,000	$29,029,000	$30,212,000
Angles								
<= 30 Degrees	31	9	10	18	17	15	12	9
Cost	$2,480,000	$720,000	$800,000	$1,440,000	$1,360,000	$1,200,000	$960,000	$720,000
> 30 Degrees	5	11	8	9	14	13	16	8
Cost	$590,000	$1,298,000	$944,000	$1,062,000	$1,652,000	$1,534,000	$1,888,000	$944,000
Total Angle Costs	$3,070,000	$2,018,000	$1,744,000	$2,502,000	$3,012,000	$2,734,000	$2,848,000	$1,664,000
Ohio River Crossing								
	$1,000,000	$2,000,000	$2,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Clearing Cost								
Forested Acres	48.33	27.34	30.87	36.23	32.37	44.43	41.08	61.90
Clearing Cost	$628,290	$355,420	$401,310	$470,990	$420,810	$577,590	$534,040	$804,700
ROW Acquisition Cost								
125% PVA Property Cost	$1,694,814.00	$1,247,152.00	$913,548.44	$3,431,307.00	$2,055,317.00	$1,945,104.00	$1,907,810.00	$957,538.00
Total	**$33,576,104**	**$25,557,372**	**$24,870,858**	**$37,226,297**	**$37,688,127**	**$35,454,694**	**$35,318,850**	**$34,638,238**

2.2. Emphasis on Built Environment:

TABLE 20: ALTERNATIVE ROUTE EVALUATION MODEL EMPHASIS ON BUILT ENVIRONMENT

CRITERIA ↓		Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Built	72%								
Feature		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	55.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Residences (300')	15.0%	1.00	0.33	0.18	0.00	0.09	0.15	0.12	0.18
Weighted		0.15	0.05	0.03	0.00	0.01	0.02	0.02	0.03
Proposed Residential Developments	4.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Commercial Buildings (300')	6.0%	0.20	0.40	1.00	0.20	0.20	0.00	0.00	0.00
Weighted		0.01	0.02	0.06	0.01	0.01	0.00	0.00	0.00
Proximity to Industrial Buildings (300')	2.0%	0.00	0.25	0.00	1.00	0.38	0.38	0.38	0.00
Weighted		0.00	0.01	0.00	0.02	0.01	0.01	0.01	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	12.0%	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Listed Historic Structures/Districts (1500' from edge of R/W)	6.0%	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
		0.06	0.00	0.00	0.00	0.06	0.06	0.06	0.00
TOTAL	100.0%	0.81	0.20	0.09	0.03	0.09	0.09	0.09	0.03
WEIGHTED TOTAL		0.58	0.14	0.06	0.02	0.07	0.06	0.06	0.02
Natural	14%								
Natural Forests (Acres)	25.0%	1.00	0.36	0.90	0.11	0.00	0.36	0.26	0.77
Weighted		0.25	0.09	0.22	0.03	0.00	0.09	0.06	0.19
Stream/River Crossings	10.0%	0.92	0.23	0.08	0.00	0.23	0.54	1.00	0.92
Weighted		0.09	0.02	0.01	0.00	0.02	0.05	0.10	0.09
Wetland Areas (Acres)	55.0%	1.00	0.05	0.20	0.02	0.00	0.14	0.01	0.98
Weighted		0.55	0.03	0.11	0.01	0.00	0.08	0.01	0.54
Floodplain Areas (Acres)	10.0%	0.16	0.11	0.08	0.85	1.00	0.39	0.07	0.00
Weighted		0.02	0.01	0.01	0.08	0.10	0.04	0.01	0.00
TOTAL	100.0%	0.91	0.15	0.35	0.12	0.12	0.26	0.18	0.82
WEIGHTED TOTAL		0.13	0.02	0.05	0.02	0.02	0.04	0.03	0.12
Engineering	14%								
Miles of Rebuild with Existing T/L*	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miles of Co-location with Existing T/L*	40.0%	0.00	0.52	0.64	0.68	0.58	0.87	0.93	1.00
Weighted		0.00	0.21	0.26	0.27	0.23	0.35	0.37	0.40
Total Project Costs	60.0%	1.00	0.50	0.38	0.20	0.24	0.06	0.05	0.00
Weighted		0.60	0.30	0.23	0.12	0.14	0.04	0.03	0.00
TOTAL	100.0%	0.60	0.51	0.48	0.40	0.38	0.39	0.40	0.40
WEIGHTED TOTAL		0.08	0.07	0.07	0.06	0.05	0.05	0.06	0.06
SUM OF WEIGHTED TOTALS		0.80	0.24	0.18	0.10	0.14	0.16	0.14	0.19
RANK		8	7	5	1	2	4	3	6

2.3. Emphasis on Engineering Concerns

TABLE 21: ALTERNATIVE ROUTE EVALUATION MODEL EMPHASIS ON ENGINEERING CONCERNS

Engineering									
CRITERIA ↓		Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Built	14%								
Feature		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	55.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Residences (300')	15.0%	1.00	0.33	0.18	0.00	0.09	0.15	0.12	0.18
Weighted		0.15	0.05	0.03	0.00	0.01	0.02	0.02	0.03
Proposed Residential Developments	4.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Commercial Buildings (300')	6.0%	0.20	0.40	1.00	0.20	0.20	0.00	0.00	0.00
Weighted		0.01	0.02	0.06	0.01	0.01	0.00	0.00	0.00
Proximity to Industrial Buildings (300')	2.0%	0.00	0.25	0.00	1.00	0.38	0.38	0.38	0.00
Weighted		0.00	0.01	0.00	0.02	0.01	0.01	0.01	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	12.0%	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Listed Historic Structures/Districts (1500' from edge of R/W)	6.0%	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
		0.06	0.00	0.00	0.00	0.06	0.06	0.06	0.00
TOTAL	100.0%	0.81	0.20	0.09	0.03	0.09	0.09	0.09	0.03
WEIGHTED TOTAL		0.11	0.03	0.01	0.00	0.01	0.01	0.01	0.00
Natural	14%								
Natural Forests (Acres)	25.0%	1.00	0.36	0.90	0.11	0.00	0.36	0.26	0.77
Weighted		0.25	0.09	0.22	0.03	0.00	0.09	0.06	0.19
Stream/River Crossings	10.0%	0.92	0.23	0.08	0.00	0.23	0.54	1.00	0.92
Weighted		0.09	0.02	0.01	0.00	0.02	0.05	0.10	0.09
Wetland Areas (Acres)	55.0%	1.00	0.05	0.20	0.02	0.00	0.14	0.01	0.98
Weighted		0.55	0.03	0.11	0.01	0.00	0.08	0.01	0.54
Floodplain Areas (Acres)	10.0%	0.00	0.00	0.00	0.00	1.00	2.00	3.00	4.00
Weighted		0.00	0.00	0.00	0.00	0.10	0.20	0.30	0.40
TOTAL	100.0%	0.89	0.14	0.34	0.04	0.12	0.42	0.47	1.22
WEIGHTED TOTAL		0.12	0.02	0.05	0.01	0.02	0.06	0.07	0.17
Engineering	72%								
Miles of Rebuild with Existing T/L*	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miles of Co-location with Existing T/L*	40.0%	0.00	0.52	0.64	0.68	0.58	0.87	0.93	1.00
Weighted		0.00	0.21	0.26	0.27	0.23	0.35	0.37	0.40
Total Project Costs	60.0%	1.00	0.50	0.38	0.20	0.24	0.06	0.05	0.00
Weighted		0.60	0.30	0.23	0.12	0.14	0.04	0.03	0.00
TOTAL	100.0%	0.60	0.51	0.48	0.40	0.38	0.39	0.40	0.40
WEIGHTED TOTAL		0.43	0.37	0.35	0.29	0.27	0.28	0.29	0.29
SUM OF WEIGHTED TOTALS		0.67	0.42	0.41	0.30	0.30	0.35	0.37	0.46
RANK		8	6	5	1	2	3	4	7
* Inverted for calculations									

