FILE

Duke Energy®
Ohio

DUKE ENERGY OHIO, INC.
EX552 / 315 Main St.
Cincinnati, OH 45202

March 2, 2010

Ms. Reneé Jenkins, Secretary
Public Utilities Commission of Ohio
180 East Broad Street
Docketing Division 13th Floor
Columbus, Ohio 43215-3973

Re: Letter of Notification
Line F5781 Hamilton to Fairfield 138 kV Electric Transmission Rebuild
PUCO Case No. 10-265-EL-BLN

Ms. Jenkins:

Enclosed for filing are one original and ten copies of a Letter of Notification (LON) regarding a Duke Energy project.

If you have any questions regarding this submittal, please contact me at (513) 287-2379.

Sincerely,
Duke Energy

Stephen R. Lane
Environmental Scientist

Enclosures

Cc Mr. Jim O'Dell (OPSB)
Mr. Mark Ruzicka (Duke Energy)
Mr. Roger Zimmerman (Duke Energy)

LETTER OF NOTIFICATION FOR

LINE F5781 138 KV HAMILTON TO FAIRFIELD REBUILD

PUCO Case Number 10-265 -EL- BLN

Submitted pursuant to OAC 4906-11-01

Duke Energy Ohio

March 2, 2010

(A) Need Statement

(1) Project Name, Description, and Need

(a) ***Name:*** This proposed project is the Line F5781 Hamilton to Fairfield 138,000 (138 kV) Electric Transmission Line Rebuild.

This project qualifies as a Letter of Notification (LON) because it fits the criteria of OAC 4906-1-01, Appendix A (1)(c), "Line(s) one hundred twenty-five kV and above but less than three hundred kV, and not greater than two miles in length." The proposed new 138 kV transmission line rebuild is approximately 1.5 miles in length and will extend from Duke Energy Ohio's Hamilton Substation #60 south and west along Symmes Road to the State Route 4 (Dixie Highway).

(b) ***Description:*** This project will rebuild an existing 138 kV transmission line along a more southerly alignment and sell the existing transmission poles and easement to the City of Hamilton for their use. This will accommodate the City of Hamilton Electric Utility in their need for a new 138 kV electric transmission line that intersects State Route 4 near the intersection of this road with Baltimore and Ohio Railroad.

A project vicinity map and engineering line drawings for the project are included.

(c) ***Need:*** It is Duke Energy's understanding that the City of Hamilton needs to upgrade their system to handle increased load. This proposal will reduce overall project costs by eliminating about 1,700 feet of transmission line compared to leaving the existing Duke Energy 138 kV transmission line where it currently is, as discussed further below in 3) Alternatives Considered.

(2) Reference per Long-Term Forecast Report (LTFR)

This proposed project is not included in the 2010, or earlier, LTFRs.

(3) Alternatives Considered

The main alternative considered was having the City of Hamilton build a new 138 kV transmission line without involving Duke Energy in any rebuild work. In this instance F5781 would have remained along its existing route traversing southwest and then northwest along the railroad to State Route 4. The City of Hamilton project would have had to go along the proposed rebuild route south along Symmes Road. The problem is that the City of Hamilton needs to go northward at State Route 4. Had Duke Energy not been willing to accommodate this project as proposed there would have been a requirement for an extra 1,700 feet of 138 kV line from Symmes Road north along State Route 4, increasing the cost and impact along this stretch. The location that the Duke Energy line intersects State Route 4 is not critical as it is for the City of Hamilton Project, hence the selection of the proposed rebuild option. Rebuilding the Duke Energy transmission line away from the railroad and along existing transportation routes also increases access to this line for maintenance and during emergency situations.

(4) Construction Schedule

Work on the project at its earliest is planned to begin mid-May 2010. The overall project has an in-service date of June 2011.

(5) Area Maps and Directions to Project Area

A street line map of the project vicinity is attached to this LON; smaller scale engineering line drawings of the project route is also attached. One way to reach the project location from Columbus is to take I-71 south for about 90 miles then take exit #17B west I-275.

Continue to travel west on I-275 for about 7 miles to exit #41 north at Springfield Pike (State Route 4). Follow State Route 4 north for about 5 miles to Symmes Road, this intersection is the western limit of the project route. The east end of the project route can be reached by following Symmes Road east to Gilmore Road, then north along Gilmore Road to the substation.

(B) Technical Features

(1) Operating Characteristics

The proposed transmission line loop will operate at 138 kV and require approximately 1.47 miles of new 954ACSR45x7 conductor, 24 new steel poles, the replacement of 9 wood poles with steel poles, and the associated appurtances. The locations of the new poles are identified on the included engineering line drawings. The typical pole height will be between 75 and 85 feet in height, the poles on either side of the railroad crossing will be 115 feet in height. The specifications for these structures are included in Appendix A. Functionally the new line will be no different from the one it is replacing.

(2) Electric and Magnetic Fields

Duke Energy ran estimates of the electric and magnetic fields using the "Enviro" program for the proposed 138 kV transmission line loop at the lowest point of conductor sag along the length of the loop. This study shows that the maximum magnetic field directly under the middle conductor at one meter above ground would be a maximum of 142 milligauss (mG) at , tapering off to 2.4 mG at 250 feet if the line were loaded to its maximum winter rating. At the distance of the nearest residence to the proposed transmission line rebuild, located approximately 120 feet south of the line on the south side of Symmes Road are expected to be at 0.7 mG at normal maximum loading, 7.0 mG at emergency line loading, and 8.7 mG at maximum winter rating.

It is reasonable that the electric field strengths, measured in kilovolts per meter (kV/m), are the same regardless of line loadings because the electric fields are dependent on voltage, which is held constant at 138,000, while magnetic field strengths depend on amperage, which varies by demand for electricity.

Duke Energy designs its facilities according to the National Electric Safety Code (NESC), at a minimum. The structure height and configuration was chosen based on the NESC, engineering parameters, and cost.

(3) Estimated Cost

The project is expected to cost approximately $1,200,000.

(C) <u>Socioeconomic Data</u>

(1) Land Use

Land use along the project route is primarily light industrial and commercial, with some residential south of Symmes Road. North of the project route is an area of undeveloped and agricultural lands. The project route largely follows existing roadways and crosses over the Baltimore and Ohio Railroad the route midpoint.

