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Case Number : 05-360-EL-BSB
05-361-EL-BTX

File Date : 2/7/06

Section : 1 of 4

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BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the :
Application of the :
Cincinnati Gas & Electric :
Company for a certificate : Case No. 05-360-EL-BSB
of Environmental :
Compatibility and Public :
Need for Commencement of :
Construction of the :
Hillcrest Substation. :

In the Matter of the :
Application of the :
Cincinnati Gas & Electric :
Company for a certificate : Case No. 05-361-EL-BTB
of Environmental :
Compatibility and Public :
Need for Hillcrest :
Eastwood 138 kV :
Transmission Line. :

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PROCEEDINGS

before Hearing Examiner Scott E. Farkas, at the
Public Utilities Commission of Ohio, commencing at
1:10 p.m., on Wednesday, January 18, 2005, in
Hearing Room 11-C, 180 East Broad Street, Columbus,
Ohio.

ARMSTRONG & OKEY, INC.
185 South Fifth Street, Suite 101
Columbus, Ohio 43215-5201
(614) 224-9481/(800) 223-9481
Fax (614) 224-5724

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1 APPEARANCES:

2 Cincinnati Gas & Electric
3 By Mr. Paul Colbert
4 and Mr. Rocco O. D'Ascenzo
5 139 East Fourth Street
6 Cincinnati, Ohio 45202

7 On behalf of the Company.

8 Thompson Hine, LLP
9 By Ms. Carolyn S. Flahive
10 Ten West Broad Street, Suite 700
11 Columbus, Ohio 43215-3435

12 On behalf of Valley Asphalt

13 Jim Petro, Ohio Attorney General
14 Duane W. Luckey, Senior Deputy
15 Attorney General
16 Public Utilities Section
17 Mr. Stephen A. Reilly
18 Mr. John Jones
19 180 East Broad Street, 9th Floor
20 Columbus, Ohio 43215-3793

21 and

22 Ms. Lauren Angell
23 Assistant Attorney General
24 30 E. Broad St, 25th Floor
Columbus, Ohio 43226-0410

On behalf of the Staff of the Public
Utilities Commission.

1 Wednesday Afternoon Session,
2 January 18, 2006

3 - - -

4 THE HEARING EXAMINER: The Power Siting
5 Board has called for hearing at the time of place the
6 matter of the application of Cincinnati Gas &
7 Electric Company for a Certificate of Environmental
8 Compatibility and Public Need for Commencement of
9 Construction of the Hillcrest Substation, Case No --
10 05-360-EL BSB, and The Matter of the Application of
11 the Cincinnati Gas & Electric Company for a
12 Certificate of Environmental Compatibility and Public
13 Need for the Hillcrest Eastwood 138 kV Transmission
14 Line, Case No. 05-361-EL-BTX.

15 I am Scott Farkas, an administrative law
16 judge in the case. We will take appearances.

17 First, on behalf of the applicant.

18 MR. D'ASCENZO: Thank you. My name is
19 Rocco D'Ascenzo, on behalf of the Cincinnati Gas &
20 Electric Company. The business address is 139 East
21 Fourth Street, Cincinnati, Ohio, 45202. With me is
22 Paul Colbert, also representing the Cincinnati Gas &
23 Electric Company.

24 THE HEARING EXAMINER: Thank you.

1 MS. FLAHIVE: Staff.

2 THE HEARING EXAMINER: Thank you, your
3 Honor. On behalf of staff of the Power Citing
4 Commission, Jim Petro, attorney general, Duane
5 Luckey, senior deputy attorney general, Steve Reilly,
6 John Jones, assistant attorneys general; address is
7 180 East Broad Street, Columbus, Ohio, 43215.

8 Also on behalf of staff is Lauren Angell,
9 assistant attorney general, 30 East Broad Street
10 Columbus, Ohio 4325.

11 THE HEARING EXAMINER: Thank you. And in
12 05-361 we have a motion to intervene filed by Valley
13 Asphalt Corporation. Please make your appearance.

14 MS. FLAHIVE: Thank you. I am Carolyn S
15 Flahive, Thompson Hine, 10 West Broad Street
16 Columbus, Ohio, 43215, representing the Valley
17 Asphalt Corporation.

18 THE HEARING EXAMINER: Thank you.

19 It is my understanding in Case No. 05-360
20 the parties have come to a resolution in this case.

21 MR. D'ASCENZO: That is correct, your
22 Honor. Parties are in the process of drafting a
23 stipulation which, in essence, adopts the staff's
24 recommendation, and we will be filing that hopefully

1 later today, if not tomorrow.

2 THE HEARING EXAMINER: Thank you. That
3 resolves all the issues.

4 MR. D'ASCENZO: It resolves all of the
5 issues.

6 THE HEARING EXAMINER: Okay. 05-361.

7 MR. D'ASCENZO: With respect to 05-361,
8 to address the first issue, the intervention, the
9 company has filed a memorandum in opposition. We
10 filed that this morning. And our reasons for
11 objecting at this late in time we believe that this
12 petition is, first of all, untimely, and that the
13 company, Valley Asphalt, who is moving to intervene
14 had actual notice of this case as early as -- I
15 should say the latest in November of 2005 when CG&E
16 sent a letter to them explaining what was going on,
17 defined specifically how to intervene in the case.

18 The company also fulfilled all of its
19 requirements for publication of notices under the
20 Ohio Administrative Code, and we feel that Valley
21 Asphalt had ample opportunity to come in prior to the
22 day before the hearing to file its petition.

23 Also, we believe that the petition itself
24 does not conform with the requirements of the Ohio

1 {Administrative Code under 4906-7-04, and the reasons
2 are further expanded upon in our Memorandum in
3 Opposition.

4 So that being said, I think it's fair to
5 say that CG& lab has been talking to Valley Asphalt
6 and has been trying to address their concerns and
7 will continue to do so. We believe we have reached
8 an agreement in principle as to the issues and
9 concerns that they have and hope to file something
10 memorializing those concerns and now to address those
11 within the next two weeks.

12 And with that, we would agree to a
13 continuance of the actual hearing, hoping to resolve
14 all of those issues.

15 And part of this agreement in principle
16 would involve a statement by Valley Asphalt that
17 outlines the scope of their involvement and interest
18 in this case. So I believe that concludes the
19 intervention issue.

20 THE HEARING EXAMINER: Wait a minute.
21 And during that two-week time period you're agreeing,
22 both sides are agreeing that the issue of the
23 intervention of Valley Asphalt is stayed for the time
24 being.

1 MR. D'ASCENZO: Correct. It is in
2 abeyance. In the event there is no solution, we will
3 come back.

4 THE HEARING EXAMINER: Or the parties
5 would come back in two weeks and be allowed to argue
6 for and against intervention.

7 MR. D'ASCENZO: Yes, that's correct.
8 Thank you.

9 And with respect to the hopeful
10 resolution of this 361 case, again CG&E and staff
11 have come to an agreement and are in the process of
12 drafting a stipulation, which, again, in substance
13 adopts nearly all of the recommendations set forth in
14 the staff report with one minor exception, and that
15 would be fully set out in the stipulation which we
16 hope to file this afternoon or tomorrow

17 THE HEARING EXAMINER: Is that the
18 staff's understanding also?

19 MR. REILLY: That's our understanding as
20 far as 361.

21 THE HEARING EXAMINER: Also 360.

22 MR. REILLY: 360.

23 THE HEARING EXAMINER: Ms. Flahive, is
24 that your understanding of the agreement of the

1 parties in the discussion of trying to attempt to
2 resolve the case and agreeing to two weeks not to
3 leave the issue of intervention as it is?

4 MS. FLAHIVE: Yes.

5 THE HEARING EXAMINER: The parties are
6 reserving the right to argue.

7 MS. FLAHIVE: In fact, I would reiterate
8 that Mr. D'Ascenzo opposed and addressed our
9 intervention up front. It is now our understanding
10 we reserve our rights to defend the petition to
11 intervene, as CG&E reserves its right to oppose it
12 should we not reach agreement in the next two weeks
13 and have to return to the Commission.

14 MR. D'ASCENZO: I think the only other
15 preliminary matter has to do with some comments that
16 were made during the public hearing.

17 THE HEARING EXAMINER: Before we get to
18 that, does that address the issues with respect to
19 Valley Asphalt, the intervention and attempting to
20 resolve it?

21 MS. FLAHIVE: Yes, it does.

22 MR. D'ASCENZO: Well, other than Valley
23 Asphalt.

24 MS. FLAHIVE: Would you like me to?

1 MR. D'ASCENZO: If you wouldn't mind.

2 MS. FLAHIVE: I will add per our
3 agreement for the record, for formality, that the
4 scope of the involvement of Valley Asphalt in regards
5 to this case is limited solely to objections that are
6 pertinent to its property. The company, Valley
7 Asphalt, has no other objections to the application
8 and at this point has no intention to raise any. The
9 company is solely concerned with the impact of the
10 lines on its property, and that's what the agreement
11 will deal with. We do want to state that on the
12 record.

13 Again, I addressed we will reserve our
14 rights to defend our proposed intervention as CG&E
15 has reserved its rights to oppose it.

16 For the record, Valley Asphalt is looking
17 forward to these continued discussions, good faith
18 negotiations with CG&E to reach agreement within the
19 next two weeks.