2.4. Emphasis on Natural Environment:

TABLE 22: ALTERNATIVE ROUTE EVALUATION MODEL EMPHASIS ON NATURAL ENVIRONMENT

Natural									
CRITERIA ↓		Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Built	14%								
Feature		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	55.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Residences (300')	15.0%	1.00	0.33	0.18	0.00	0.09	0.15	0.12	0.18
Weighted		0.15	0.05	0.03	0.00	0.01	0.02	0.02	0.03
Proposed Residential Developments	4.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Commercial Buildings (300')	6.0%	0.20	0.40	1.00	0.20	0.20	0.00	0.00	0.00
Weighted		0.01	0.02	0.06	0.01	0.01	0.00	0.00	0.00
Proximity to Industrial Buildings (300')	2.0%	0.00	0.25	0.00	1.00	0.38	0.38	0.38	0.00
Weighted		0.00	0.01	0.00	0.02	0.01	0.01	0.01	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	12.0%	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Listed Historic Structures/Districts (1500' from edge of R/W)	6.0%	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
		0.06	0.00	0.00	0.00	0.06	0.06	0.06	0.00
TOTAL	100.0%	0.81	0.20	0.09	0.03	0.09	0.09	0.09	0.03
WEIGHTED TOTAL		0.11	0.03	0.01	0.00	0.01	0.01	0.01	0.00
Natural	72%								
Natural Forests (Acres)	25.0%	1.00	0.36	0.90	0.11	0.00	0.36	0.26	0.77
Weighted		0.25	0.09	0.22	0.03	0.00	0.09	0.06	0.19
Stream/River Crossings	10.0%	0.92	0.23	0.08	0.00	0.23	0.54	1.00	0.92
Weighted		0.09	0.02	0.01	0.00	0.02	0.05	0.10	0.09
Wetland Areas (Acres)	55.0%	1.00	0.05	0.20	0.02	0.00	0.14	0.01	0.98
Weighted		0.55	0.03	0.11	0.01	0.00	0.08	0.01	0.54
Floodplain Areas (Acres)	10.0%	0.00	0.00	0.00	0.00	1.00	0.39	0.07	0.00
Weighted		0.00	0.00	0.00	0.00	0.10	0.04	0.01	0.00
TOTAL	100.0%	0.89	0.14	0.34	0.04	0.12	0.26	0.18	0.82
WEIGHTED TOTAL		0.64	0.10	0.24	0.03	0.09	0.19	0.13	0.59
Engineering	14%								
Miles of Rebuild with Existing T/L*	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miles of Co-location with Existing T/L*	40.0%	0.00	0.52	0.64	0.68	0.58	0.87	0.93	1.00
Weighted		0.00	0.21	0.26	0.27	0.23	0.35	0.37	0.40
Total Project Costs	60.0%	1.00	0.50	0.38	0.20	0.24	0.06	0.05	0.00
Weighted		0.60	0.30	0.23	0.12	0.14	0.04	0.03	0.00
TOTAL	100.0%	0.60	0.51	0.48	0.40	0.38	0.39	0.40	0.40
WEIGHTED TOTAL		0.08	0.07	0.07	0.06	0.05	0.05	0.06	0.06
SUM OF WEIGHTED TOTALS		0.84	0.20	0.32	0.09	0.15	0.25	0.20	0.65
RANK		4	2	3	1	2	5	3	7

2.5. Equal Consideration of Categories (Simple Average):

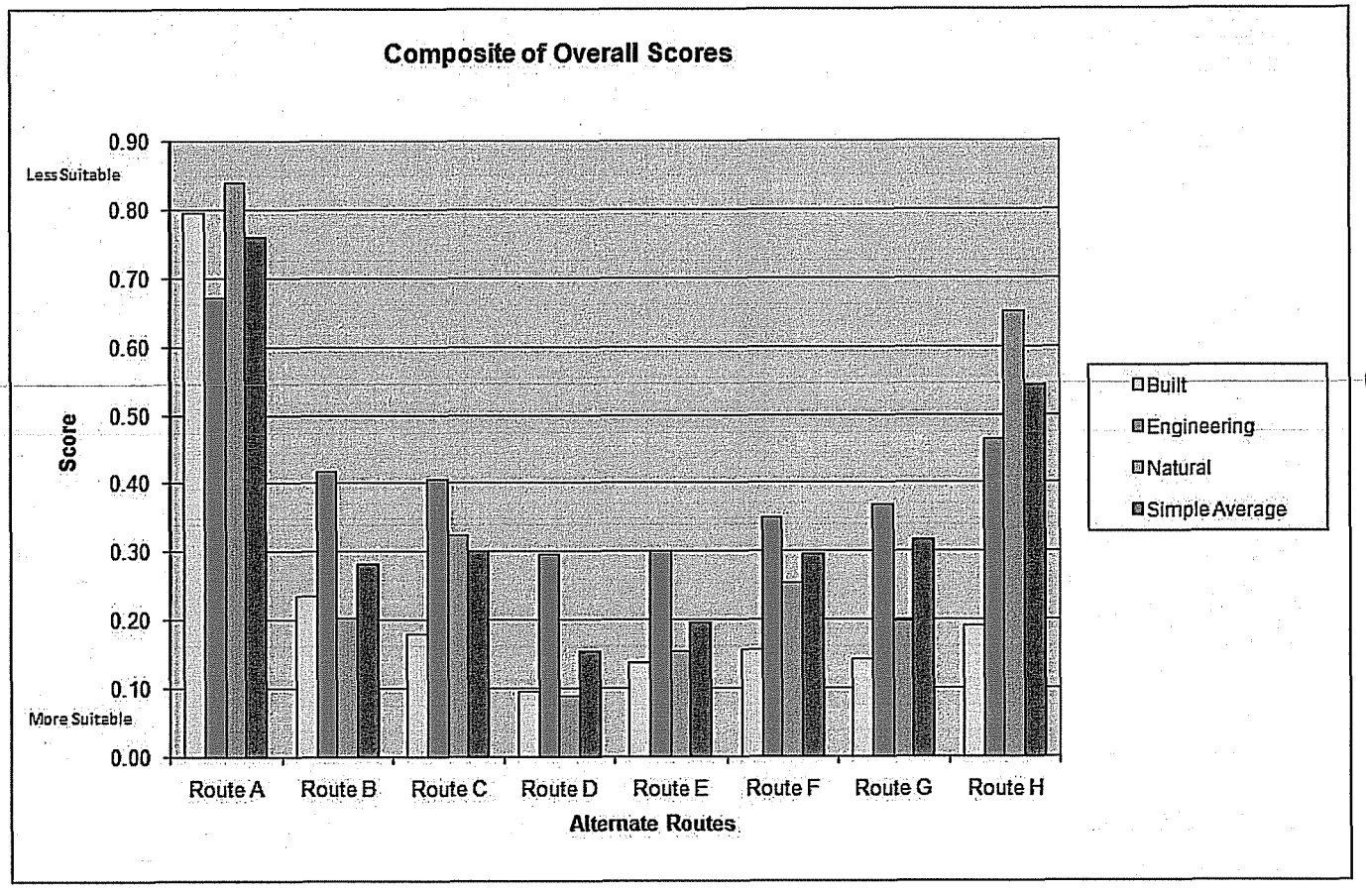
TABLE 23: ALTERNATIVE ROUTE EVALUATION MODEL EQUAL CONSIDERATION OF CATEGORIES

Simple Average									
CRITERIA ↓		Route A	Route B	Route C	Route D	Route E	Route F	Route G	Route H
Built	33%								
Feature		Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
Residences within the ROW	55.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Residences (300')	15.0%	1.00	0.33	0.18	0.00	0.09	0.15	0.12	0.18
Weighted		0.15	0.05	0.03	0.00	0.01	0.02	0.02	0.03
Proposed Residential Developments	4.0%	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proximity to Commercial Buildings (300')	6.0%	0.20	0.40	1.00	0.20	0.20	0.00	0.00	0.00
Weighted		0.01	0.02	0.06	0.01	0.01	0.00	0.00	0.00
Proximity to Industrial Buildings (300')	2.0%	0.00	0.25	0.00	1.00	0.38	0.38	0.38	0.00
Weighted		0.00	0.01	0.00	0.02	0.01	0.01	0.01	0.00
School, DayCare, Church, Cemetery, Park Parcels (#)	12.0%	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
Listed Historic Structures/Districts (1500' from edge of R/W)	6.0%	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
		0.06	0.00	0.00	0.00	0.06	0.06	0.06	0.00
TOTAL	100.0%	0.81	0.20	0.09	0.03	0.09	0.09	0.09	0.03
WEIGHTED TOTAL		0.27	0.07	0.03	0.01	0.03	0.03	0.03	0.01
Natural	33%								
Natural Forests (Acres)	25.0%	1.00	0.36	0.90	0.11	0.00	0.36	0.26	0.77
Weighted		0.25	0.09	0.22	0.03	0.00	0.09	0.06	0.19
Stream/River Crossings	10.0%	0.92	0.23	0.08	0.00	0.23	0.54	1.00	0.92
Weighted		0.09	0.02	0.01	0.00	0.02	0.05	0.10	0.09
Wetland Areas (Acres)	55.0%	1.00	0.05	0.20	0.02	0.00	0.14	0.01	0.98
Weighted		0.55	0.03	0.11	0.01	0.00	0.08	0.01	0.54
Floodplain Areas (Acres)	10.0%	0.00	0.00	0.00	0.00	1.00	2.00	3.00	4.00
Weighted		0.00	0.00	0.00	0.00	0.10	0.20	0.30	0.40
TOTAL	100.0%	0.89	0.14	0.34	0.04	0.12	0.42	0.47	1.22
WEIGHTED TOTAL		0.29	0.05	0.11	0.01	0.04	0.14	0.16	0.40
Engineering	33%								
Miles of Rebuild with Existing T/L*	0.0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weighted		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miles of Co-location with Existing T/L*	40.0%	0.00	0.52	0.64	0.68	0.58	0.87	0.93	1.00
Weighted		0.00	0.21	0.26	0.27	0.23	0.35	0.37	0.40
Total Project Costs	60.0%	1.00	0.50	0.38	0.20	0.24	0.06	0.05	0.00
Weighted		0.60	0.30	0.23	0.12	0.14	0.04	0.03	0.00
TOTAL	100.0%	0.60	0.51	0.48	0.40	0.38	0.39	0.40	0.40
WEIGHTED TOTAL		0.20	0.17	0.16	0.13	0.12	0.13	0.13	0.13
SUM OF WEIGHTED TOTALS		0.76	0.28	0.30	0.15	0.20	0.30	0.32	0.54
RANK		8	3	5	1	2	4	6	7
* Inverted for calculations									

2.6. Overall Scores of Each Route:

After evaluating all routes within the network of alternatives, Route D scored best in all perspectives (Built, Engineering, Natural, and Simple). Route E scored the second best in all categories, with the exception of the Natural perspective. Here Route E was tied for second place with Route B. Figure 47 displays the comparison of the routes in a bar graph.