The nearest residences to the transmission line rebuild are located on the south side of Symmes Road approximately 120 feet south proposed transmission line. The nearest industrial/commercial facilities are on Tedia Way at the eastern end of the project route. At the western end of the project is the Fisher Park Industrial Center, at the eastern end Duke Energy's Hamilton Substation #60.

(2) Agricultural District Land

According to information received from the Butler County Auditors' Office, no property along the project route is included in the ORC 929 agricultural district program.

(3) Cultural Resources

The majority of the proposed route follows existing road right-of-way and is located immediately adjacent to the road ditch-lines. The remaining 1,200 feet between Tedia Way and Gilmore Road includes 3 new poles outside of the road right-of-way. This section of line follows the northern edge of light industrial facilities and a lumber storage yard through an area that has been previously disturbed by borrow and fill activities. No buried cultural resource investigation is proposed for the project as the poles are to be placed in areas previously disturbed by road and ditch construction or borrow and fill activities.

(4) Notification of Officials

Copies of the letters transmitting this Letter of Notification to officials of Butler County, Fairfield Township, and the City of Fairfield are included in Appendix B. No public information program, materials, or meetings were conducted for the siting of this proposed facility.

(5) Current and Pending Litigation

There is no current or pending litigation involving the proposed facility.

(6) Other Agency Permits and Requirements

No other agency permits or requirements exist for the transmission line loop.

(D) Environmental Data

A Duke Energy biologist/environmental scientist conducted a field survey of the project route on January 25, 2010. This survey included an evaluation of potential habitat for species of concern likely to be found on the project route, a wetland determination, and an assessment of surface drainages in the project vicinity. A summary of the findings is given below.

(1) Species of Concern

No species of concern or habitat suitable for such species were observed during the field survey. The habitat along the project route is characterized by maintained lawns and scrub/shrub areas adjacent to light industrial land uses. No suitable Indiana bat roosting trees were observed along the project route.

(2) Areas of Ecological Concern

One monotypic narrow leaved cat-tail (*Typha angustifolia*) wetland was found under the proposed rebuild just east of Tedia Way. This is an invasive species indicative of recent disturbance and is a characteristic of very low quality wetlands.

One man-made surface waterway is crossed by the project along the western edge of the Baltimore and Ohio Railroad. At the proposed transmission line crossing point this surface water functions as drainage ditch at the base of the railroad ballast and is representative of low quality limited resource water.

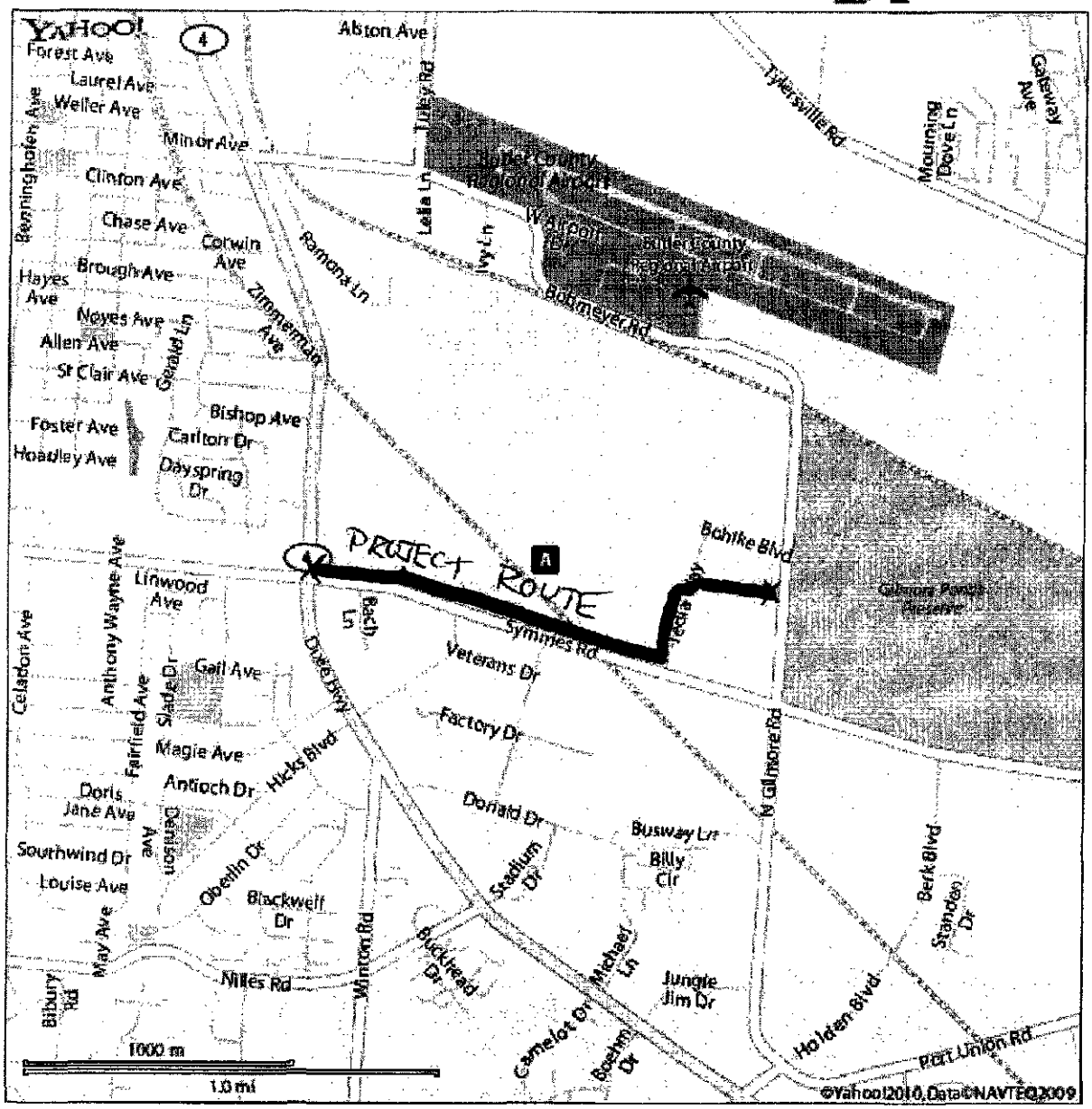
No other wetlands or other areas of ecological concern were identified along the project route.