20 THE HEARING EXAMINER: Thank you.

21 MR. D'ASCENZO: Last Thursday on
22 January 12 there was a public hearing in this case at
23 which time members of the community that would be
24 directly affected by the transmission line were

1 allowed to comment on the record, and some of those
2 individuals had questions that the company felt it
3 would be good to provide answers as part of the
4 record of this proceeding.

5 And with your permission, I will read
6 those questions and answers.

7 THE HEARING EXAMINER: Thank you.

8 MR. D'ASCENZO: Question No. 1, was from
9 Nicholas Ring, who is an attorney representing a
10 Mr. and Mrs. Jack Cox, who live south of the Norfolk
11 and Western Railroad along the preferred route. They
12 have concerns that the 70-foot wide right-of-way will
13 affect the continued agricultural use of their land.

14 And the company's response, the
15 transmission line poles will typically be between 200
16 and 235 feet apart along their property, and they are
17 not planning to exceed 300 feet apart, and the poles
18 in that area are planned to be between 65 and 90 feet
19 in length so it will be possible for the landowners
20 to farm within the right-of-way around those poles
21 and under the conductors, the exceptions to that
22 being the small areas of land between each pole and
23 the edge of the railroad right-of-way.

24 Mr. Ring also was concerned that there

1 weren't any discussions with his clients, between his
2 clients and CG&E regarding compensation, and that is
3 correct. CG&E does not negotiate with the individual
4 landowners for compensation until an actual project
5 line route has been selected. In letters that the
6 company has sent out to the individual property
7 owners, CG&E provided telephone numbers that they
8 could contact us to discuss those issues if they had
9 specific questions for their property.

10 Mr. Ring further stated that his client's
11 main concern was a misrepresentation of the project
12 where the line would be on his clients' land. They
13 had an understanding that the line would be 20 to
14 25 feet and would require a right-of-way of 20 to
15 25 feet, and they were curious as to why the proposed
16 route had been recommended over alternative routes.

17 And CG&E in response says that it has
18 communicated with the landowners along
19 Hagemans-Crossing road where the right-of-way
20 requirements are 26 feet as the line can overhang the
21 road right-of-way. That is not the case along the
22 railroad where a 70-foot right-of-way would be
23 required, and that explains the discrepancy. This is
24 due to the existing railroad communications line at

1 the southern limit of the Norfolk and Western
2 right-of-way. This 70-foot right-of-way width along
3 the railroad, although not explicitly stated in the
4 application, was discussed in the Fourth Set of
5 Interrogatories that are available in the docket.

6 With respect to notification, CG&E has
7 met all of its notification and public distribution
8 requirements for the projects as set forth in the
9 Ohio Administrative Code. A public informational
10 meeting was held in Brown County on December 7, 2004.
11 On August 18, 2005 CG&E delivered copies of the
12 completed application to public officials and
13 libraries. CG&E provided public notice of the
14 proposed facilities through full page ads placed in
15 the Cincinnati Enquirer on September 16, 2005,
16 December 7, 2005 and January 6, 2006; and with the
17 Post on September 16, 2005 and December 7, 2005.

18 These advertisements included project
19 maps which showed the general layout and location of
20 the facilities.

21 Further information regarding the
22 substation and transmission line projects was also
23 made available on line through Cinergy's website and
24 the application for the transmission line itself

1 included a detailed route selection study as required
2 by the Ohio Administrative Code.

3 The second set of comments came from
4 Mr. Joe Berger, who stated he is unclear of
5 compensation, pole locations, or right-of-way width.
6 Mr. Berger also expressed concerns about losing
7 control of a septic system on his property.

8 As I stated earlier, CG&E doesn't begin
9 negotiation typically with individual landowners
10 until an actual project route has been approved, so
11 that as far as compensation, those issues are to be
12 addressed with the individual landowner once a route
13 is selected.

14 Furthermore, concerns that Mr. Berger had
15 with respect to damage to landscaping or crops will
16 also be addressed through the negotiation process.

17 Along Mr. Berger's property, which is
18 located along Hagemans-Crossing, CG&E would be
19 negotiating for 26 feet of right-of-way, while it is
20 unlikely this will result in any septic system
21 damages, CG&E would be repairing or reimbursing
22 Mr. Berger for any damages that occur.

23 CG&E engineering is currently planning to
24 span Mr. Berger's 60 feet of frontage so that no

1 poles would interfere with his septic system.

2 Mr. Berger also had concerns about safety
3 property values, and concerns about future gas
4 pipeline in the right-of-way.

5 Certainly safety and aesthetic issues are
6 a concern to the company, and they were addressed in
7 its application, which was routed by the Ohio Power
8 Citing Board Staff. The easements that the company
9 is looking to negotiate will not include anything
10 pertaining to gas pipelines. This is only for the
11 actual power transmission lines. So gas is not part
12 of this at all.

13 Mr. Miller had concerns over tower size,
14 easement width and concerns of a future gas pipeline
15 in the right-of-way.

16 As stated in the application, towers are
17 not going to be used for any portion of this project.
18 Wooden poles between 65 and 90 feet in height will be
19 used exclusively. The easement width will be maximum
20 of 26 feet along existing roadways, 70 feet along the
21 railroad, and will not exceed 100 feet between US 68
22 and Greenbush East Road and between Tri-County and
23 Hagemans-Crossing Road. The easement will not be
24 negotiated to include gas pipelines, although it

1 would include static line and fiberoptic
2 communication cables.

3 Mr. Carl Vineyard stated that he had no
4 idea of what to comment on.

5 As I previously stated, the company
6 fulfilled all of its notice requirements under the
7 Ohio Administrative Code and the company also sent
8 letters to the individual property owners, which are
9 docketed in the proceeding.

10 A Mr. Charles McClary, who owns property
11 along Brooks-Malott Road, inquired as to why he had
12 been sent two letters concerning the project and
13 nothing more.

14 Again, the company's response is that we
15 fulfilled all of our requirements under the Ohio
16 Administrative Code. The application was available
17 in local libraries and through the worldwide web.

18 Mr. McClary also had concerns about road
19 frontage, egress and ingress, loss of usable farmland
20 and property values.

21 And the project as approved will not
22 affect the ingress or egress or the amount of usable
23 farmland compared to existing conditions along his
24 property. There is an existing distribution line

1 along Brooks-Malott Road, which will be overbuilt,
2 and any potential loss in property values would be
3 included through the right-of-way negotiation.

4 And that concludes the company's
5 responses.

6 Thank you.

7 THE HEARING EXAMINER: Is there anything
8 further?

9 (No response.)

10 THE HEARING EXAMINER: Nothing further,
11 we will be adjourned. Thank you.

12 (Thereupon, the hearing concluded at 1:30
13 p.m.)

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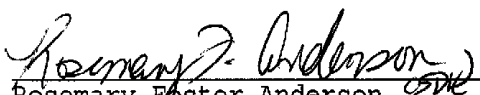
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1 CERTIFICATE

2 I do hereby certify that the foregoing is a
3 true and correct transcript of the proceedings taken
4 by me in this matter on Wednesday, January 18, 2006,
5 and carefully compared with my original stenographic
6 notes.

7 
8 Rosemary Foster Anderson,
9 Professional Reporter and
Notary Public in and for
the State of Ohio.

10 My commission expires April 5, 2009.

11 (RFA-6779)

12 - - -

BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the Application of)
The Cincinnati Gas & Electric Company)
For a Certificate of Environmental) Case No. 05- 361- EL-BTX
Compatibility and Public Need for the)
Hillcrest-Eastwood 138 kV)
Transmission Line)

**THE CINCINNATI GAS & ELECTRIC COMPANY'S MOTION TO OVERRULE
AND MEMORANDUM IN OPPOSITION TO VALLEY ASPHALT'S PETITION
TO INTERVENE**

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BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Application of)	
The Cincinnati Gas & Electric Company)	
For a Certificate of Environmental)	Case No. 05- 361- EL-BTX
Compatibility and Public Need for the)	
Hillcrest-Eastwood 138 kV)	
Transmission Line)	

**THE CINCINNATI GAS & ELECTRIC COMPANY'S MOTION TO OVERRULE
AND MEMORANDUM IN OPPOSITION TO VALLEY ASPHALT'S PETITION
TO INTERVENE**

Now comes The Cincinnati Gas & Electric Company (CG&E), pursuant to O.A.C. 4906-7-12, and hereby respectfully requests the Ohio Power Siting Board (Board) deny the Petition to Intervene filed by Valley Asphalt Corporation (Valley Asphalt). Valley Asphalt's petition is untimely under Ohio Administrative Code section 4906-7-04,¹ highly prejudicial, and does not conform to the express requirements of Ohio Administrative Code 4906-7-11.² As such, CG&E respectfully requests the Board deny Valley Asphalt's Petition to Intervene.

¹ O.A.C. 4906-7-04. Baldwins, 2005.

² O.A.C. 4906-7-11. Baldwins, 2005.