FIGURE 47: COMPARISON OF THE ROUTES



3. Expert Judgment:

In the Expert Judgment Model, Routes C & D were examined by the Vectren routing team. During the meeting, much discussion took place on the items in the Expert Judgment Model including their definitions and weights. The following items and weights were determined by the siting team:

- *Visual Issues* 5%
- *Community Issues* 25%
- *Project Management (Schedule & Cost)* 25%
- *Construction / Maintenance Accessibility / Reliability* 25%
- *Special Permit Issues (COE Permits)* 20%

Visual Impacts:

During the route selection meeting, it was discussed that visual issues were impacts to a scenic vista or landscape, as well as how many people may be able to see the line, no matter what the landscape setting may be.

Route C scored a "5" or high impact. Route C crosses the Ohio River just southwest (downstream) of the city of Henderson. Henderson is located along the Ohio River, on the Kentucky side. Though the route enters Kentucky in an industrial district near a water treatment facility, the view from the riverfront and the down town area of Henderson may be impacted by the placement of a transmission line in this area. Furthermore, Route C borders a cemetery near Henderson.

Route D scored a "3" or medium impact. Relative to Route C, Route D travels a more cross-country route, impacting the viewshed of fewer people. Route D crosses the river directly south of the Brown generating station, and is not visible, vis-à-vis a bend in the river, from downtown Henderson.

Community Issues:

Issues discussed for community issues pertained to the proximity to people (homes, churches, schools, etc…), direct impact to property owners, and additional issues that some may perceive, including opposition to the project and preference expressed by community leaders with whom Vectren has met. Additionally, community opposition to the construction of the transmission line is represented in this dimension of the Expert Judgment model.

Route C scored a "3" or medium impact.

Route D scored a "5" or high impact.

Project Management (Schedule & Cost):

The main discussion for the project management item was the number of property owners and their potential impacts to the schedule. Additionally, the difference in river crossing types was discussed.

Route C scored a "2" or somewhat low impact.

Route D scored a "3" or medium impact. Route D will require the acquisition of more easements in Kentucky.

Construction / Maintenance Accessibility / Reliability:

Route C crossed near Henderson and incorporates an island in the crossing. Route D crosses the river without the assistance of any island.

Route C scored a "4" or somewhat high impact. This was mainly driven by the construction and access to (for repair and maintenance) a structure on the island in the Ohio River between Indiana and Kentucky. Special construction and transportation techniques would be needed for these purposes, including a helicopter lifting the constructed structure to the island, and boat access for construction equipment.

Route D scored a "3" or medium impact.

Special Permit Issues:

The largest special permit issue has been identified as the Ohio River crossing. A river crossing is required, and must be permitted by the USACE. It is expected that the Corps of Engineers (USACE) will prefer the Ohio River crossing of Route D over Route C. This is because Route C will need a structure placed on Henderson Island in the Ohio River. Therefore, Route C scored a "4" and Route D scored a "3."

Overall Weighting:

Route C scored 3.3 according to the Expert Judgment Analysis

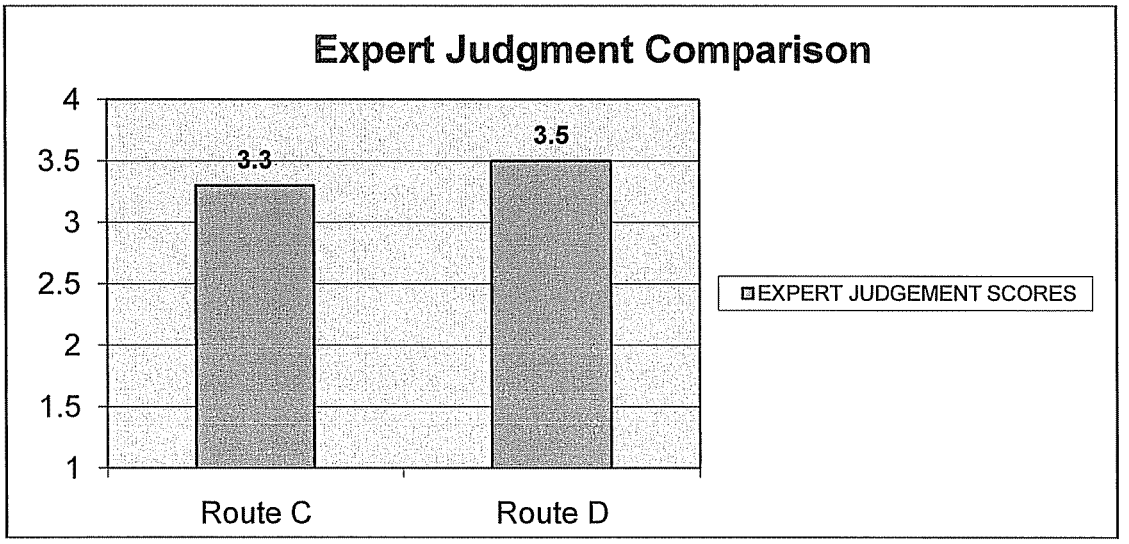
Route D scored 3.5 according to the Expert Judgment Analysis.

TABLE 24: Expert Judgment Model

EXPERT JUDGEMENT 1 = Low Impact 3 = Medium Impact 5 = High Impact

	Per Project	Route C	Route D
Visual Issues	5%	5	3
Weighted		0.25	0.15
Community Issues	25%	3	5
Weighted		0.75	1.25
Project Management (Schedule & Cost)	25%	2	3
Weighted		0.5	0.75
Construction/ Maintenance Accessability / Reliability	25%	4	3
Weighted		1	0.75
Special Permit Issues	20%	4	3
Weighted		0.8	0.6
TOTAL			
	100%	3.3	3.5
		Indiana	Kentucky

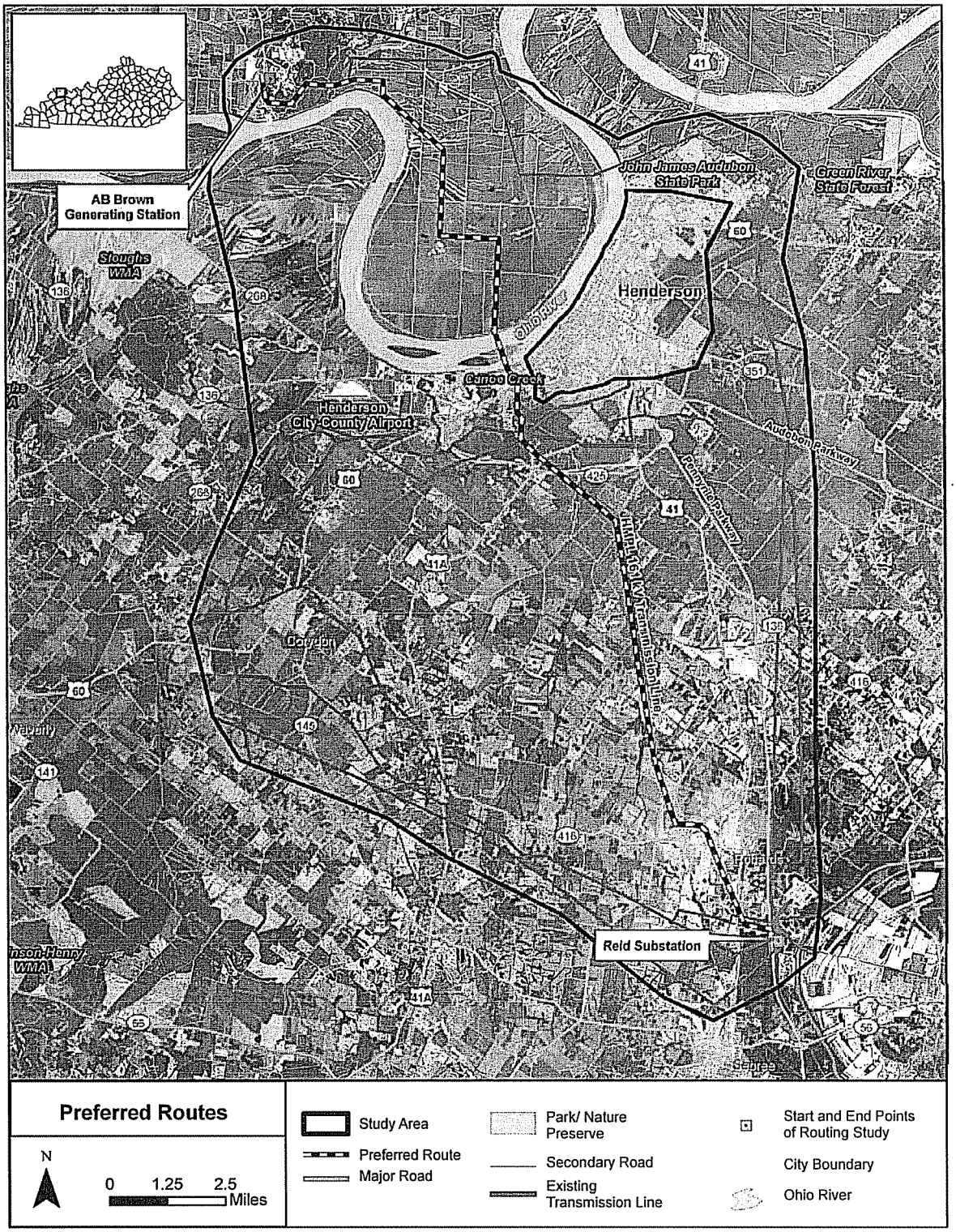
FIGURE 48: EXPERT JUDGMENT COMPARISON



Part XI: Conclusion

This study is based on the EPRI-GTC siting methodology. The results of this study developed a route for a 345 kV transmission line right-of-way from the AB Brown generating station to the Reid substation. After evaluating the alternative routes, Route C received the lowest score and Route D was second. Although Route C and Route D scored close to each other, the team, using Expert Judgment, determined that Route C was indeed preferable over Route D (Figure 48).