(3) Additional Information

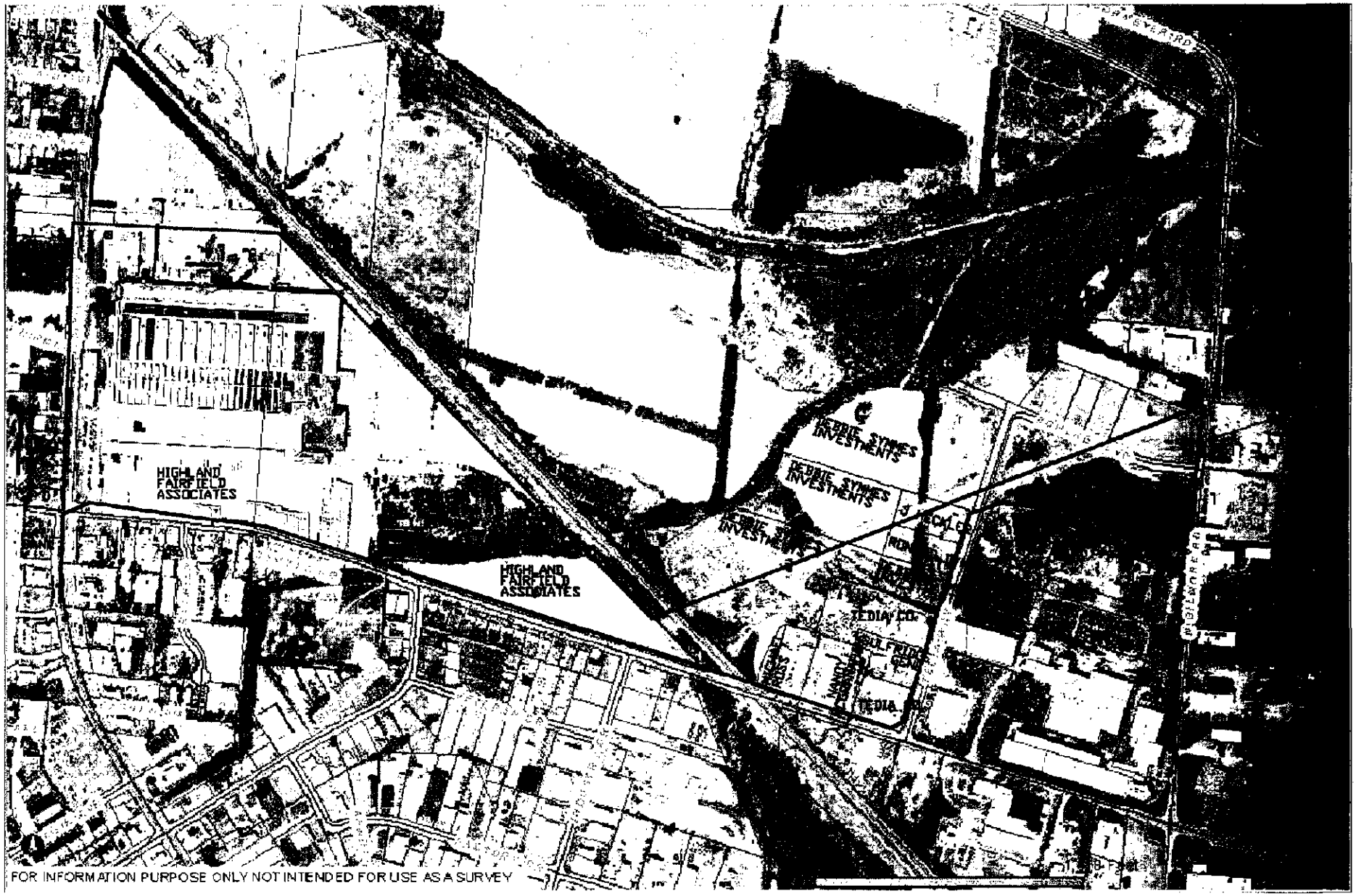
There is no known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

Map of 39.352169,-84.531101

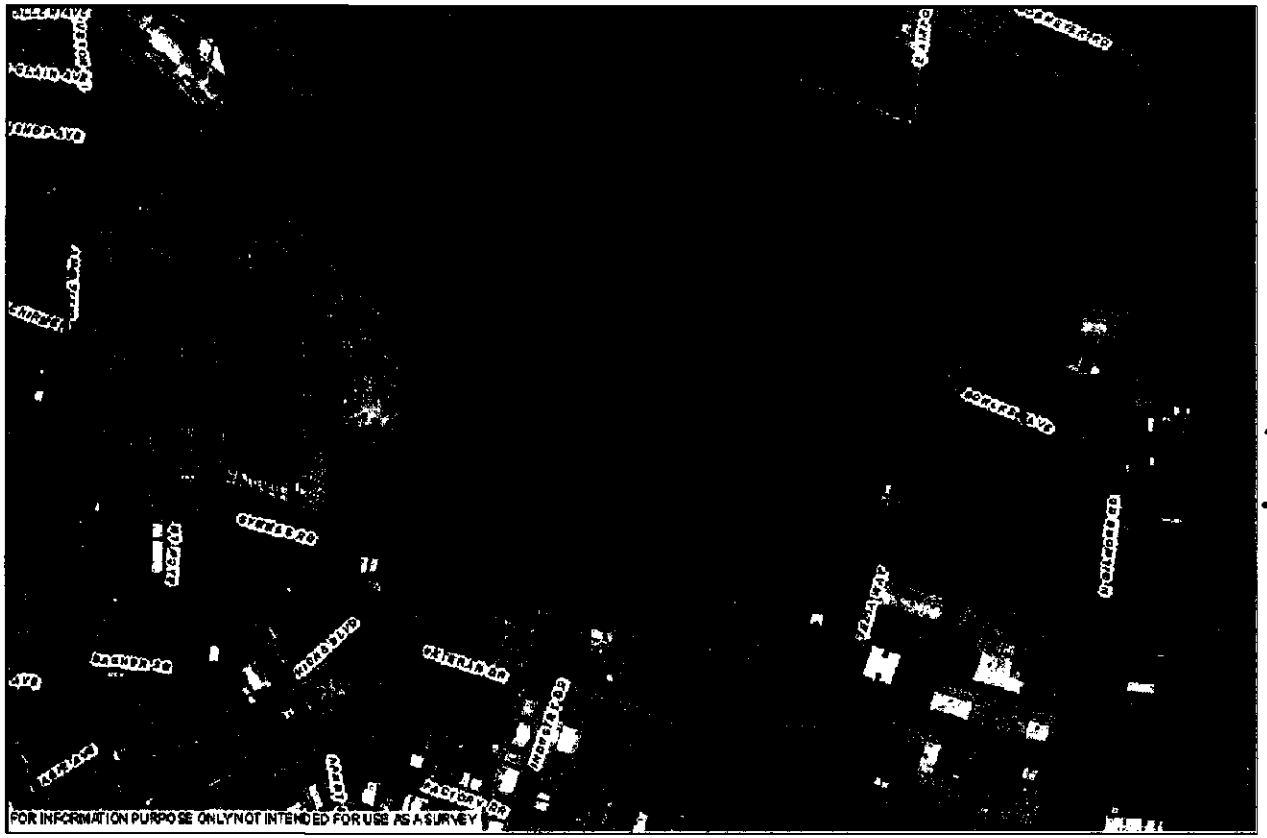
YAHOO!