Respectfully Submitted,



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BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Application of)	
The Cincinnati Gas & Electric Company)	
For a Certificate of Environmental)	Case No. 05- 361- EL-BTX
Compatibility and Public Need for the)	
Hillcrest-Eastwood 138 kV)	
Transmission Line)	

MEMORANDUM IN SUPPORT

I. INTRODUCTION:

On or about June 13, 2005, CG&E filed its Application to the Power Siting Board for a Certificate of Environmental Compatibility and Public Need (Application) to construct the Hillcrest-Eastwood 138 kV transmission line (Project). The Project involves the construction of a new single-circuit overhead transmission line between CG&E's existing Eastwood Substation and the proposed Hillcrest Substation. This line will provide needed electric transmission and distribution support to the eastern limits of CG&E's service territory including, Mount Orab, Sterling and Green Townships located in Brown County, and Williamsburg Township, located in Clermont County. Moreover, this project and the associated substation will relieve the CCD-owned, and Dayton Power and Light operated, 345/ 138 kV transformer bank (TB) at the Stuart Generating Station, and will support the Stuart Foster 138 kV corridor.

Pursuant to relevant O.A.C. 4906-5-08,³ CG&E held a public meeting in Brown County, to discuss the proposed construction of the Project on December 7, 2004. Notice of this public information meeting was published in the News Democrat prior to the meeting. On August 18, 2005, following the filing of the Project Application, CG&E delivered copies of the completed Application to public officials and libraries, as required by O.A.C. 4906-5-06.⁴ As required by O.A.C. 4906-05-08,⁵ CG&E provided public notice of the proposed facilities through full-page ads placed on the following dates in newspapers of general circulation:

- September 16, 2005, Cincinnati Enquirer and The Post
- October 20, 2005, The News Democrat
- October 26/27, 2005, The Community Journal-Clermont, Community Journal – North Clermont, Milford-Miami Advertiser, Bethel Journal and respective Internet sites.
- December 7, 2005, The Cincinnati Enquirer, The Post
- January 6, 2006 The Cincinnati Enquirer

These ads included descriptions of the projects, maps showing the general layout and location of the facilities, and information pertaining to upcoming public and adjudicatory hearings. Further, information regarding the substation and transmission line projects was available online via Cinergy's website and through the Ohio Power Siting Board's website. The application for the transmission line included a route selection study, as required by OAC 4906-15-3,⁶ describing how and why the preferred route was selected.

³ O.A.C. 4906-5-08. Baldwins, 2005.

⁴ O.A.C 4906-5-06. Baldwins, 2005.

⁵ O.A.C 4906-05-08 Baldwins 2005.

⁶ O.A.C. 4906-15-3. Baldwins 2005.

A local public hearing was held on January 12, 2006, in Brown County, Ohio, at which time interested persons were given the opportunity to comment on the Project. Numerous members of the community did provide comments and used the hearing as an opportunity to express concerns on the record. Valley Asphalt did not make an appearance on the record and did not offer any comments during the proceeding.

Despite the numerous public notices as described above, and the failing to participate in the public hearing, on January 17, 2006, at 10:32 am, just twenty-four hours before the adjudicatory hearing of this matter, Valley Asphalt filed its Petition to Intervene in the above captioned matter.

CG&E respectfully requests this Board deny Valley Asphalt's petition because it is untimely, prejudicial, will result in unnecessary and unjust delays, and fails to comply with the requirements for intervention and appearance before this Board as set forth in the Ohio Administrative Code.

II. LAW AND ARGUMENT

A. Valley Asphalt's Petition is Untimely

Section 4906-7-04 of the Ohio Administrative Code provides in pertinent part:

(A) Persons who desire to intervene in a board proceeding shall comply with the following requirements...

(2) All other persons may petition for leave to intervene by:

(a) Preparing a petition for leave to intervene setting forth the grounds for the proposed intervention and the interest of the petitioner in the proceedings.

(b) *Filing said petition within the time established by the board or administrative law judge.*

(3) Copies of all notices of intervention and petitions for leave to intervene shall be sent to all parties by the

prospective intervenor, and a certificate of service shall be filed with the board at the time of filing said notice or petition pursuant to rule 4906-7-06 of the Administrative Code.⁷

The petition for Intervention filed by Valley Asphalt is untimely and should be denied. By Entry dated December 1, 2005, the Board stated that it would “accept petitions to intervene in the hearing by interested persons up to five days prior to the scheduled date for the hearing, or later if good cause is shown.” Petitioner’s request to Intervene was filed on January 17, 2006 at 10:30 am, less than twenty-four hours before the commencement of the scheduled adjudicatory hearing of the above captioned matter. Clearly, this was not within the time established by the Board.⁸

As described above, CG&E complied with all notice and publication requirements proscribed by the Ohio Administrative Code. CG&E held a public hearing in Brown County in December 2004. CG&E filed its Application in June 2005, nearly six (6) months ago. Since the filing of the application, CG&E published public notices in newspapers of general circulation no less than four (4) times, exceeding its obligation under O.A.C. 4906-5-08, which only requires two publication dates. Further, beginning on or about August 18, 2005 copies of the Applications were available in the public libraries located in Brown and Clermont Counties. Lastly, on January 12, 2006, in Brown County, a public hearing was held which gave impacted residents along both the preferred and alternate routes to provide comments for the record. Valley Asphalt did not offer any comments on the record.⁹

⁷ O.A.C. 4906-7-04. Baldwins, 2005. *Emphasis Added.*

⁸ *Id.*

⁹ It is understood that a representative of Valley asphalt did arrive but after the conclusion of the evidentiary hearing. Despite this fact, CG&E representatives were available to discuss the matter with Valley Asphalt’s representative at that time.

In its Petition for Intervention, Valley Asphalt acknowledges that it received a letter from Cinergy on November 25, 2005, pertaining to the proposed Project and a notification of the Public Hearing on January 12, 2006.¹⁰ As such, notwithstanding the preceding publications and information already made available by CG&E, Valley Asphalt had actual notice of the Project nearly two months ago. Petitioner had many opportunities to investigate the matter, determine its impact and to file for intervention prior to the day before the scheduled hearing. Valley Asphalt has failed to establish good cause for untimely intervention in this proceeding.

To allow intervention at this stage will cause unnecessary delays in this proceeding. CG&E has not had an opportunity to investigate the matter, and is unable to offer evidence or testimony at the January 18, 2006 hearing, to address the specific allegations made in Valley Asphalt's Petition.

B. Valley Asphalt's Petition to Intervene does not comply with O.A.C. 4906-7-11.

Valley Asphalt's Petition does not comply with the express requirements of O.A.C. 4906-7-11. Specifically, O.A.C. 4906-7-11 provides:

Except as otherwise provided in paragraphs (B), (C), and (D) of this rule, each party shall be represented by an attorney at law authorized to practice before the courts of this state, with the exception of an individual person who is appearing on his or her own behalf.¹¹

Valley Asphalt is a corporation registered to do business in the State of Ohio. As such, under Ohio law and the Ohio Administrative Code, an attorney must represent Valley Asphalt. Jackie Jurgensen, Property Management and Acquisitions signed valley Asphalt's petition. According to the Ohio Supreme Court's attorney registration

¹⁰ See Petition for Intervention filed January 17, 2006.

¹¹ O.A.C. 4906-7-11 Baldwins, 2005.

directory, there is no record of a Jackie Jurgensen that is licensed to practice law in the state of Ohio. Therefore, it is safe to assume that the individual who signed the petition on behalf of Valley Asphalt is not an attorney. As such, the petition fails to comply with the express requirements of O.A.C. 4906-7-11, that an attorney must represent each party, who is not an individual person.

This requirement extends well beyond proceedings in front of this Commission. Ohio law also requires a corporation to be represented by an attorney in a legal proceeding. The Supreme Court of Ohio, in denying a corporation the ability to appear in a proceeding through its officers and without a licensed attorney, has held that:

To allow a corporation to maintain litigation and appear in court represented by corporate officers or agents only would lay open the gates to the practice of law for entry to those corporate officers or agents who have not been qualified to practice law and who are not amenable to the general discipline of the court.¹²

Therefore, the petition to intervene is deficient and should be denied.

C. Extraordinary Circumstances do not exist and Valley Asphalt has not met its burden of showing Good Cause:

With respect to untimely filed petitions for intervention, O.A.C. 4906-07-04 provides as follows:

(C) The board or the administrative law judge may, in extraordinary circumstances, and for good cause shown, grant a petition for leave to intervene in subsequent phases of the proceeding, filed by a person identified in paragraph (A)(1) or (A)(2) of this rule, who failed to file a timely notice of intervention or petition for leave to intervene. Any petition filed under this paragraph must contain, in addition to the information set forth in paragraph (A)(2) of this rule, a statement of good cause for failing to timely file the notice or petition and shall be granted only upon a finding that:

¹² *Union Sav. Ass'n v. Home Owners Aid*, 23 Ohio St. 2d 60, 64 (1970).

(1) Extraordinary circumstances justify the granting of the petition.

(2) The intervenor agrees to be bound by agreements, arrangements, and other matters previously made in the proceeding.¹³

Valley Asphalt has failed to demonstrate the extraordinary circumstances necessary to grant its intervention at this stage of the proceeding. Valley Asphalt states four reasons for its opposition to the Preferred Route, which in turn, are the foundation of its request to intervene. Specifically, Valley Asphalt alleges:

- A. Our property on Bodman Road has approximately 3,093 feet of rail. Our primary reason for purchasing this land was the proximity to the rail.
- B. Negative economic impact of not being able to load and offload products such as aggregate and asphalt at our production facility.
- C. We will need to be using heavy equipment such as loaders and cranes which are not easy to maneuver around power lines.
- D. We have stockpiled aggregate and created a plant site that would be altered by the setbacks.¹⁴

CG&E respectfully submits that extraordinary circumstances do not exist which would necessitate Valley Asphalt's intervention. With respect to Valley Asphalt's first and second allegations, based upon conversations with Valley Asphalt's representative(s) following the January 12, 2006 public hearing and subsequent telephone conversations on January 17, 2006, after the filing of the petition for Intervention, CG&E has discovered that Valley Asphalt is not currently using the railroad as part of its business.