FIGURE 49: PREFERRED ROUTE



Part XII: References

"EPRI-GTC Overhead Electric Transmission Line Siting Methodology," Electric Power Research Institute & Georgia Transmission Corp., February 2006

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www.hendersonkyairport.com

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TAB 8

AFFIDAVIT OF JAMES H. COX

Comes the Affiant, James H. Cox, and, after first being duly sworn, states the following:

1. I am employed by Southern Indiana Gas & Electric Co. d/b/a Vectren Energy Delivery of Indiana, Inc. (Vectren), and have been so employed for the past four years as Chief Electric Engineer and Manager of Electric Reliability Compliance.
2. I am a licensed professional electric engineer, and my license was granted by the State of Texas in 1986.
3. I have been involved in Southern Indiana Gas & Electric Co. d/b/a Vectren Energy Delivery of Indiana, Inc. (hereafter, Vectren)'s Gibson-Brown-Reid 345 kV Electric Transmission Project (hereafter, Project) and my involvement has included review of proposed design and construction for the Project, and
4. That the Project will be designed, constructed and maintained in accordance with accepted engineering practices, the National Electric Safety Code, and in accordance with all applicable legal requirements.

Further, Affiant Sayeth Not.

James H. Cox
Affiant

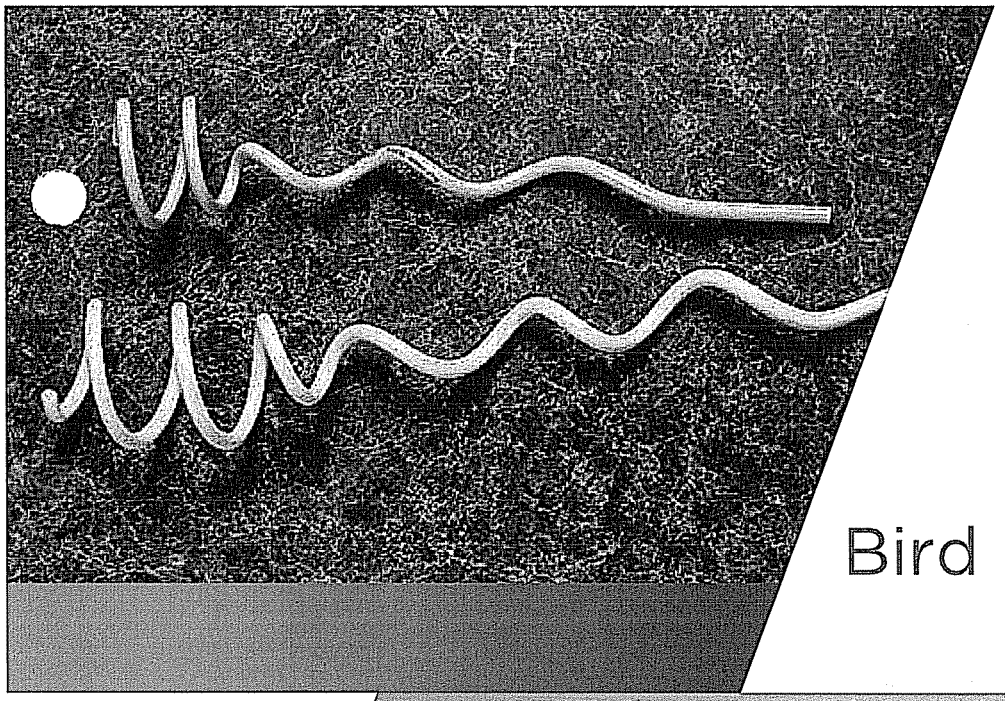
State of Indiana
County of Vanderburgh

Subscribed, sworn to and acknowledged before me by James H. Cox this 8th day of July, 2010.

Mary Etta Smith
Notary Public, State at Large
My commission expires: July 4, 2014

MARY ETTA SMITH
Notary Public, State of Indiana
County of Vanderburgh
My Commission Expires July 4, 2014

TAB 9



Bird Flight Diverters

Energy Division

Tyco Electronics' Bird Flight Diverters, commonly referred to as BFD, provide a visual image that helps migratory birds avoid collisions with utility power lines. Studies have shown that proper installation of BFD's may reduce collisions by up to 90%. A technical paper supporting this claim is available upon request through your local Tyco Electronics representative.

Material
These units are made from high impact UV stabilized, PVC material. The standard color is gray with yellow being the second most common. Other colors are available upon request; however, studies conducted do not prove the color to be a determining factor in the BFD's effectiveness.

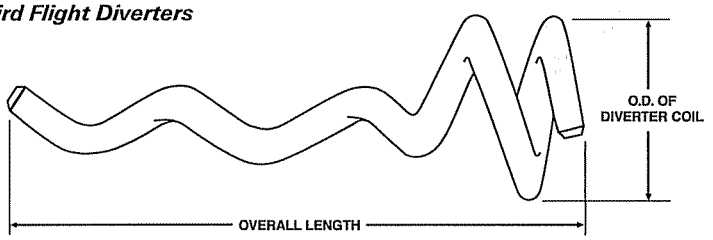
Performance
These units have a Heliformed rod gripping section (the smaller end) that is sized to fit a certain diameter that does not abrade the conductor on which it is applied. The larger helical end is designed to provide the birds a more visual reference of the line. It is designed to be used in ambient temperatures from −40 to 150°F with a flow temperature of about 200°F.

Application
Studies have determined the most effective spacing to be 15ft. (5meters) apart on the topmost outside conductors.

Tyco Electronics

Our commitment. Your advantage.

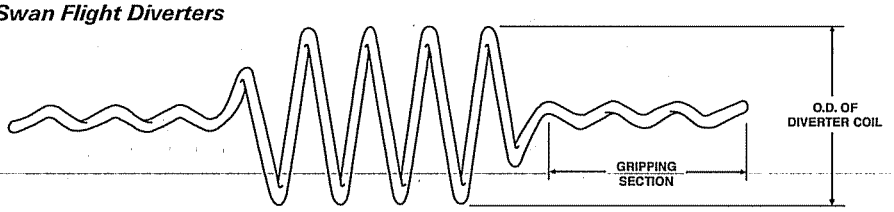
Bird Flight Diverters



Catalog Number	Range Inches (mm)		Overall Length Inches (mm)	O.D. of Diverter Coil (mm)	Color Code	Weight Pounds (gms)
BFD 0445	0.175 - 0.249	(4.4-6.3)	7.0 (178)	2.25 (57)	Black	0.10 (45)
BFD 0635	0.250 - 0.349	(6.4-8.9)	8.5 (216)	2.5 (63)	Blue	0.12 (54)
BFD 0890	0.350 - 0.449	(9.0-11.4)	9.5 (241)	2.75 (70)	Brown	0.13 (59)
BFD 1140	0.450 - 0.599	(11.5-15.2)	11.0 (280)	3.0 (76)	Green	0.16 (172)
BFD 1520	0.600 - 0.770	(15.3-19.6)	13.0 (330)	4.0 (102)	Purple	0.33 (150)
BFD 1960	0.771 - 0.858	(19.7-21.8)	15.0 (381)	4.0 (102)	Red	0.38 (172)
BFD 2220	0.859 - 0.969	(21.9-24.6)	19.0 (482)	4.5 (114)	Blue	0.39 (177)
BFD 2460	0.970 - 1.050	(24.7-26.7)	19.0 (482)	4.5 (114)	Brown	0.43 (195)
BFD 2700	1.051 - 1.131	(26.8-28.7)	23.5 (597)	5.0 (127)	Green	0.53 (240)
BFD 3035	1.132 - 1.212	(28.8-30.8)	23.5 (597)	5.5 (140)	Red	0.55 (249)

Note: Add suffix "Y" to part number's for yellow color (i.e. BFD 0445-Y).