When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.



FOR INFORMATION PURPOSE ONLY NOT INTENDED FOR USE AS A SURVEY



1.47 mi. NEW

EXISTING DUKE

VICINITY SKETCH

PRELIMINARY

LEGEND

CA. —— T ——

- NEW POLE
- EXISTING POLE
- REMOVE POLE
- NEW H-FRAME
- EXISTING H-FRAME
- EXISTING FOREIGN POLE
- REMOVE FOREIGN POLE
- EXISTING RAILROAD POLE

PROJECT NO: AMOHD134
CITY/TWP: FAIRFIELD
COUNTY: BUTLER, OHIO
TAX DIST: 8 0080
R/W REQ'D: EXISTING/YES
RAILROAD PERMIT: YES
CITY PERMIT: YES
TRIM TREES: YES
QUIT CLAIM REQ'D: NO
PASSPORT NO: 1053464

	PROJECT / ACTIVITY	O.U./ RESP CNTR	MAN HRS
TRANS I/S:	E4734 / I	V462/8455	M. HRS
TRANS R/M:	E4734 / R	V462/8455	M. HRS
TRANS MAINT:	E4734 / X	V462/8455	M. HRS
DIST I/S:	E4732 / I		
DIST R/M:	E4732 / R		
DIST MAINT:	E4732 / X		

BDC NR: [illegible]

DATE: 08/31/2009

REVISIONS:

ENGINEER: ROGER ZIMMERMAN 513-287-2205

CO-OP: TOM HEBBELER

JUR PROPOSALS: 2009CGE0641HAM
2009CGE0641OST
2009CGE0641TWC

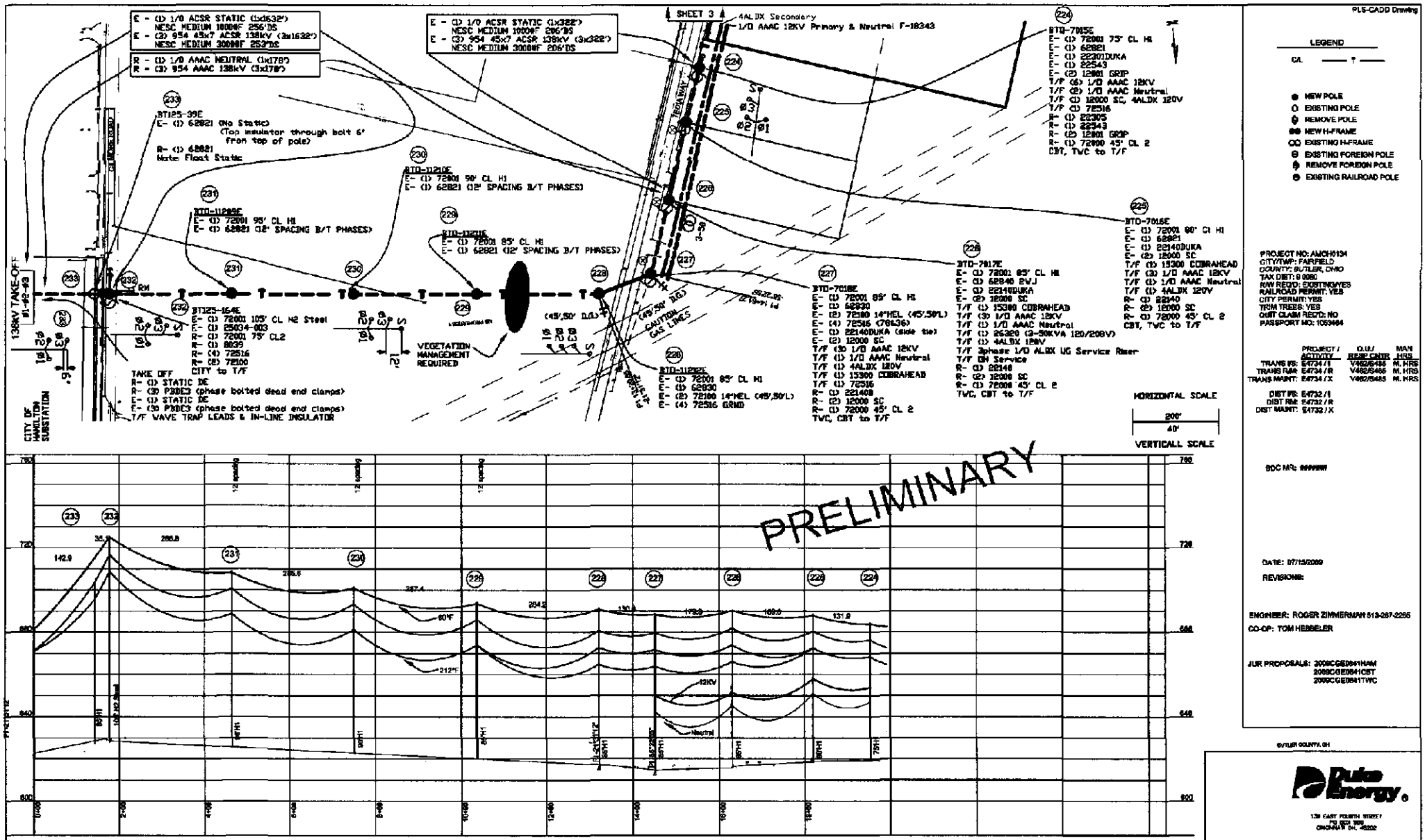
BUTLER COUNTY, OH

Duke Energy.