¹³ O.A.C. 4906-7-04. Baldwins, 2005.

¹⁴ See *Petition at 2*.

In fact, Valley Asphalt has no immediate plans to use the railroad as described in its Petition. Further, Valley Asphalt has not investigated what conditions the railroad, OSHA, or State law would require of Valley Asphalt to load and unload the cars as it wishes to do. Valley Asphalt has not conducted any feasibility study, engineering, or designing with respect to how it could load and unload product from rail cars. For instance, it is unknown whether Valley Asphalt would be required to build a section of track off the main rail line onto its property for a car to park or whether it could actually park the railcar on the main track while it is being loaded. Therefore, Valley Asphalt's allegations with respect to the use of the railway are purely speculative in nature and lack foundation. Certainly extraordinary circumstance and good cause cannot be demonstrated through pure speculation and conjecture.

With respect to Valley Asphalt's third allegation pertaining to the use of heavy equipment, Valley Asphalt has failed to show why this is good cause necessitating intervention at such a late date. Valley Asphalt would use the equipment along the proposed transmission line route for the lading and unloading of the rail cars. As described above, Valley Asphalt is not currently using its property in this manner and has conducted absolutely no research as to the feasibility of such a use. The machinery will be able to run under the transmission lines providing they do not interfere with the lines themselves. As stated in previous filings before this Board, CG&E would require approximately a seventy foot (70) easement along the railway. The poles themselves will be placed at the midpoint of this easement, or approximately 35 feet from the railway and 150 to 250 feet apart. The actual impact the poles will have along Valley Asphalt's property will be minimal, certainly not extraordinary.

With respect to Valley Asphalt's final allegation, Valley Asphalt claims that its plant site would be altered by the setbacks. Valley Asphalt was not able to offer any support for this allegation during phone conversations with CG&E. Further, Valley Asphalt conceded that it is possible that there would be no economic impact that is attributable to the transmission lines themselves. Valley Asphalt is in the planning stages of building its asphalt plant. It has not conducted any research relating to setbacks required from the railway, or environmental constraints. Once again, Valley Asphalt's allegation is based upon pure speculation.

Further, pursuant to O.A.C. 4906-7-04(C)(2), in order for Valley Asphalt to be permitted to intervene at this stage, it must agree to be bound by any agreements, arrangements, and other matters previously made in the proceeding.¹⁵ On January 11, 2006, CG&E and the Staff of the Commission reached an agreement with respect to the issues presented by the Staff's report. The parties are currently drafting a stipulation to be filed which essentially agrees with nearly every recommendation set forth in the Staff's Report of Investigation. This would include Staff's recommendation that the preferred route be used for the construction of the transmission line project. Although the Board is not required to follow this agreement and adopt its subsequent Stipulation in order to be permitted to intervene in this matter, Valley Asphalt must agree to be bound by this Stipulation.

D. Valley Asphalt Will Not Be Prejudiced If the Board Denies Intervention.

The lack of status as an intervenor in this proceeding will not prejudice Valley Asphalt in anyway whatsoever. Valley Asphalt will maintain its ability to negotiate with

¹⁵ O.A.C. 4906-7-04. Baldwins, 2005.

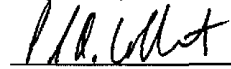
CG&E with respect to the necessary easement and right-of-way, which may impact Valley Asphalt. To the extent the easement or right-of way has an identifiable and real economic impact on the ability of Valley Asphalt to operate and uses its property, Valley Asphalt will be made whole.

CG&E has pledged to negotiate in good faith with Valley Asphalt with respect to its concerns. Specifically, CG&E has already offered a one-time relocation of facilities to a mutually agreeable location on Valley Asphalt's property should the preferred route, if selected by this Board interfere with Valley Asphalt's ability to use the railway at anytime in the future. Further, to the extent Valley Asphalt decides to go ahead with its plans to use the railway, CG&E has pledged to work with Valley Asphalt to ensure that it will be able to operate in the safest manner. CG&E has offered that to the extent the location of the transmission lines along the preferred route cause an incremental difference in any construction or design work required to use the railway for the loading and unloading of cars, CG&E has offered to pay this incremental difference.

III. CONCLUSION

For the foregoing reasons, CG&E respectfully requests that the Board deny Valley Asphalt's Petition for Intervention.

Respectfully Submitted,



Paul A. Colbert (0058582)

Senior Counsel.

Rocco O. D'Ascenzo (0077651)

Counsel

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139 East Fourth Street

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Attorneys for Applicant

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E-mail: rocco.d'ascenzo@cinergy.com



Cinergy Corp.
139 East Fourth Street
P.O. Box 960
Cincinnati, OH 45201-0960

August 8, 2005

✓ ALREADY
REPLACED

Ms. Reneé Jenkins, Secretary
Public Utilities Commission of Ohio
Docketing Division, 13th Floor
180 East Broad Street
Columbus, Ohio 43215-3793

Re: Case No. 05-360-EL-BSB
Hillcrest Substation Project

Dear Ms. Jenkins:

Enclosed for filing are thirty copies and one original of Tables 1, 2, and 3 of Appendix 03-1, Chapter 4906-15-03, of the Hillcrest Substation Project Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need (PUCO Case No. 05-360-EL-BSB). These tables supersede those found within the applications filed on June 13, 2005.

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

Sincerely,
The Cincinnati Gas & Electric Company

Stephen R. Lane
Environmental Scientist

Cc Mr. Stuart Siegfried (OPSB)

CINERGY.

RECEIVED-DOCKETING DIV

June 10, 2005

2005 JUN 13 AM 11:47

Cinergy Corp.
139 East Fourth Street
P.O. Box 960
Cincinnati, OH 45201-0960

Mr. Alan R. Schriber, Chair
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

PUCO

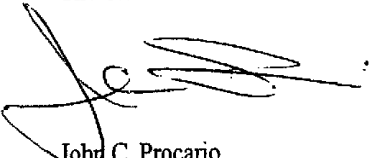
Attention: Ms. Renée Jenkins, Secretary
Public Utilities Commission of Ohio

RE: Application for a Certificate of Environmental Compatibility and Public
Need for the Hillcrest Substation.
Case No. 05-360-EL-BSB

Dear Mr. Schriber and Ms. Jenkins:

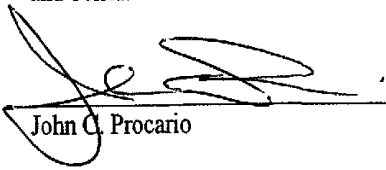
Attached herewith is the Application for a Certificate of Environmental Compatibility
and Public Need for the Hillcrest Substation.

Very truly yours,
The Cincinnati Gas & Electric Company



John C. Procario
Vice President and Chief Operating Officer
Regulated Business Unit

Now comes John C. Procario who says that the information and material contained in the
attached Application for a Certificate of Environmental Compatibility and Public Need
for the Hillcrest Substation is true and accurate to the best of his knowledge, information,
and belief.



John C. Procario

Sworn to and subscribed before me this 6th day of June, 2005.



Norma L. Bales

NORMA L. BALES
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 03-17-06

CINERGY.

RECEIVED-DOCKETING DIV

June 10, 2005

2005 JUN 13 AM 11:47

Cinergy Corp.
139 East Fourth Street
P.O. Box 960
Cincinnati, OH 45201-0960

Mr. Alan R. Schriber, Chair
Ohio Power Siting Board
180 East Broad Street
Columbus, Ohio 43215

PUCO

Attention: Ms. Reneé Jenkins, Secretary
Public Utilities Commission of Ohio

RE: Application for a Certificate of Environmental Compatibility and Public
Need for the Hillcrest Substation.
Case No. 05-360-EL-BSB

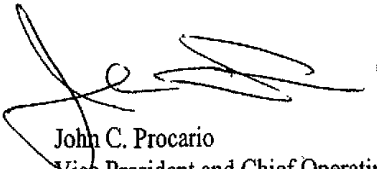
Dear Mr. Schriber and Ms. Jenkins:

Pursuant to the Rules and Regulations of the Ohio Power Siting Board, The Cincinnati Gas & Electric Company, an operating company of Cinergy Corp., hereby submits an Application for a Certificate of Environmental Compatibility and Public Need for the Hillcrest Substation.