Swan Flight Diverters



Catalog Number	Range Inches (mm)		Overall Length Inches (mm)	O.D. of Diverter Coil (mm)	Color Code	Weight Pounds (gms)
SFD 0445	0.175 - 0.249	(4.4-6.3)	20 (508)	7.0 (178)	Black	0.40 (181)
SFD 0635	0.250 - 0.349	(6.4-8.9)	23 (584)	7.0 (178)	Blue	0.46 (208)
SFD 0890	0.350 - 0.449	(9.0-11.4)	25 (635)	7.5 (190)	Brown	0.50 (226)
SFD 1140	0.450 - 0.599	(11.5-15.2)	35 (889)	8.0 (203)	Green	0.70 (317)
SFD 1520	0.600 - 0.770	(15.3-19.6)	38 (965)	8.0 (203)	Purple	1.40 (635)
SFD 1960	0.771 - 0.858	(19.7-21.8)	38 (965)	8.0 (203)	Red	1.40 (635)
SFD 2220	0.859 - 0.969	(21.9-24.6)	40 (1016)	8.0 (203)	Blue	1.50 (680)
SFD 2460	0.970 - 1.050	(24.7-26.7)	40 (1016)	8.0 (203)	Brown	1.50 (680)
SFD 2700	1.051 - 1.131	(26.8-28.7)	46 (1168)	8.0 (203)	Green	2.0 (907)
SFD 3035	1.132 - 1.212	(28.8-30.8)	46 (1168)	8.0 (203)	Red	2.0 (907)

Note: Add suffix "Y" to part number's for yellow color (i.e. SFD 0445-Y).

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http://energy.tycoelectronics.com/bfd
www.tycoelectronics.com

Energy Division – a pioneer in the development of economical solutions for the electrical power industry. Our product range includes: Cable accessories, connectors & fittings, electrical equipment, instruments, lighting controls, insulators & insulation enhancement and surge arresters.

1654037 E174 7/07

TAB 10

The Gleaner
SCRIPPS HOWARD
An E.W. Scripps Company
BOX 4
455 KLUTEY PARK PLAZA
HENDERSON, KENTUCKY 42419-0004
Phone (270) 827-2000
Fax (270) 827-2765

AFFIDAVIT OF PUBLICATION

STATE OF KENTUCKY)
) SS
COUNTY OF HENDERSON)
)

I, Sharon Alvey, being Classified Customer Service Rep
(Title or Position)
of THE GLEANER, a newspaper published and having a general circulation in the City of Henderson, Kentucky, hereby states that The Gleaner carried the advertisement of:

Construction of 345 KV elect. transmission line

ON THE FOLLOWING DATES July 14, 2010

SIGNATURE Sharon Alvey

DATE: 7-14-10

Subscribed and sworn to before me by the Affiant named in the afore-going Affidavit, being personally known to me this 14 day of July 2010.

My commission expires June 7, 2014.

Vicki Yates 417366

Notary Public

HOME REPAIR RENOVATION LAWN CARE PROFESSIONAL SERVICES CLEANING CHILD/ADULT CARE TREE TRIMMING SERVICES

OFFICE ASSISTANT
PT duties include light bookkeeping, phone, filing, organizational skills
Send to P.O.Box 2038
Henderson, KY 42419
(812) 461-1234

0002 Public Notices

PUBLIC NOTICE

Southern Indiana Gas & Electric Co., d/b/a Vectren Energy Delivery of Indiana, Inc. ("Vectren") proposes to construct a 345 KV electric transmission line from Vectren's A.B. Brown Plant on the Ohio River in Posey County, Indiana, between Evansville and Mt. Vernon, to the Big Rivers Reid EHV Station near Sebree, in Webster County, Kentucky. The Kentucky portion of the line begins at the Ohio River, just south of the City of Henderson, and continues through the Industrial District before intercepting and paralleling an existing Henderson Municipal Power and Light (HMPL) 161kV Transmission Line. The line follows the existing line in a Southeast direction through Henderson County and into Webster County where it connects to to Big River's Reid Generating Station. Total Route length is approximately fifteen miles in Kentucky.

The proposed construction is subject to approval by the Kentucky State Board on Electric Generation and Transmission Siting (the "Board"). The address of the Board is the Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky, 40601. The phone number of the Public Service Commission is (502) 564-3940.

A person who wishes to become a party to a proceeding before the Board may, by written motion filed no later than thirty (30) days after Vectren's application is filed with the Board, request leave to intervene. A party may, upon written motion filed no later than thirty (30) days after Vectren's application has been filed, request the Board to schedule an evidentiary hearing at the offices of the Public Service Commission, Frankfort, Kentucky.

A request for a local public hearing shall be made by at least three (3) interested persons who reside in the county or municipal corporation in which the construction is proposed to be located. The request shall be made in writing and shall be filed within thirty (30) days following the filing of Vectren's application.

PERSON

Expressway Dodge is seeking full time employees for night duty watching security cameras. Must provide impeccable references. Pre-employment drug test required. Apply in person, fill out online application at www.expresswaydodge.com or send resume to jobs@expresswayonline.com.

EXPRESSWAY
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Evansville, IN 47715

1100 Automotive

1100 Automotive

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Due to the growth of Expressway Jeep's Service Department, there are immediate openings available. We are seeking a full time Diesel Mechanic as well as an Automatic Transmission Mechanic. Must be ASE Certified. Benefits include insurance, competitive wages, 401k, paid vacations, and more.

Apply in person to:
Jim Gaston, Service Manager
Expressway Jeep Chrysler Dodge
3900 Highway 62 E, Mt. Vernon, IN 47620
or email to jgaston@expresswayjeep.com

EXPRESSWAY
Chrysler Jeep Dodge RAM

Open Mon-Sat 8:30am- 8:30pm
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Expressway is a equal opportunity employer.

1103 E Franklin St
or mail resume to
P.O. Box 3357
Evansville, IN 47732
attn Brian Stratman

Let us help your business with your recruitment needs.
CALL CLASSIFIEDS
(812) 461-1234

Exp. & Class A CDL needed. Home Daily. Paid holidays, vacations, insurance.
O'Bryan Barrel Co.
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1452 Healthcare Nursing

1452 Healthcare Nursing

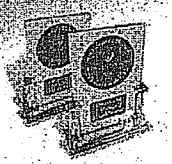
1452 Healthcare Nursing

Good people delivering Great quality care.

Becoming one of the Top 5% of the nation's hospitals has not been easy, or overnight. It's been a process. One that's taken time, effort and working with dedicated staff to change the way we do things.

Changing processes where appropriate has not only resulted in greater quality and better care – but it has resulted in better outcomes for our patients and those they love.

Improving Quality. Improving Outcomes. Improving Lives.



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2009 & 2010 Distinguished Hospital Awards for Clinical Excellence.℠

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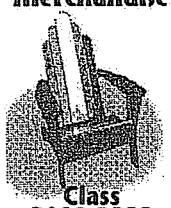
Flexible schedule. Contract position. The HealthPark is seeking a licensed or certified Massage Therapist to work as an independent contractor to provide deep muscle, sports and therapeutic massage. Candidate must be able to work in team environment and committed to providing outstanding customer service. One to two years experience preferred. The HealthPark is a 110,000 square foot medical based wellness center that focuses on maintaining and improving health - body, mind and spirit.

Apply online at www.omhs.org or for more information call 1-877-227-3841.

Merchandise



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3100 Appliances

FREEZER.19.6 cubic ft Frostless, Upright $145 812-867-2679

erator 26.4 cb ft. SXS Crush Ice/Ice, Water threw door. Almond Color 5 years old. Good Condition $350 call 270-577-8521.

3240 Articles for Sale

AUTO CARRIER (Sears) "Sport 15 CAV", med sz, like new $125; Sears "Pro Form" treadmill, ex cond. $300. To see call for appt. 812-886-9787

BREAKER BOX, lg electrical. $80. 270-826-7987

1452 Healthcare Nursing

rm table w/leaf & 4 chrs $300, California King bed-MUST SEE-Will sacrifice at $1200 812-598-7238

MOVING SALE
Piano & bench in good cond, $350; 36" cable ready color TV $250; solid oak entertainment ctr $350; lrg solid oak dining table w/leaf & 6 chairs $600; 1 new & 1 good 16" rim truck tires for $95; table saw w/stand $200; scroll saw $75; 270-826-2814

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1452 Healthcare Nursing

1452 Healthcare Nursing

{growth}

Opportunity is cropping up all around American Senior Communities. You too can share in our growth at our Evansville locations.

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North Park Nursing Center
630 Fairway Drive, Evansville
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Must have certification and 1 year of experience.
We offer competitive compensation and the affordable benefits you would expect from an industry leader.

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Fax: 317-780-7472
Email: jhrjobs@americanseniorcommunities.com
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American Senior Communities

www.AmericanSrCommunities.com

TAB 11

KY POWER UP

Indiana-Kentucky *Electric Transmission Line* *800.928.2222 • www.kypowerup.com*

June 25, 2010

Dear _____,

As you may have read in a the Henderson Gleaner newspaper article on June 5, Vectren Energy Delivery (Vectren) has submitted a pre-filing notice to the Kentucky Public Service Commission (PSC) State Siting Board to move forward with phase two of a new electric transmission line that will ultimately connect Vectren's A.B. Brown plant in Posey County, Ind., and the Big Rivers Electric Corporation's Reid Station in Webster County, Ky. When completed, this critical project will improve electric reliability for the southwestern Indiana and western Kentucky regions by reducing power flow congestion and overloaded electric lines.

After a lengthy route study, which considered agricultural impact, electrical considerations, residential impact, visual impact, environmental impact, special constraints and cost, we have arrived at a preferred route. We intend to seek approval of this route through the PSC in an official filing this week.