139 EAST FOURTH STREET
PO BOX 960
CINCINNATI OH, 45202

F-5781 REROUTE FOR CITY OF HAMILTON – 138kV

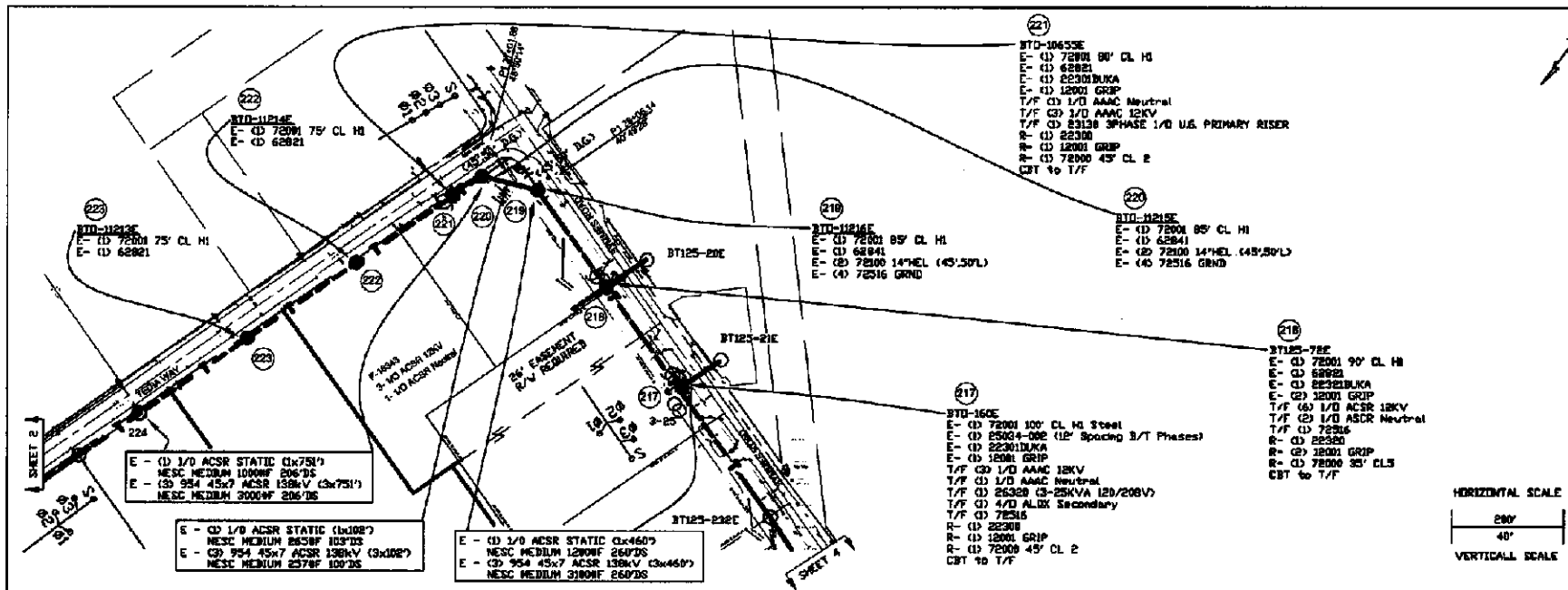
DWG. NO. 1053464 - 1 OF 5



F-5781 REROUTE FOR CITY OF HAMILTON – 138kV

DWG. NO. 1053464 - 2 OF 5

PLS-CADD Drawing

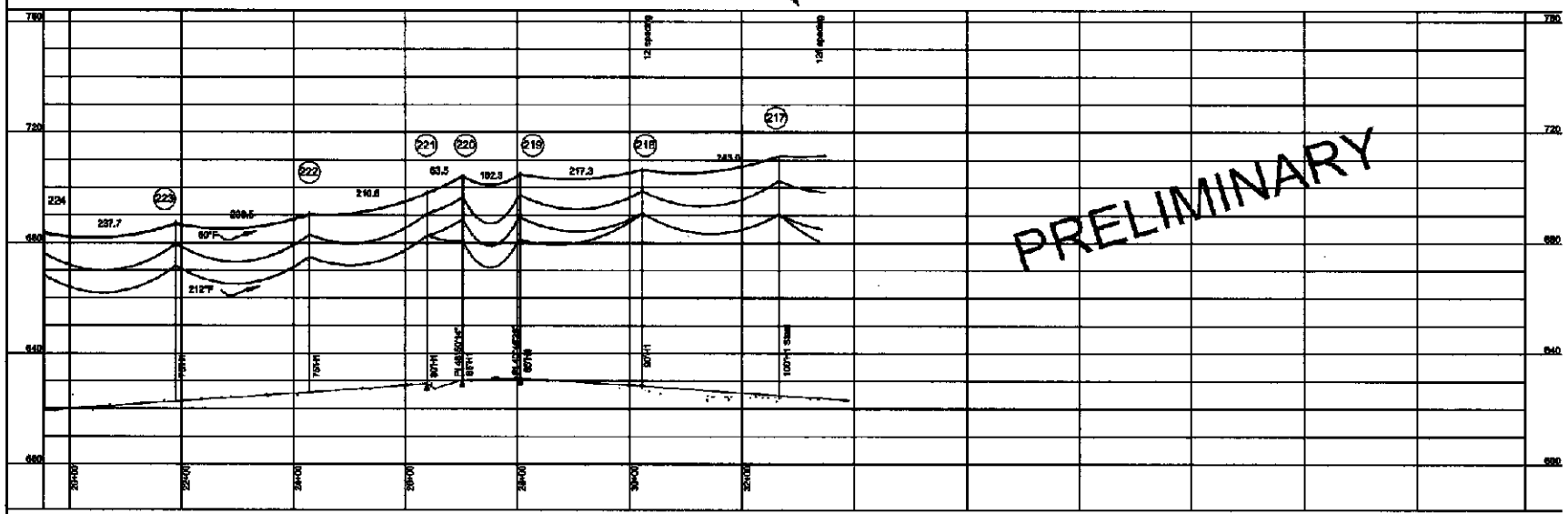


HORIZONTAL SCALE

280'

40'

VERTICALL SCALE



PRELIMINARY

LEGEND

CL ——— T ———

- NEW POLE
- EXISTING POLE
- REMOVE POLE
- NEW H-FRAME
- EXISTING H-FRAME
- EXISTING FOREIGN POLE
- REMOVE FOREIGN POLE
- EXISTING RAILROAD POLE