The following information is included per the requirements of OAC 4906-5-03(A)(3):

- (a) Applicant: The Cincinnati Gas & Electric Company
139 East Fourth Street
Cincinnati, Ohio 45202
- (b) Name and Location: Hillcrest Substation
Brown County, Ohio
- (c) Authorized Representative: Mr. Stephen Lane
Environmental Scientist
139 East Fourth Street, Room 409-A
Cincinnati, Ohio 45202
(513) 287-2379

Very truly yours,
The Cincinnati Gas & Electric Company



John C. Procario
Vice President and Chief Operating Officer
Regulated Business Unit

**APPLICATION TO THE OHIO POWER SITING BOARD
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED**

**OPSB CASE NO.
05-360-EL-BSB**

**Hillcrest
Substation Project
June 2005**

**Prepared by:
URS Corporation**

URS

**Prepared for:
Cincinnati Gas & Electric**

CINERGY.
CG&E

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
4906-15-01 PROJECT SUMMARY AND FACILITY OVERVIEW	01-1
(A) Project Summary and Facility Overview	01-1
(1) General Purpose of the Facility	01-1
(2) Summary Description of Proposed Facility	01-1
(3) Site Selection Process	01-2
(4) Principal Environmental and Socioeconomic Considerations	01-3
(a) Land Use Impacts	01-3
(b) Economic Impacts	01-3
(c) Ecological Impacts	01-3
(d) Cultural Impacts	01-4
(5) Project Schedule Summary	01-4
4906-15-02 JUSTIFICATION OF NEED	02-1
(A) Justification of Need	02-1
(1) Purpose of the Proposed Facility	02-1
(2) System Conditions and Local Requirements	02-2
(3) Load Flow Studies	02-2
(a) Planning Criteria	02-2
(b) Load Flow Studies	02-5
(c) Double Contingency Stability Performance Analysis	02-13
(d) Projected Distribution Loads	02-14
(4) East Central Area Reliability (ECAR) Base Case Model Data	02-16
(5) Base Case Data for Natural Gas Transmission Line	02-16
(B) Expansion Plans	02-17
(1) Long-Term Forecast	02-17
(C) Impact on Electric System Economy and Reliability	02-17
(D) Options to Eliminate the Need for the Proposed Project	02-18
(E) Facility Rationale	02-20
(F) Facility Schedule	02-21
(1) Schedule	02-21
(2) Impact Delays	02-21
4906-15-03 SITE AND ROUTE ALTERNATIVES ANALYSIS	03-1
4906-15-04 TECHNICAL DATA	04-1
(A) Alternative Sites/Routes of Projects	04-1
(1) Geography and Topography	04-1
(a) Transmission Line	04-1
(b) Proposed Substation Locations	04-1
(c) Major Highway and Railroad Routes	04-1
(d) Air Transportation Facilities	04-2
(e) Utility Corridors	04-2
(f) Proposed Permanent Access Roads	04-2
(g) Lakes, Ponds, Reservoirs, Streams, Canals, Rivers, and Swamps	04-2
(h) Topographic Contours	04-2
(i) Soil Associations Crossed by the Preferred and Alternate Sites	04-3
(j) Population Centers and Legal Boundaries	04-3
(2) Slope and Soil Mechanics	04-3
(B) Layout and Construction	04-3
(1) Site Activities	04-3
(a) Surveying and Soil Testing	04-3
(b) Grading and Excavation	04-3
(c) Access Roads and Trenches	04-4
(d) Stringing of Cable	04-4

TABLE OF CONTENTS (Continued)

<u>Section</u>	<u>Page</u>
(e) Removal and Disposal of Construction Debris	04-4
(f) Post Construction Reclamation	04-4
(g) Other Site Activities	04-4
(2) Layout for Associated Facilities	04-4
(a) Map of Associated Facilities	04-4
(b) Reasons for Proposed Layout and Unusual Feature	04-5
(c) Future Modification Plans	04-5
(C) Transmission Equipment	04-5
(1) Electric Transmission Line Data	04-5
(2) Electric Transmission Substation Data	04-6
(a) Breakers	04-6
(b) Switchgear	04-6
(c) Bus Arrangement and Structures	04-6
(d) Transformers	04-6
(e) Control Buildings	04-6
(f) Other Major Equipment	04-7
(3) Gas Transmission Line Data	04-7
(4) Gas Transmission Facilities	04-7
4906-15-05 FINANCIAL DATA	05-1
(A) Ownership	05-1
(B) Electric Capital Costs	05-1
(C) Gas Capital Cost	05-1
4906-15-06 SOCIOECONOMIC AND LAND USE IMPACT ANALYSIS	06-1
(A) Socioeconomic Characteristics	06-1
(B) Route Alignments and Land Use	06-2
(1) Proposed Routing	06-2
(2) Substations	06-2
(3) General Land Use	06-3
(a) Residential	06-3
(b) Commercial	06-4
(c) Industrial	06-4
(d) Cultural	06-4
(e) Agricultural	06-4
(f) Recreational	06-4
(g) Institutional	06-4
(4) Transportation Corridors	06-4
(5) Existing Utility Corridors	06-5
(6) Noise Sensitive Areas	06-5
(7) Agricultural Land	06-5
(C) Land Use Impacts of the Proposed Project	06-5
(1) Impact of Construction	06-5
(2) Impact of Operation and Maintenance	06-6
(3) Mitigation Procedures	06-6
(D) Public Interaction Information	06-6
(1) Townships, towns and Villages within 1,000 feet of the Site Alternatives	06-6
(2) Public Officials Contacted	06-6
(3) Public Information Programs	06-8
(4) Liability Compensation	06-9
(5) Serving the Public Interest	06-9
(6) Tax Revenues	06-10
(7) Impact on Regional Development	06-10
(E) Health and Safety	06-10
(1) Compliance with Safety Regulations	06-10
(2) Electric and Magnetic Fields	06-10

TABLE OF CONTENTS (Continued)

<u>Section</u>	<u>Page</u>
(a) Calculated Electric and Magnetic Field Levels	06-10
(b) Current State of EMF Knowledge	06-11
(c) Line Design Considerations	06-13
(d) EMF Public Policy.....	06-13
(3) Aesthetic Impact.....	06-14
(a) Views of the Substation	06-14
(b) Structure Design Features	06-14
(c) Facility Effect on Site and Surrounding Area	06-14
(d) Visual Impact Minimization	06-15
(4) Estimate of Radio and Television Interference.....	06-15
(F) Cultural Impacts of the Proposed Project.....	06-16
(1) Archaeological Resources and Correspondence with Agency.....	06-16
(2) Construction Impacts on Cultural Resources	06-16
(3) Operation and Maintenance Impacts on Cultural Resources	06-17
(4) Mitigation Procedures	06-17
(G) Noise	06-17
(1) Construction	06-18
(a) Dynamiting or Blasting Activities.....	06-18
(b) Operation of Earth Moving or Excavating Equipment	06-18
(c) Driving of Piles.....	06-18
(d) Erection of Structures	06-19
(e) Truck Traffic	06-19
(f) Installation of Equipment.....	06-19
(2) Operation and Maintenance.....	06-19
(3) Mitigation Procedures	06-19
(H) Other Significant Issues.....	06-19
4906-15-07 ECOLOGICAL DATA.....	07-1
(A) Summary of Ecological Impact Studies	07-1
(B) Ecological Features	07-1
(1) Route Alignments	07-2
(2) Substations and Compressor Stations	07-2
(a) Preferred Site	07-2
(b) Alternate Site	07-2
(3) All Areas Currently not Developed for Agricultural, Residential, Commercial, Industrial, Institutional, or Cultural Purposes, Including:.....	07-2
(a) Streams and Drainage Channels	07-2
(b) Lakes, Ponds, and Reservoirs	07-3
(c) Marshes, Swamps, and Other Wetlands.....	07-3
(d) Woody and Herbaceous Vegetation Land	07-3
(e) Locations of Threatened and Endangered Species.....	07-4
(4) Soil Associations:	07-5
(C) Impacts of Alternative Routes on Water Bodies	07-6
(1) Construction Impact	07-6
(2) Operation and Maintenance Impact.....	07-6
(3) Mitigation Procedures	07-6
(D) Wetlands Impact	07-6
(1) Construction Impact	07-6
(2) Operation and Maintenance Impact.....	07-7
(3) Mitigation Procedures	07-7
(E) Vegetation Impact.....	07-7
(1) Construction Impact	07-7
(2) Operation and Maintenance Impact.....	07-7
(3) Mitigation Procedures	07-8
(F) Commercial and Threatened/Endangered Species Impact	07-8
(1) Construction Impact	07-9

TABLE OF CONTENTS (Continued)

<u>Section</u>	<u>Page</u>
(2) Operation and Maintenance Impact.....	07-9
(3) Mitigation Procedures	07-10
(G) Slopes and Erodible Soils	07-10
(1) Construction Impact	07-10
(2) Operation and Maintenance Impact.....	07-10
(3) Mitigation Procedures	07-10
(H) Other Issues.....	07-10

TABLES (within section or follow text)

02-1	2008 SUMMER PEAK CASE EVALUATION NORMAL OPERATING CONDITIONS, NO OUTAGES
02-2	2008 SUMMER PEAK CASE EVALUATION STUART – HILLCREST OUT
02-3	2008 SUMMER PEAK CASE EVALUATION FOSTER – HILLCREST OUT
02-4	2008 SUMMER PEAK CASE EVALUATION FOSTER – PIERCE OUT
02-5	2008 SUMMER PEAK CASE EVALUATION STUART – CLINTON OUT
02-6	2008 SUMMER PEAK CASE EVALUATION ZIMMER – SILVER GROVE – RED BANK OUT
05-1	ESTIMATES OF APPLICABLE INTANGIBLE AND CAPITAL COSTS FOR THE PREFERRED AND ALTERNATE SITES
06-1	STUDY AREA DEMOGRAPHICS OF PREFERRED AND ALTERNATE SITES
06-2	CONSTRUCTION EQUIPMENT APPROXIMATE SOUND LEVELS
07-1	MAJOR PLANT SPECIES OBSERVED OR EXPECTED TO OCCUR IN THE STUDY AREA
07-2	ANIMAL SPECIES IDENTIFIED OR LIKELY TO OCCUR IN THE STUDY AREA