We believe a parcel of your property falls within this proposed route. Therefore, we would like to invite you to a public meeting of impacted property owners on Tuesday, July 6, 2010. The meeting will take place at the Henderson Community College in the student services center from 5:30 to 8:30 p.m.; you are invited to drop in anytime during this 3-hour period.

At this meeting, you will have the opportunity to learn more about the project, its benefits to the region and the construction timeline. In addition, you will be able to review a detailed map of the proposed route and an aerial view of how it will cross your property. We will have representatives on hand who can discuss the easement acquisition process and how property owners will be compensated accordingly. You will walk away with contact information of a representative who will work with you to answer any questions and facilitate this process in the coming weeks.

We have enclosed a map of the meeting location and a brochure on the transmission line project that should help get you up to speed on our plans. Likewise, we have a web site, www.kypowerup.com, that should help address any questions prior to the meeting.

We hope you're able to attend the July 6 event and look forward to meeting you. If this date does not work for you, please contact us at 1-800-928-2222 or via email at BV345@qk4.com, and we will set up some time to discuss the project at your convenience. Please note: If you have a tenant farmer who utilizes your property for crop production, feel free to invite him/her to this meeting as well.

Thank you,

Ky Power Up staff

Please join us for the

KY Power Up Public Meeting

Henderson Community College

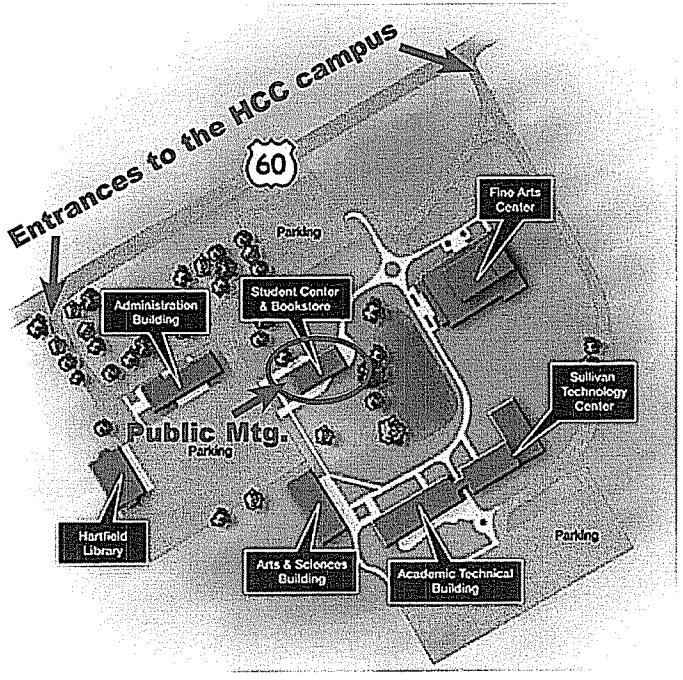
Student Services Center

July 6, 2010 • 5:30 - 8:30 p.m.

KY POWER UP

Indiana-Kentucky *Electric Transmission Line*

800.928.2222 • www.kypowerup.com • BV345@qk4.com



Benefits to Kentucky Residents

- No construction cost to Kentucky residents!
- Increases electricity import and export capability including access to more renewable energy;
- Enhances electric reliability and adds flexibility to the power supply in high demand or peak periods by relieving some of the load on the existing transmission system; and
- Improves overall transmission system safety and reliability by creating an additional source of electricity through a transmission network with stronger structures. Structures are designed to withstand high winds and ice accumulation.

Who is Vectren?

Vectren Corporation (NYSE: VVC) is an energy holding company headquartered in Evansville, Ind. Vectren's energy delivery subsidiaries provide gas and/or electricity to more than one million customers in adjoining service territories that cover nearly two-thirds of Indiana and west central Ohio. Vectren's non-utility subsidiaries and affiliates currently offer energy-related products and services to customers throughout the Midwest and Southeast. These include gas marketing and related services; coal production and sales, and energy infrastructure services.

To learn more about Vectren, visit www.vectren.com. VECTREN

Who is Big Rivers?

Big Rivers Electric Corporation is a custom-owned, not-for-profit, generation and transmission cooperative (G&T) headquartered in Henderson, Ky. Big Rivers is owned by three not-for-profit member cooperatives that distribute retail electric power to more than 111,000 homes, farms, businesses and industries across 22 counties in wester Kentucky. Big Rivers supplies the wholesale power needs of the member cooperatives and markets surplus power to non-member utilities and power markets. Big Rivers is a member of NERC and SERC.

To learn more about Big Rivers, visit www.bigrivers.com. Big Rivers Electric Corporation

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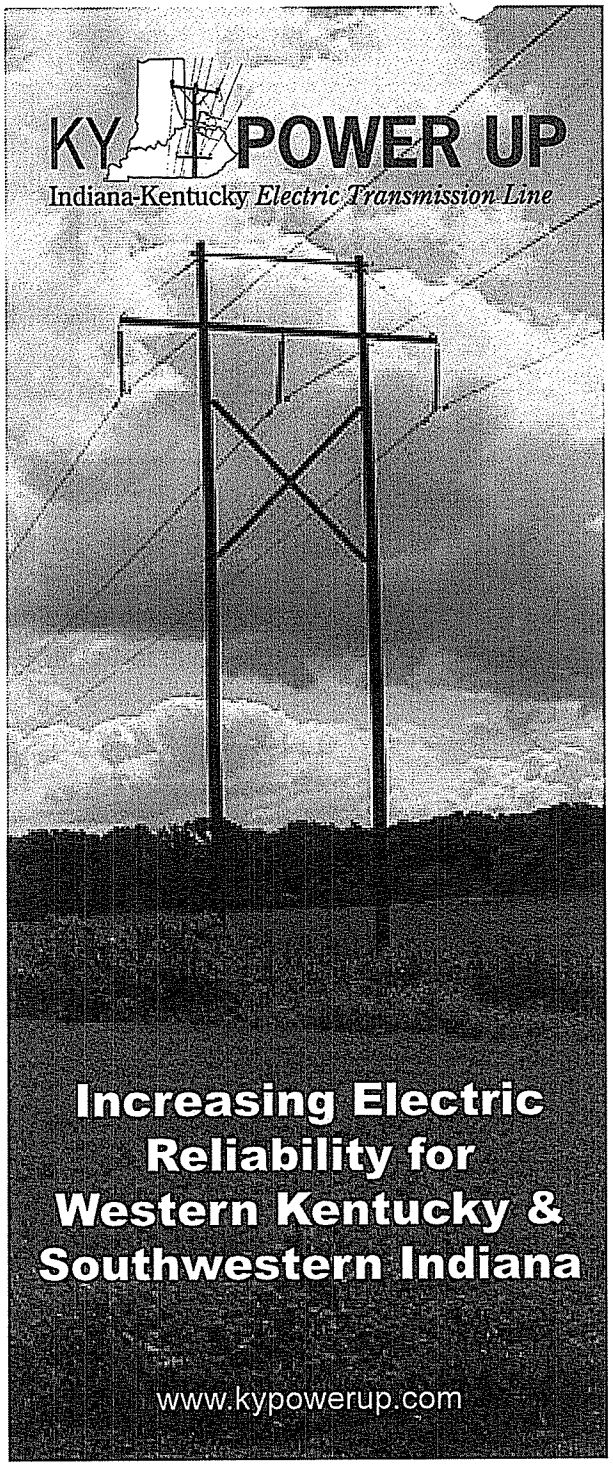


Project Overview

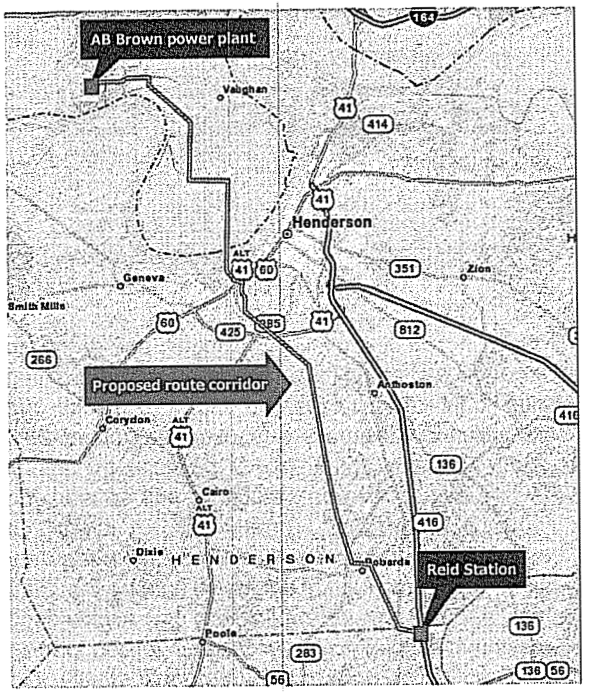
Vectren Energy Delivery (Vectren) has filed to construct a new transmission line connecting Big Rivers Electric Corporation's Reid Station in Webster County, Ky to Vectren's A.B. Brown plant in Posey County, Ind. This transmission line will reduce line overloads and increase reliability to the entire region.

Why is this line needed?

- Electric system reliability is crucial in today's environment. Outages can result in significant economic impacts and public inconveniences.
- Identified congestion on the electric transmission system in southwest Indiana and western Kentucky can limit access to available generation capacity in the energy markets.
- Limiting access to low cost generation capacity can result in higher energy costs to the systems constrained by congestion, which results in higher costs for their customers.