PROJECT NO: AMOH0154
CITY/TWP: FAIRFIELD
COUNTY: BUTLER, OHIO
TAX DIST: 9 0000
R/W REQ'D: EXISTING/YES
RAILROAD PERMIT: YES
CITY PERMIT: YES
TRIM TREES: YES
DUCT CLAIM REQ'D: NO
PASSPORT NO: 1083484

	PROJECT / ACTIVITY	O.U./ REIMB CNTR	MAN HRS
TRANS I/S:	E4734 / I	V4626/485	M. HRS
TRANS R/M:	E4734 / R	V4626/485	M. HRS
TRANS MAINT:	E4734 / X	V4626/486	M. HRS
DIST I/S:	E4732 / I		
DIST R/M:	E4732 / R		
DIST MAINT:	E4732 / X		

SDC NR: ######

DATE: 07/15/2009

REVISIONS:

ENGINEER: ROGER ZIMMERMAN 513-287-2265

CO-OP: TOM HEBBELER

JUR PROPOSALS: 2009CGE0641HAM
2009CGE0641CBT
2009CGE0641TWC

BUTLER COUNTY, OH

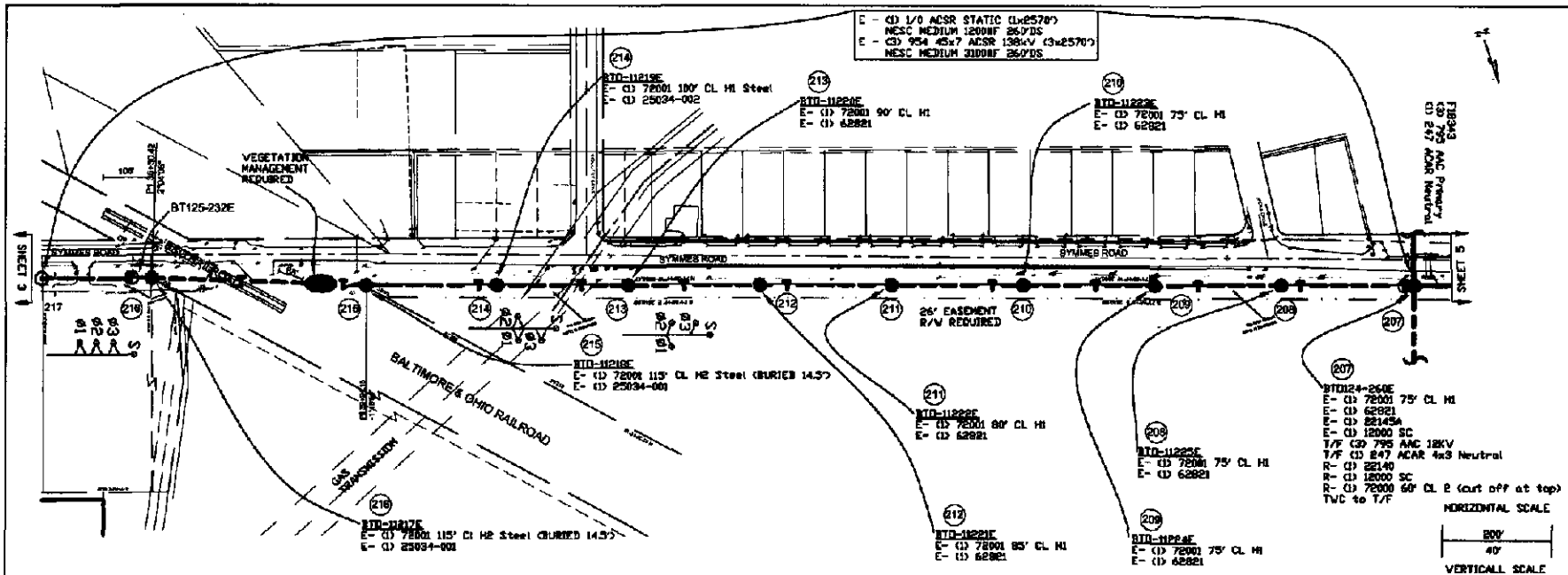
Duke Energy.

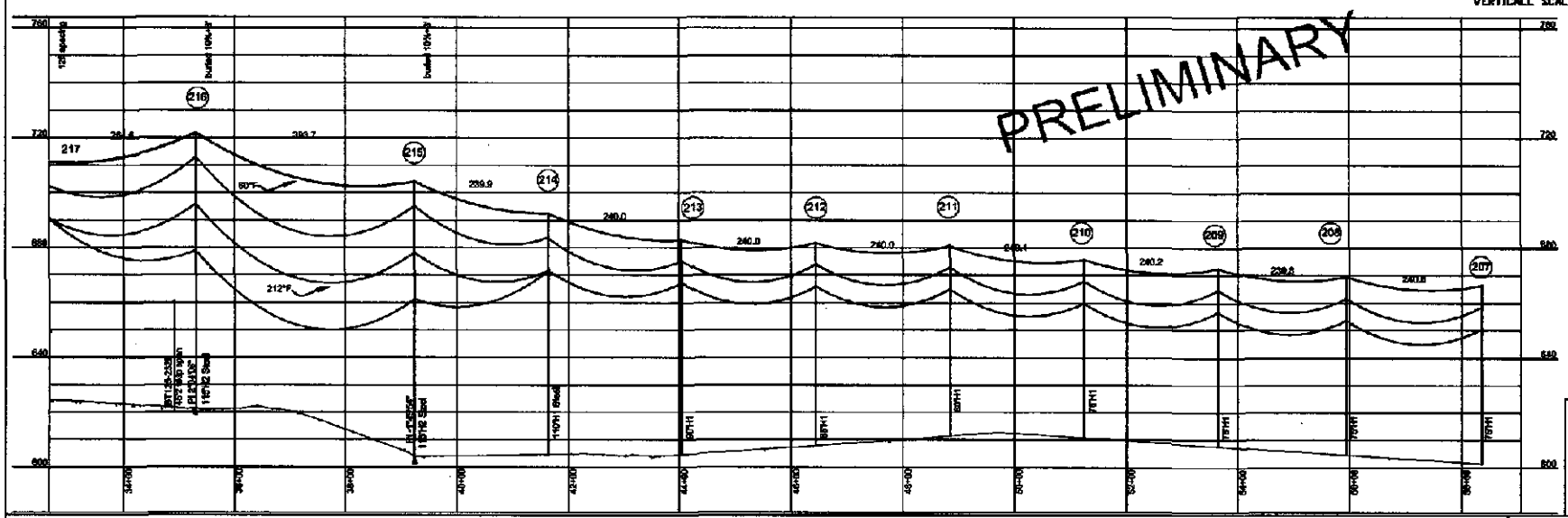
139 EAST FOURTH STREET
PO BOX 960
CINCINNATI OH 45202

F-5781 REROUTE FOR CITY OF HAMILTON – 138kV

DWG. NO.