FIGURES (follow tables)

02-1	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION OUT
02-2	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION IN-SERVICE
02-3A	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION OUT PIERCE – FOSTER OUTAGE
02-3B	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION IN-SERVICE PIERCE – FOSTER OUTAGE
02-4A	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION OUT STUART – CLINTON OUTAGE
02-4B	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION IN-SERVICE STUART – CLINTON OUTAGE
02-5A	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION OUT ZIMMER – SILVER GROVE – RED BANK OUTAGE
02-5B	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION IN-SERVICE ZIMMER – SILVER GROVE – RED BANK OUTAGE
02-6A	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION OUT FOSTER CEDARVILLE OUTAGE
02-6B	2008 BASE CASE HILLCREST STUDY HILLCREST SUBSTATION IN-SERVICE FOSTER CEDARVILLE OUTAGE
02-7A	STUART CASE ST1
02-7B	STUART CASE ST2
02-8A	ZIMMER CASE Z1
02-8B	ZIMMER CASE Z2
02-9A	SPURLOCK CASE SP1
02-9B	SPURLOCK CASE SP2

TABLE OF CONTENTS (Continued)

<u>Section</u>		<u>Page</u>
02-10	CG&E 34.5 KV SOUTHERN AREA	
02-11	BROWN 51 SUMMER LOADING/BROWN 51 WINTER LOADING	
02-12	BROWN TB1 TERITARY LOADING	
02-13	PROJECT SCHEDULE	
04-1	PREFERRED AND ALTERNATE SITE ALIGNMENTS	
06-1	LAND USE WITHIN 1,000 FEET OF THE PREFERRED AND ALTERNATE SUBSTATION LOCATIONS	
07-1	DELINEATED WETLANDS WITHIN 1,000 FEET OF THE PREFERRED AND ALTERNATE SITES	

**APPENDICES
(follow figures)**

02-1	LONG TERM FORECAST REPORT EXCERPT	
02-2	SOUTH CENTRAL POWER COMPANY APPROVAL LETTER	
03-1	SITE AND ROUTE SELECTION STUDY	
04-1	SUBSTATION LAYOUTS	
06-1	PUBLIC OFFICIALS CONTACTED AND QUESTIONNAIRE	
06-2	PUBLIC MEETING INFORMATION	
06-3	EMF INFORMATION	
06-4	SELECTED PHOTOGRAPHS OF THE PREFERRED AND ALTERNATE SUBSTATION SITES	
07-1	U.S. ARMY CORPS OF ENGINEERS WETLAND DELINEATION FORMS	
07-2	OHIO EPA OHIO RAPID ASSESSMENT METHOD (ORAM) FOR WETLANDS V5.0 FORMS	
07-3	SELECTED PHOTOGRAPHS	

4906-15-01 Project summary and facility overview.

(A) An applicant for a certificate to site a major electric power, gas, or natural gas transmission facility shall provide a project summary and overview of the proposed project. In general, the summary should be suitable as a reference for state and local governments and for the public. The summary and overview shall include the following:

- (1) A statement explaining the general purpose of the facility.
- (2) A description of the proposed facility.
- (3) A description of the site or route selection process, including descriptions of the major alternatives considered.
- (4) A discussion of the principal environmental and socioeconomic considerations of the preferred and alternate routes or sites.
- (5) An explanation of the project schedule (a bar chart is acceptable).

(B) Information filed by the applicant in response to the requirements of this section shall not be deemed responses to any other section of the application requirements.

Effective: 12/15/2003

R.C. 119.032 review dates: 09/30/2003 and 09/30/2008

Promulgated Under: 111.15

Statutory Authority: 4906.03

Rule Amplifies: 4906.06, 4906.03

Prior Effective Dates: 12/27/76, 10/10/78, 7/7/80, 7/7/88, 8/28/98

4906-15-01 PROJECT SUMMARY AND FACILITY OVERVIEW

(A) Project Summary and Facility Overview

This Application seeks a Certificate of Environmental Compatibility and Public Need from the Ohio Power Siting Board ("OPSB") for the Cincinnati Gas & Electric Company's (CG&E) proposed Hillcrest Substation Project. The scope of the proposed project involves the construction of a new power substation that will tap the existing Stuart-Foster 345 kV transmission line and connect with the proposed Hillcrest-Eastwood 138 kV overhead electric transmission line (the subject of PUCO Case No. 05-361-EL-BTX). The proposed project will support the Hillcrest-Eastwood 138 kV transmission line and provide needed electric transmission and distribution capacity to the eastern limits of the CG&E service area. This project is within Green Township in Brown County, Ohio. CG&E will construct, maintain, operate, and own the proposed substation.

(1) General Purpose of the Facility

The purpose of the proposed facility (and the associated transmission line) is to relieve the CCD-owned and Dayton Power and Light Company-operated 345/138 kV transformer bank (TB) 7 at the Stuart Generating Station (which feeds the 138kV circuit to Brown Substation and on to Eastwood Substation) and to support the Stuart-Foster 138 kV corridor. In addition, Hillcrest Substation will provide increased distribution reliability and a source of distribution capacity for load growth throughout the extended project vicinity.

(2) Summary Description of Proposed Facility

The Hillcrest Substation is approximately 17.6 acres in size at the Preferred Site and 9.9 acres in size at the Alternate Site. This Application is part of a combined transmission line and substation project. The proposed transmission line, (PUCO case no. 05-361-EL-

BTX), will originate at the existing CG&E Eastwood Substation and end at the proposed Hillcrest Substation. The Hillcrest Substation will tap the existing Stuart-Foster 345 kV transmission line. The selection of a suitable site for the Hillcrest Substation near to the Stuart-Foster 345 kV transmission line was a precursor to transmission line route selection as it defined the eastern termination point for the project.

(3) Site Selection Process

Several potential sites were identified and considered prior to the selection of a Preferred and an Alternate Site. Potential locations to the north of State Route 32 (SR 32), near the intersection of Hillcrest Road and Greenbush East Road, were given priority as this area is generally less developed than areas to the south and is located midway between the existing Foster Substation to the northwest and Stuart Generating Station to the southeast. A new substation in this area would also minimize the length required for the new Hillcrest-Eastwood 138 kV transmission line due to the general southeast to northwest trend of the Stuart-Foster line and increase opportunities for future distribution support and growth. In addition, substation sites adjacent to existing transmission lines are considered ideal as they minimize the aesthetic impacts of additional transmission lines to and from a more distant substation location. Availability of suitable land is another important consideration in substation siting as it is CG&E policy that condemnation is to be avoided if at all practical. Based on these considerations and engineering constraints, the following candidate sites were selected:

Preferred Site: The Preferred Substation Site is located east of Driver Collins Road and north of Greenbush East Road, approximately 1,600 feet northwest of the intersection of Greenbush East and Hillcrest Roads. The site is undeveloped and used for agricultural row cropping. The site is currently part of a parcel that is developed with two residences located on the southeast portion of the property. Access to the site will be available from Greenbush East Road to the south.

Alternate Site: The Alternate Substation Site is located at the southwest corner of Hillcrest Road and Greenbush East Road. The site is partially developed with two

residences on the northeastern portion of the property. The remainder of the site is comprised of old-field herbaceous vegetation. Access to the site is available from Greenbush East Road to the north and Hillcrest Road to the east.

(4) Principal Environmental and Socioeconomic Considerations

A general socioeconomic survey of the study area was performed as part of this Application. This included a field survey, preparation of a land use map, determination of current population estimates and projections for the area, and an assessment of project compatibility with local and regional development plans. This information allowed an assessment of the potential social and economic impacts of the proposed substation on the surrounding communities.

(a) Land Use Impacts: Land use in the immediate area of both the Preferred and Alternate Sites is predominantly residential and agricultural uses with scattered woodlots. No known sensitive land uses were identified at the Preferred or Alternate Sites. Based on a review of available land use plans and contacts with local agencies, the project appears to be consistent and compatible with local and regional development projects.

(b) Economic Impacts: Regional development within Brown County is not expected to be directly impacted as a result of this project. However, the project will have an indirect positive impact on the region due to an increased reliability and availability of electricity. In addition, CG&E will pay property taxes on utility facilities in Brown County.

(c) Ecological Impacts: An ecological study of the Preferred and Alternate Sites was performed as part of this Application. The study included analysis of published literature and maps and a field survey to assess the presence of plant and animal species, wetlands, and streams located along the project route. The results of this study are discussed in detail in Section 4906-15-07 of this Application.

No streams or wetland areas were identified on the Preferred or Alternate Sites during the ecological field surveys. No Federal or State species of concern were identified during the field surveys.

(d) Cultural Impacts: No previously recorded archeological sites were identified within 100 feet or 1,000 feet of either proposed substation location. A Phase I Cultural Resources Survey will be completed for the Preferred Site as dictated by the State Historic Preservation Office. The results of cultural resources survey will be forwarded to the OPSB once completed. If the Alternate Site is selected, a Phase I Cultural Resources Survey will be completed for this site.

(5) Project Schedule Summary

Construction of the Hillcrest Substation Project is proposed to begin on approximately July 1, 2006, and the project is planned to be placed in service by June 30, 2008. A project schedule in a bar chart format is provided as Figure 02-13.