Visit www.kypowerup.com for an online resource to this project.

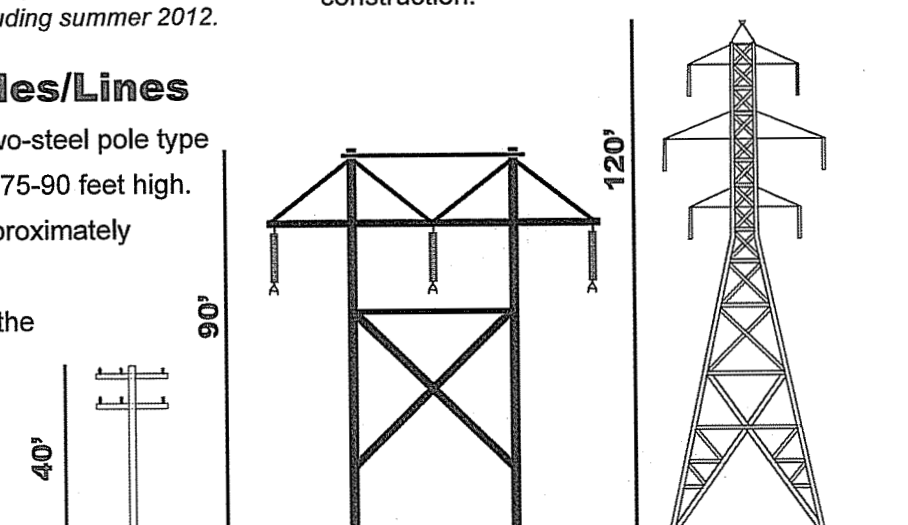
Proposed Route



The Kentucky portion of the transmission line route will be approximately 13 miles long with construction beginning early 2011 and concluding summer 2012.

Transmission Poles/Lines

- Most structures will be the two-steel pole type (cover photo) approximately 75-90 feet high.
- Typical structures will be approximately 900 feet apart.
- Steel poles will age to have the appearance of wood poles.



Right of Way and Land Owner Information

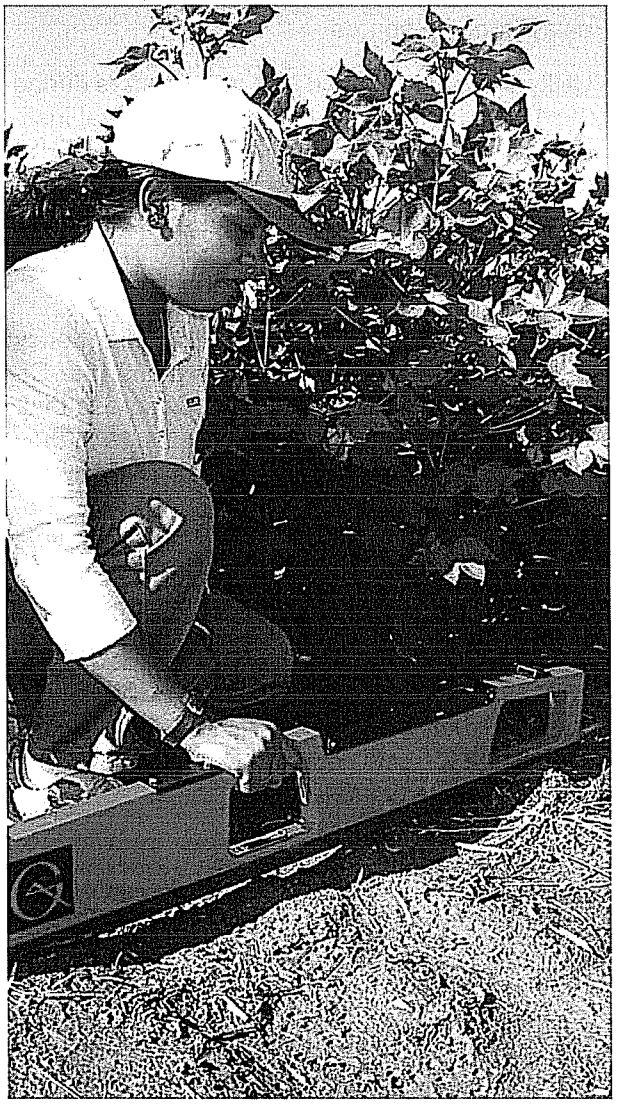
- Right of way will typically be 150 feet wide and approximately 60% will be alongside existing easements.
- Fair compensation will be paid to landowners who may have transmission facilities on their property.
- Construction crews will work with land owners for clearing trees and disposal of the wood.
- Vectren and its contractors will perform all environmental soil erosion mitigation during the construction.
- The landowner will be compensated and kept whole for any losses of crop value or similar short-term impacts during construction.

KY POWER UP

Indiana-Kentucky *Electric Transmission Line*

What is EMF

and how could it affect me?



Electric & Magnetic Fields (EMF)

EMF are found wherever there is electrictiy, whether it is wiring, appliances, computers, or power lines. Electric fields are associated with voltage, while magnetic fields are asscoiated with the flow of current. Exposure to any EMF source (e.g., a blender, computer, or power line) is determined by how strong the field is at its source, how far away you are from the source and how long you stay near the source. The strength of EMF drops off quickly as you move away from the source.

Utility companies joined with many others during the 1990s to provide funds for the National Institute of Environmental Health Sciences (NIEHS) to run the EMF Research and Public Information Dissemination Program so that independent scientists could determine whether exposure to EMF involves a risk to human health.

At the completion of the extremely low frequency (ELF) EMF research program in 1999, the Director of the NIEHS reported to Congress that: "The probability that ELF-EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal, scientific support that exposure to this agent is causing any degree of harm."

The Institute of Engineering and Technology also concluded overall that "the balance of scientific evidence to date still does not indicate that harmful effects occur in humans due to low-level exposure to EMFs."

Sources: *EMF - Electric and Magnetic Fields Associated with the Use of Electric Power: Questions and Answers* (PDF, 11.4 MB; National Institute for Environmental Health Safety and the National Institutes of Health, June 2002.)
UK Institution of Engineering and Technology, *The Possible Harmful Biological Effects of Low-Level Electromagnetic Fields of Frequencies up to 300 GHz;* http://www.theiet.org/publicaffairs/bepag/postat02final.pdf

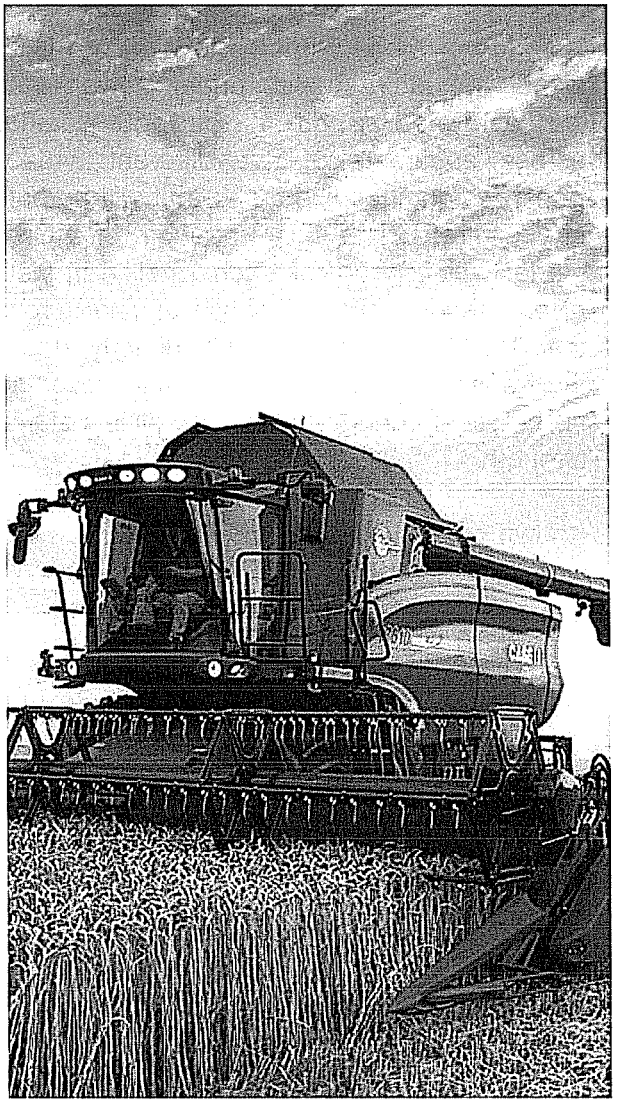
www.kypowerup.com
800.928.2222 • BV345@qk4.com

KY POWER UP

Indiana-Kentucky *Electric Transmission Line*

Global Positioning System (GPS)

Will transmission lines interefere with GPS?



Global Positioning System (GPS)

According to a study by the Institute of Electronics and Electrical Engineers (IEEE), power line conductors are unlikely to cause signal degradation to GPS signals. The study noted no loss of satellite signals as the GPS receiver moved across a power line easement. A GPS receiver relies on a dispersed constellation of satellites - at least four and often more.

A series of measurements to evaluate GPS signal reception quality under power lines was perormed in both fair and foul weather across easemets of two different 345-kV transmission lines like those that will be built in your area. The signal strength of a GPS carrier was logged for each satellite in view at one-second intervals while driving across the 345-kV easements and directly under the transmission lines. The results revealed no practical change in each satellite's signal strength.