1053464 - 3 OF 5





PLS-CADD Drawing

LEGEND

- C/L
- NEW POLE
- EXISTING POLE
- REMOVE POLE
- NEW H-FRAME
- EXISTING H-FRAME
- EXISTING FOREIGN POLE
- REMOVE FOREIGN POLE
- EXISTING RAILROAD POLE

PROJECT NO: AMOH0134
CITY/TWP: FAIRFIELD
COUNTY: BUTLER, OHIO
TAX DIST: 9 0080
R/W REQ'D: EXISTING/YES
RAILROAD PERMIT: YES
CITY PERMIT: YES
TRIM TREES: YES
QUIT CLAIM REQ'D: NO
PASSPORT NO: 1053464

	PROJECT / ACTIVITY	C.U. / RESP CNTR	MAN HRS
TRANS WR:	E4734 / I	V62US485	M. HRS
TRANS RAR:	E4734 / R	V62US485	M. HRS
TRANS MAINT:	E4734 / X	V62US485	M. HRS

DIST WR: E4732 / I
DIST RAR: E4732 / R
DIST MAINT: E4732 / X

EDC MR: [redacted]

DATE: 07/15/2009

REVISIONS:

ENGINEER: ROGER ZIMMERMAN 513-287-2295

CO-OP: TOM HESSELER

JUR PROPOSALS: 2009CGE0841HAM
2009CGE0841OST
2009CGE0841TWC

BUTLER COUNTY, OH

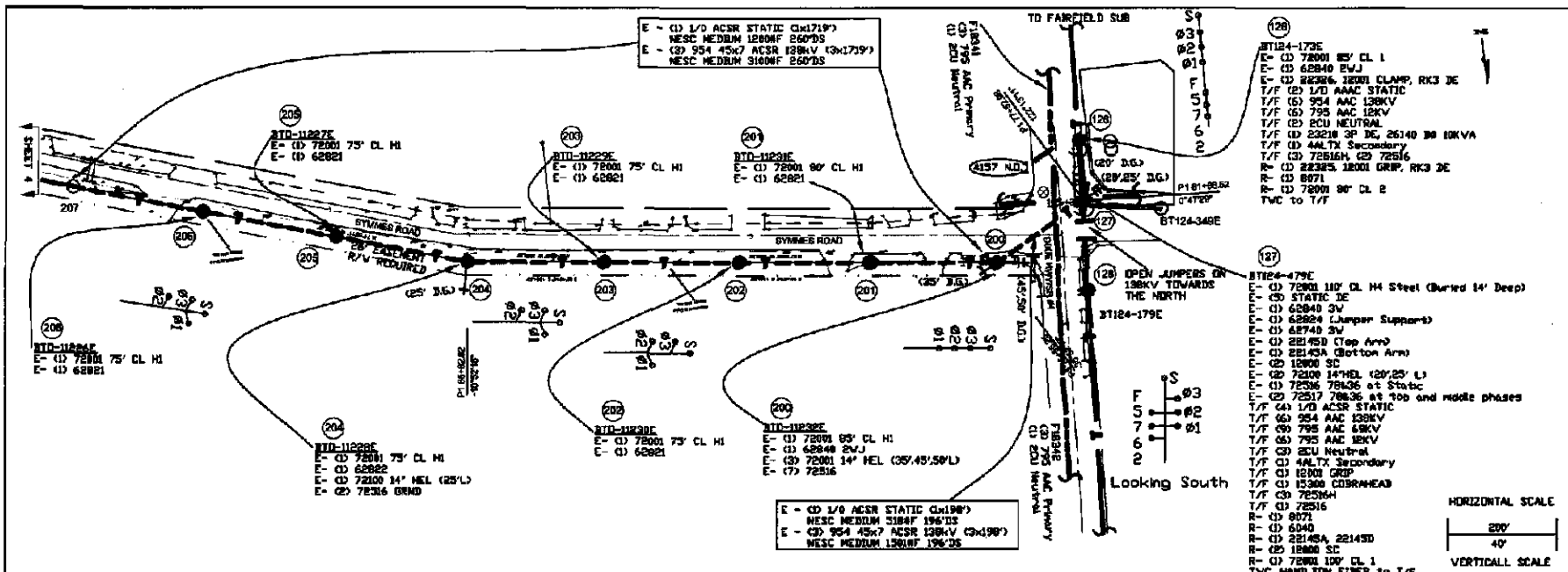
Duke Energy.

139 EAST FOURTH STREET
PO BOX 960
CINCINNATI OH 45202

F-5781 REROUTE FOR CITY OF HAMILTON – 138KV

DWG. NO.

1053464 - 4 OF 5



F-5781 REROUTE FOR CITY OF HAMILTON – 138kV

DWG. NO.