4906-15-02 Review of need for proposed project.

(A) The applicant shall provide a statement explaining the need for the proposed facility, including a listing of the factors upon which it relied to reach that conclusion and references to the most recent long-term forecast report (if applicable). The statement shall also include but not be limited to, the following:

- (1) A statement of the purpose of the proposed facility.
- (2) Specific projections of system conditions or local requirements that impacted the applicant's opinion on the need for the proposed facility.
- (3) Relevant load flow studies and contingency analyses, if appropriate, identifying the need for system improvement.
- (4) For electric power transmission facilities, one copy of the relevant power flow base case model data, including "East Central Area Reliability Coordination Agreement" equivalents, in "General Electric (Positive Sequence Load Flow), Power Technology Incorporated", or common raw data format on diskette, with appropriate directions to recover data if compressed.
- (5) For gas or natural gas transmission projects, one copy in electronic format of the relevant base case system data on diskette, with a description of the analysis program and the data format.

(B) Expansion plans.

- (1) For the electric power transmission lines and associated facilities, the applicant shall provide a brief statement of how the proposed facility and site/route alternatives fit into the applicant's most recent long-term electric forecast report and the regional plans for expansion, including, but not limited to, the following:
 - (a) Reference to any description of the proposed facility and site/route alternatives in the most recent long-term electric forecast report of the applicant.
 - (b) If no description was contained in the most recent long-term electric forecast report, an explanation as to why none was filed in the most recent long-term electric forecast report.
 - (c) Reference to regional expansion plans, including East Central Area Reliability Coordination Agreement bulk power plans, when applicable (if the transmission project will not affect regional plans, the applicant shall so state).

(2) For gas transmission lines and associated facilities, the applicant shall provide a brief statement of how the proposed facility and site/route alternatives fit into the applicant's most recent long-term gas forecast report, including the following:

(a) Reference to any description of the proposed facility and site/route alternatives in the most recent long-term gas forecast report of the applicant.

(b) If no description was contained in the most recent long-term gas forecast report, an explanation as to why none was filed in the most recent long-term gas forecast report.

(C) For electric power transmission facilities, the applicant shall provide an analysis of the impact of the proposed facility on the electric power system economy and reliability. The impact of the proposed facility on all interconnected utility systems shall be evaluated, and all conclusions shall be supported by relevant load flow studies.

(D) For electric power transmission lines, the applicant shall provide an analysis and evaluation of the options considered which would eliminate the need for construction of an electric power transmission line, including electric power generation options and options involving changes to existing and planned electric power transmission substations.

(E) The applicant shall describe why the proposed facility was selected to meet the projected need.

(F) Facility schedule.

(1) Schedule. The applicant shall provide a proposed schedule in bar chart format covering all applicable major activities and milestones, including:

(a) Preparation of the application.

(b) Submittal of the application for certificate.

(c) Issuance of the certificate.

(d) Acquisition of rights-of-way and land rights for the certified facility.

(e) Preparation of the final design.

(f) Construction of the facility.

(g) Placement of the facility in service.

(2) Delays. The applicant shall describe the impact of critical delays on the eventual in-service date.

Replaces: part of 4906-15-04

Effective: 12/15/2003

R.C. 119.032 review dates: 09/30/2003 and 09/30/2008

Promulgated Under: 111.15

Statutory Authority: 4906.03

Rule Amplifies: 4906.06, 4906.03

Prior Effective Dates: 12/27/76, 11/6/78, 7/7/80, 7/7/88, 8/28/98

4906-15-02 JUSTIFICATION OF NEED

(A) Justification of Need

(1) Purpose of the Proposed Facility

This Application is for the certification of a new 345,000/138,000 volt (345/138 kV) substation at a location to be known as the Hillcrest Substation. This facility is to be located beneath the existing CG&E, Columbus Southern Power Company, and Dayton Power and Light Company (collectively CCD) Stuart-Foster 345 kV transmission line and at the northeastern terminus of the proposed Hillcrest-Eastwood 138 kV overhead electric transmission line (the subject of PUCO Case No. 05-361-EL-BTX). The proposed substation will be constructed, owned, and operated by CG&E. The proposed facility will be constructed in a three-position, 345 kV ring-bus configuration to avoid potential interruptions to the CCD Stuart-Foster 345 kV transmission line. The 345/138 kV transformer at Hillcrest will be able to supply 400 MVA of 138 kV capacity. The 138 kV circuit from CG&E's Eastwood Substation will be rated to deliver approximately 300 MVA. Of that, 120 MVA of capacity will be available to supply distribution services from the proposed Hillcrest Substation and the remainder will support the Stuart-Foster corridor.

The purpose of the proposed facility (and the associated transmission line) is to relieve the CCD-owned and Dayton Power and Light Company-operated 345/138 kV TB7 at the Stuart Generating Station (which feeds the 138kV circuit to Brown Substation and Eastwood Substation) and to support the Stuart-Foster 138 kV corridor. In addition, future distribution circuits from Hillcrest Substation will provide increased reliability and a source of electrical capacity for load growth near the eastern limits of the CG&E service area.

(2) System Conditions and Local Requirements

A major source of power for the eastern CG&E service area is currently the 138 kV Brown-Ford transmission line (circuit number 5884), which is supplied at the southern end from TB7 at Stuart Generating Station and from the north by CG&E's Foster Substation. Planning studies indicate that the 345/138 kV Stuart transformer will approach its normal hotspot rating in 2005 and its emergency hotspot rating in 2007. Note that the hotspot rating is well above the nameplate rating. With CG&E's plans for the installation of the Clinton County Substation in 2006, a critical need for the Hillcrest-Eastwood Project will be deferred although the transformer will still exceed its normal and emergency ratings in 2008, indicating a need for the proposed project at that time.

The Hillcrest Substation and Hillcrest-Eastwood 138 kV transmission line are required to address projected load growth and associated contingency overloads. The Hillcrest Substation will also provide the basis for the construction of additional distribution capacity needed to relieve the Eastwood 52 and Brown 51 34.5 kV feeders and associated transformer banks. This capacity will be required for projected future growth and demand throughout the project area and in areas further to the south in the vicinity of Georgetown and Russellville.

(3) Load Flow Studies

CG&E conducted studies of the CG&E and CCD 345 kV transmission system for the forecasted 2008 Summer Peak Load Condition with and without the Hillcrest Substation and Hillcrest-Eastwood 138 kV transmission line in-service.

(a) Planning Criteria: The planning criteria used are based upon those of the East Central Area Reliability (ECAR) Agreement and the North American Electric Reliability Council (NERC). The evaluations were based upon the requirements necessary to provide adequate supply to the area based on CG&E's planning criteria, which are described below. These planning criteria are not intended to be absolute or applied

without exception. Other factors, such as severity of consequences, availability of emergency switching procedures, probability of occurrence and the cost of remedial actions are also considered in the evaluation of the transmission system. In general, the planning criteria of CG&E and the ECAR and NERC Planning Standards are considered deterministic criteria (i.e. no randomness is involved in the development of future states of the system) as compared to criteria based upon probability. The criteria and standards are meant to be proxies for a reasonable level of reliability based on the degree of uncertainty of various factors including but not limited to; generation dispatch, facility outages, generation outages, transfers across the system and load patterns that occur in real time operations.

(i) **69 kV and 138 kV Systems:** A “facility” as defined herein shall include 69 kV and 138 kV transmission circuits or any transformer with a secondary voltage of 69 or 138 kV. Under normal system peak load conditions, the loading (typically measured in megavolt-amperes (MVA) on all facilities should be no higher than 100% of their normal rating. Voltages should be 95% of nominal or higher. The voltage on the 69 and 138 kV system should not exceed 105% for any load level. All circuit breakers should be capable of interrupting the maximum fault current duty imposed on the circuit breaker.

The 69 kV and 138 kV systems should be able to withstand any single facility outage (referred to as a “single contingency outage” which means one line or transformer out of service) during peak load periods without exceeding the emergency limits of any remaining 69 kV or 138 kV facilities. Loss of load shall be minimized although it cannot be eliminated in all situations. The voltages on the 69 kV and 138 kV systems should not be less than 90% of nominal under these conditions.

Double contingency line outages (i.e., two lines or transformers, or one of each, out of service) are considered primarily in cases involving the CG&E 138 kV underground cable feeders, which supply the West End and Charles substations near downtown Cincinnati. For an outage of any other line with one such underground circuit out of service, the

loading on all lines should be no higher than 100% of the emergency conductor rating and voltage should be 90% or higher at all points on the CG&E 138 kV system.

A line outage following an outage of a 138-69 kV autotransformer assumes that CG&E's 75 MVA mobile autotransformer is installed, a mobile transformer for tertiary load is installed if necessary, and any desirable mitigating switching or other actions are performed. Under such conditions, the loading on all transmission lines should be no higher than 100% of the emergency conductor rating. The loading on the 138-69 kV autotransformers should be no higher than 100% of the emergency rating. The mobile autotransformer must be limited to 100% of the normal rating under all circumstances. Voltages should be 90% or higher at all points on the 138 kV and 69 kV systems.

Under normal system peak load conditions with full generation output, all generating units must remain stable with occurrence of a three-phase fault accompanied by a single pole circuit breaker failure with operation of back-up circuit breakers. With one 138 kV component out-of-service, stable operation of all generating units is to be maintained with a subsequent single phase-to-ground fault accompanied by normal clearing of the fault.