Known potential causes of GPS satellite signal interference:

- Out-of-band emissions by radio, TV, communications and radar transmitters
- Gasoline engine ignition systems
- TV and computer monitors
- Fluorescent lights
- AC-DC converters
- Generators

Source: *Use of Global Positioning System (GPS) Receivers Under Power-Line Conductors* (IEEE Transactions on Power Delivery, Vol. 17, No. 4, October 2002.)

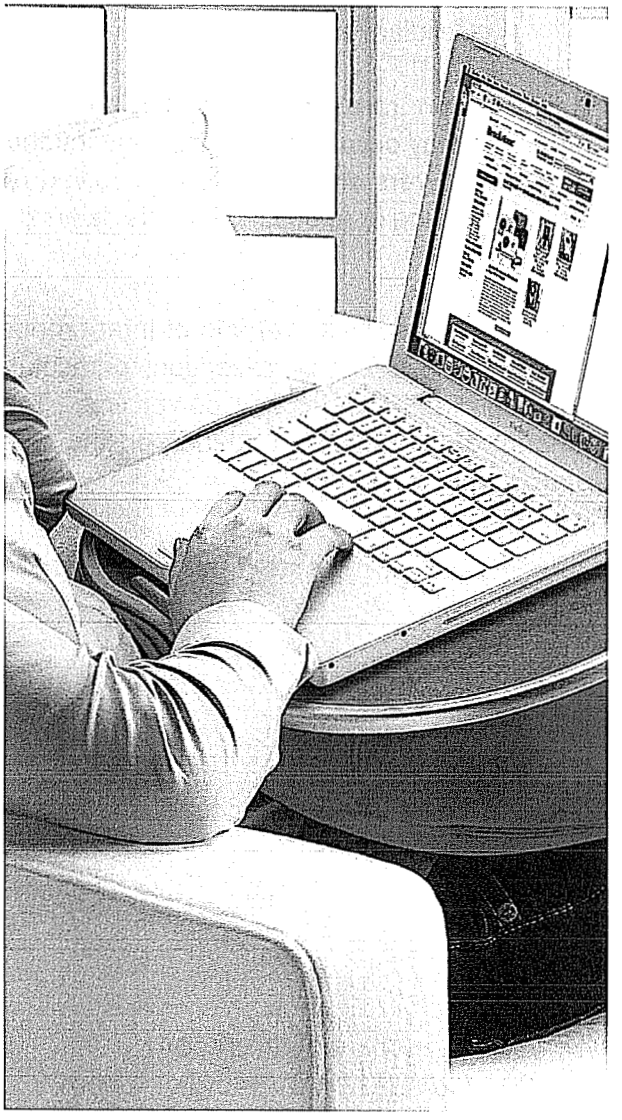
www.kypowerup.com
800.928.2222 • BV345@qk4.com

KY POWER UP

Indiana-Kentucky *Electric Transmission Line*

Electronic Devices

Will transmission lines interefere with electronic devices?



Electronic Devices

There are ***NO*** reports of transmission lines affecting common electronic devices such as:

- Cable Television
- Satellite Television
- Cardiac Pacemakers
- Wireless Internet Systems
- Cellular Phone Service

However, on rare occasions TV reception problems may occur when using conventional analog receivers and can often be solved by either changing or relocating the television antenna.

There have also been reports of interference with AM and CB radio reception, particularly when directly under any power line. The amount of interference depends on the type of radio and antenna.

www.kypowerup.com
800.928.2222 • BV345@qk4.com

KY POWER UP

Indiana-Kentucky *Electric Transmission Line*

Safety & Environment

What is being done to protect the local residents and environment?

Public Safety

The safety of stakeholders is a top priority for the Vectren team. The transmission line will be designed and constructed to meet all applicable regulations, standards and codes, which have been developed with a view to ensuring public safety. Vectren has Emergency Response Plans (ERPs) to respond to events such as tornados and other emergency scenarios. These plans are coordinated with local municipal authorities including fire and police departments. In addition, Vectren has both internal crews and contractor crews ready to respond in the event of a downed line or pole.

Environment

Major environmental features, such as protected areas, environmentally significant areas and species at risk have been identified on the potential routing maps as constraints to be avoided when possible.

www.kypowerup.com
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KY POWER UP

Indiana-Kentucky *Electric Transmission Line* *800.928.2222* ◦ *www.kypowerup.com*

July 8, 2010

Dear Property Owner,

After a lengthy route study, which considered agricultural impact, electrical considerations, residential impact, visual impact, environmental impact, special constraints and cost, we have arrived at a preferred route for phase two of a new electric transmission line that will ultimately connect Vectren's A.B. Brown plant in Posey County, Ind., and the Big Rivers Electric Corporation's Reid Station in Webster County, Ky. Upon review, it appears the route will come in contact with a parcel of your property.

A public meeting was conducted July 6, 2010 at the Henderson Community College to discuss specific details regarding this project. We understand that you were unable to attend and have enclosed a detailed map of your property highlighting areas where the 150-foot easement and/or placement of the transmission lines and poles is expected. You will also find contact information of the land agent who will be in touch within 8 - 10 weeks to discuss the easement acquisition process and how property owners will be compensated accordingly.

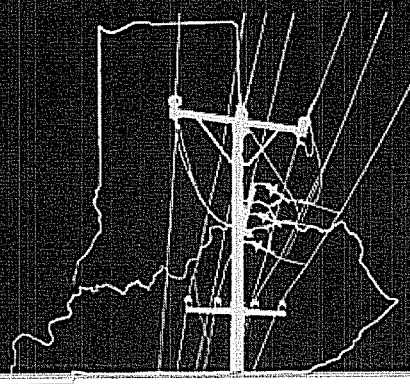
When completed, this critical project will improve electric reliability for the southwestern Indiana and western Kentucky regions by reducing power flow congestion and overloaded electric lines.

For more information regarding the overall project, visit www.kentuckypowerup.com, call us at 1-800-928-2222 or email at BV345@qk4.com. For detailed information regarding your property and the specific details, use the enclosed land agent contact information. Please note: If you have a tenant farmer who utilizes your property for crop production, feel free to invite him/her to contact us as well.

Thank you,

Ky Power Up staff

TAB 12



KYPOWERUP.COM

Indiana-Kentucky *Electric Transmission Line*

KY Power Up Public Meeting will be held on July 6, 2010 from 5:30 – 8:30 p.m. in the Student Services Center at Henderson Community College. *You are invited to stop by anytime during the 3-hour time period.*

RESOURCES

View the project map

Read the News Release (PDF)

FREQUENTLY ASKED QUESTIONS

View all FAQ or pick a category from the list below:

- *The project and its benefits*
- *Routing and acquiring easements*
- *Environment*
- *Project costs*

Vectren announces final leg of electric transmission line project

In an effort to improve electric reliability for the southwestern Indiana and western Kentucky regions, Vectren Energy Delivery (Vectren) submitted a pre-filing notice to the Kentucky Public Service Commission (PSC) State Siting Board June 3 to move forward with phase two of a new electric transmission line that will ultimately connect three regional generation facilities, including Duke Energy's Gibson Station located in Gibson County, Ind., Vectren's A.B. Brown plant in Posey County, Ind., and the Big Rivers Electric Corporation's Reid Station in Webster County, Ky.

Phase one of the project, which connects the Gibson Station and A.B. Brown plants in Indiana through roughly 37 miles of 345 kilovolt (kV) line, has been in progress since fall 2009 and is expected to be completed by December 2010. The June regulatory filing initiates phase two, which includes an approximate 25-mile connection, 13 miles of which are in Kentucky, between the Vectren and Big Rivers plants. Phase two is expected to be complete by summer 2012.

"The project is needed to reduce power flow congestion all along its path, including those electric customers of Western Kentucky," said Bill Doty, Vectren's executive vice president of utility operations. "Essentially, this project creates a robust route whereby electricity can readily travel throughout the region to help ensure reliability."

TAB 13

CERTIFICATE OF SERVICE

I certify a copy of the foregoing Application for Certificate to Construct Nonregulated Electric Transmission Line was served via US Postal Service First Class Mail, postage prepaid, on the following this 14th day of July, 2010.

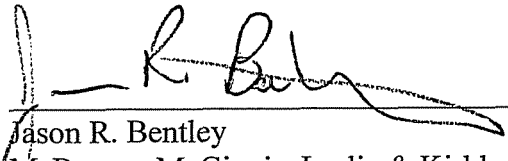
The Hon. Sandy L. Watkins
Henderson County Judge/Executive
20 N. Main Street
Henderson, KY 42420

The Hon. Jim Townsend
Webster County Judge/Executive
P. O. Box 155
Dixon, KY 42409

The Hon. Tom Davis
Mayor of Henderson
PO Box 716
222 First Street
Henderson, KY 42419-0716

The Hon. Ron Iler
Mayor of Robards
PO Box 488
8253 Highway 416 W
Robards, KY 42452

Ms. Peggy Wood
Henderson City-County Planning Commission
1990 Barret Court - Suite C
Henderson, Kentucky 42420



Jason R. Bentley
McBrayer, McGinnis, Leslie & Kirkland, PLLC
305 Ann Street, Suite 308
Frankfort, Kentucky 40601