1053464 - 5 OF 5

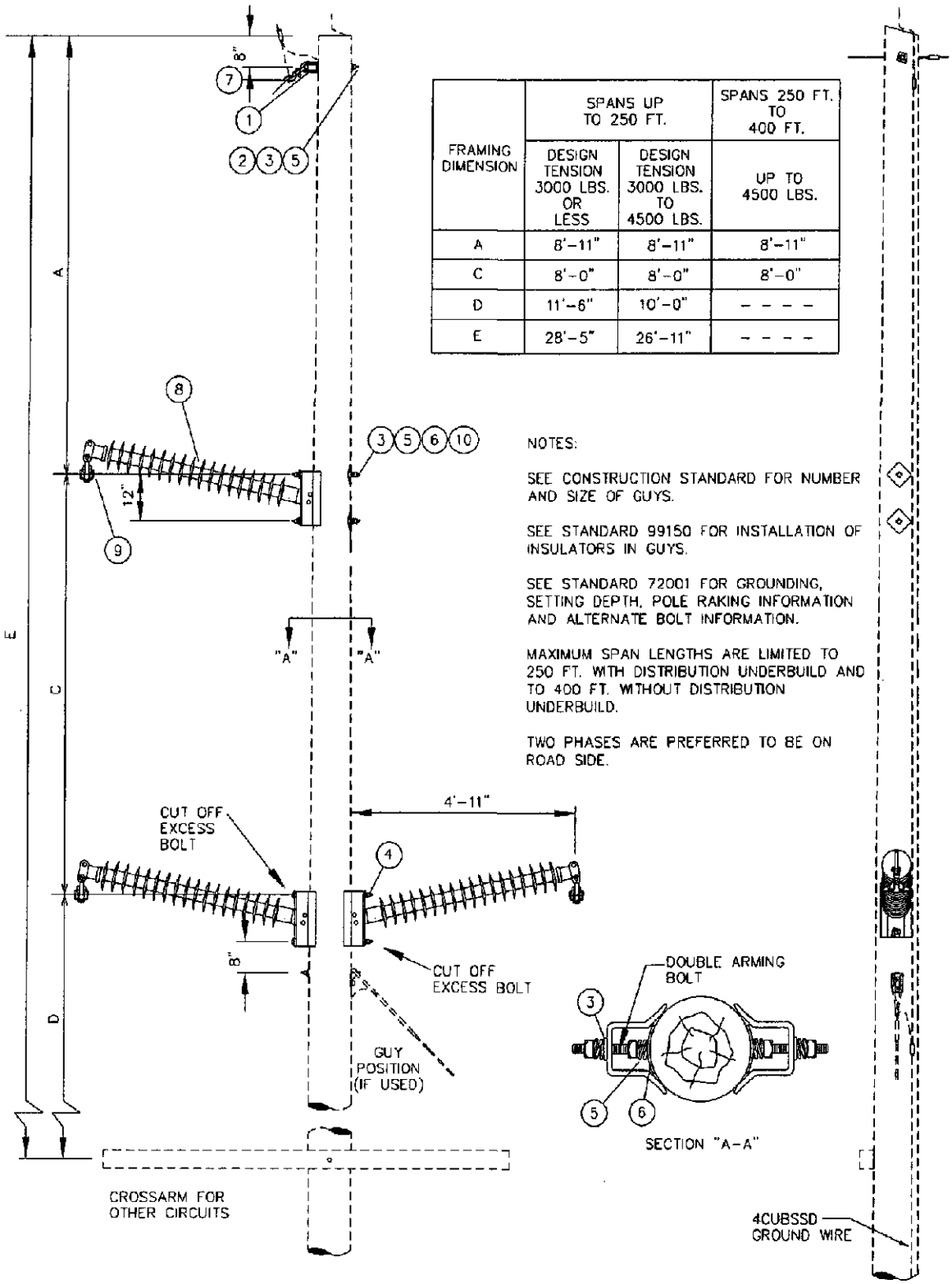
APPENDIX A

ENGINEERING SPECIFICATIONS

62821

138kV Overhead Construction Horizontal Post Type Insulators Straight Line And Angles to 5 Degrees

FRAMING DIMENSION	SPANS UP TO 250 FT.		SPANS 250 FT. TO 400 FT.
	DESIGN TENSION 3000 LBS. OR LESS	DESIGN TENSION 3000 LBS. TO 4500 LBS.	UP TO 4500 LBS.
A	8'-11"	8'-11"	8'-11"
C	8'-0"	8'-0"	8'-0"
D	11'-6"	10'-0"	- - - -
E	28'-5"	26'-11"	- - - -



NOTES:

SEE CONSTRUCTION STANDARD FOR NUMBER AND SIZE OF GUYS.

SEE STANDARD 99150 FOR INSTALLATION OF INSULATORS IN GUYS.

SEE STANDARD 72001 FOR GROUNDING, SETTING DEPTH, POLE RAKING INFORMATION AND ALTERNATE BOLT INFORMATION.

MAXIMUM SPAN LENGTHS ARE LIMITED TO 250 FT. WITH DISTRIBUTION UNDERBUILD AND TO 400 FT. WITHOUT DISTRIBUTION UNDERBUILD.

TWO PHASES ARE PREFERRED TO BE ON ROAD SIDE.

62821.dwg

APPENDIX B

LETTERS TO OFFICIALS

DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

March 2, 2010

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mr. Mark Sutton, Board President
Fairfield Township Trustees
6032 Morris Road
Fairfield Township, OH 45011

Dear Mr. Sutton:

RE: Line F5781 Hamilton to Fairfield 138 kV Electric Transmission Rebuild

Please find enclosed a copy of a Letter of Notification that Duke Energy Ohio sent to the Ohio Power Siting Board regarding a planned new 138 kV transmission line. This project is being completed so that the City of Hamilton can utilize the existing line to accommodate their increased load.

In accordance with Ohio Administrative Code (OAC) 4906-1-01 Appendix A, we are required to prepare this Letter of Notification for the Ohio Power Siting Board and in compliance with OAC 4906-11-02(B), we are hereby providing you with a copy. Please feel free to call me at (513) 287-2379 if you have any questions about this project.

Sincerely,
Duke Energy

Stephen R. Lane
Environmental Scientist

Enclosure

Cc Mr. Gregory V. Jolivette, Butler County Board of Commissioners
Mayor Ron D'Epifanio, City of Fairfield
Public Utilities Commission of Ohio

DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

March 2, 2010

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mayor Ron D'Epifanio
5350 Pleasant Avenue
Fairfield, OH 45014

Dear Mayor D'Epifanio:

RE: Line F5781 Hamilton to Fairfield 138 kV Electric Transmission Rebuild

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Sincerely,
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Stephen R. Lane
Environmental Scientist

Enclosure

Cc Mr. Gregory V. Jolivette, Butler County Board of Commissioners
Mr. Mark Sutton, Fairfield Township Trustees
Public Utilities Commission of Ohio

DUKE ENERGY CORPORATION
139 East Fourth St.
PO Box 960
Cincinnati, OH 45201-0960

March 2, 2010

Natural Resources Management
Room EX552
139 East Fourth Street
Cincinnati, Ohio 45202

Mr. Gregory V. Jolivette, Commissioner
315 High Street,
Hamilton, OH 45011

Dear Mr. Jolivette:

RE: Line F5781 Hamilton to Fairfield 138 kV Electric Transmission Rebuild

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Sincerely,
Duke Energy

Stephen R. Lane
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Enclosure

Cc Mr. Mark Sutton, Fairfield Township Trustees
Mayor Ron D'Epifanio, City of Fairfield
Public Utilities Commission of Ohio