(ii) 230 kV and 345 kV System: A "facility" as defined herein shall include 230 and 345 kV transmission circuits, any transformer with a secondary voltage of 230 kV or above or a generating unit connected to the 230 or 345 kV system. Under normal system peak load conditions, the loading on all facilities should be no higher than 100% of the normal rating of the facility. Voltages should be 95% or higher. The voltage on the 230 and 345 kV system should not exceed 105% for any load level. All circuit breakers should be capable of interrupting the maximum fault current duty imposed on the circuit breaker.

For a single contingency outage during system peak load conditions, the loading on all transmission facilities should be no higher than 100% of the emergency facility rating. The loading on the autotransformers connected to the 230 kV and 345 kV systems should

be no higher than 100% of their emergency rating. Voltages should be 90% or higher at all points on the 230 kV and 345 kV system and 90% or higher on the 138 kV system.

Double contingencies will be evaluated as necessary to determine the impact on the CG&E transmission system and on the surrounding interconnected transmission system. The severity of the consequences, availability of emergency switching procedures, probability of occurrence and the cost of remedial action will be considered in the evaluation of these double contingencies.

Under normal system peak load conditions with full generation output, all generating units must remain stable with occurrence of a three-phase fault accompanied by a single pole circuit breaker failure with operation of back-up circuit breakers. With one 230 kV or 345 kV component out-of-service, stable operation of all generating units is to be maintained with a subsequent single phase-to-ground fault accompanied by normal clearing of the fault.

(b) Load Flow Studies: The system studies reviewed the performance of Ohio and Kentucky 345 kV transmission systems for operation with and without the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line. The 345 kV load flow analyses were initially developed to address contingencies and concerns identified by the Ohio CCD companies. An exhaustive single and double contingency analysis was performed for this project and only the contingencies that exhibited the highest loadings are listed in the following tables.

The single contingency analyses were evaluated using normal ratings. The normal ratings are lower than the emergency ratings and give a more conservative estimate of reliability. The double contingency analyses were evaluated using the emergency ratings. Normal ratings modeled under double contingency conditions do not give an indication of the system's ability to handle a double outage emergency because under these circumstances normal ratings are exceeded.

An ECAR dynamics base case representing the 2008 summer peak load conditions was used for this study. The analysis utilized Shaw Power Technologies, Inc. Power System Simulator for Engineering (PSS/E™).

(i) **Normal Conditions:** This represents system conditions with no outages and “normal” economic dispatch and system conditions. A power flow diagram for normal conditions is shown as Figure 02-1. Summer peak case loadings under normal conditions are given below in Table 02-1 with and without the proposed substation in operation.

TABLE 02-1
2008 SUMMER PEAK CASE EVALUATION
Normal Operating Conditions, No Outages

345 kV Transmission Line	Hillcrest Out MVA	% of Normal Rating	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	NA	NA	667	54
Stuart - Atlanta	663	51	632	51
Stuart - Clinton	852	69	850	69
Stuart - Killen	151	12	153	12
Stuart - Spurlock	139	11	133	11
Stuart - Foster	617	50	NA	NA
Foster - Hillcrest	NA	NA	530	45
Foster - Sugar Creek	765	64	763	64
Foster - Bath	667	53	665	53
Foster - Pierce	776	65	782	66
Foster - Port Union	143	12	159	13
Foster - Todhunter	284	24	299	25
Zimmer - Spurlock	234	19	230	19
Zimmer - Port Union	616	50	615	50
Zimmer - Silver Grove	951	72	947	72
Atlanta - Adkins	513	43	512	43
Adkins Beatty	821	79	820	79
Clinton - Greene	629	53	629	53
Killen - Marquis	437	35	435	35
Marquis - Bixby	679	56	679	56
Beatty - Bixby	196	19	197	19

The addition of the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line is found to have small effects on the net normal flows as compared to line ratings in the Ohio and Kentucky systems. As summarized above in Table 02-1 and on Figure 02-1 under normal conditions on the transmission system, all voltages and loadings are within acceptable levels with or without the proposed project. Based upon these results the interconnection will not introduce new problems under normal conditions. As shown on Figure 02-2 the project reduces the projected 2008 loadings on the Stuart 345/138 kV TB7 transformer from 105% to 87% of the normal emergency rating based upon a 2% load growth rate.

(ii) Single Contingency: The single contingency represents an outage of a single element or branch in the transmission system. The addition of the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line is found to have small effects on single contingency flows as compared to line ratings in the Ohio and Kentucky systems.

Stuart-Hillcrest Outage: The single contingency outage of the Stuart-Hillcrest portion of the Stuart-Foster 345 kV transmission line is summarized in Table 02-2. For this contingency all loadings are within acceptable levels.

TABLE 02-2
2008 SUMMER PEAK CASE EVALUATION
Stuart - Hillcrest Out

345 kV Transmission Line	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	NA	NA
Stuart - Atlanta	713	58
Stuart - Clinton	974	79
Stuart - Killen	18	1
Stuart - Spurlock	404	33
Stuart - Foster	NA	NA
Foster - Hillcrest	48	4
Foster - Sugar Creek	669	56
Foster - Bath	577	46
Foster - Pierce	930	78
Foster - Port Union	327	28
Foster - Todhunter	362	31
Zimmer - Spurlock	413	33
Zimmer - Port Union	707	57
Zimmer - Silver Grove	1038	79
Atlanta - Adkins	586	49
Adkins Beatty	893	86
Clinton - Greene	739	63
Killen - Marquis	571	46
Marquis - Bixby	685	56
Beatty - Bixby	191	18

Foster-Hillcrest Out: The single contingency outage of the Foster-Hillcrest portion of the Stuart-Foster 345 kV transmission line is summarized in Table 02-3. For this contingency all loadings are within acceptable levels.

TABLE 02-3
2008 SUMMER PEAK CASE EVALUATION
Foster - Hillcrest Out

345 kV Transmission Line	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	202	16
Stuart - Atlanta	694	56
Stuart - Clinton	945	76
Stuart - Killen	50	4
Stuart - Spurlock	337	27
Stuart - Foster	NA	NA
Foster - Hillcrest	NA	NA
Foster - Sugar Creek	678	58
Foster - Bath	594	48
Foster - Pierce	904	76
Foster - Port Union	306	26
Foster - Todhunter	367	31
Zimmer - Spurlock	367	30
Zimmer - Port Union	686	55
Zimmer - Silver Grove	1013	77
Atlanta - Adkins	568	47
Adkins Beatty	876	84
Clinton - Greene	714	20
Killen - Marquis	538	43
Marquis - Bixby	684	56
Beatty - Bixby	193	19

Foster-Pierce Out: The single contingency outage of the Foster-Pierce 345 kV transmission line is summarized in Table 02-4. A power flow diagram for this contingency is shown as Figure 02-3A and 02-3B. For this contingency all loadings are within acceptable levels.

TABLE 02-4
2008 SUMMER PEAK CASE EVALUATION
Foster - Pierce Out

345 kV Transmission Line	Hillcrest Out MVA	% of Normal Rating	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	NA	NA	780	63
Stuart - Atlanta	616	50	614	49
Stuart - Clinton	881	71	880	71
Stuart - Killen	253	20	257	21
Stuart - Spurlock	115	9	107	9
Stuart - Foster	734	59	NA	NA
Foster - Hillcrest	NA	NA	641	54
Foster - Sugar Creek	655	55	652	55
Foster - Bath	562	45	560	45
Foster - Pierce	NA	NA	NA	NA
Foster - Port Union	424	36	440	37
Foster - Todhunter	408	34	423	36
Zimmer - Spurlock	274	22	268	22
Zimmer - Port Union	675	54	674	54
Zimmer - Silver Grove	936	71	931	71
Atlanta - Adkins	493	41	492	41
Adkins Beatty	802	77	800	77
Clinton - Greene	660	56	659	56
Killen - Marquis	336	27	332	27
Marquis - Bixby	718	59	718	59
Beatty - Bixby	249	24	249	24

Stuart-Clinton Out: The single contingency outage of the Stuart-Clinton 345 kV transmission line is summarized in Table 02-5. A power flow diagram for this contingency is shown as Figure 02-4A and 02-4B. For this contingency all loadings are within acceptable levels.

TABLE 02-5
2008 SUMMER PEAK CASE EVALUATION
Stuart - Clinton County Out

345 kV Transmission Line	Hillcrest Out MVA	% of Normal Rating	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	NA	NA	877	71
Stuart - Atlanta	775	62	772	62
Stuart - Clinton	NA	NA	NA	NA
Stuart - Killen	22	2	19	2
Stuart - Spurlock	423	34	414	33
Stuart - Foster	828	67	NA	NA
Foster - Hillcrest	NA	NA	724	61
Foster - Sugar Creek	969	82	969	81
Foster - Bath	847	68	845	68
Foster - Pierce	842	71	848	72
Foster - Port Union	237	20	252	21
Foster - Todhunter	307	26	321	27
Zimmer - Spurlock	408	33	403	32
Zimmer - Port Union	697	56	697	56
Zimmer - Silver Grove	1045	80	1039	79
Atlanta - Adkins	627	53	625	52
Adkins Beatty	935	90	933	89
Clinton - Greene	128	11	127	11
Killen - Marquis	609	49	604	49
Marquis - Bixby	718	59	718	59
Beatty - Bixby	237	23	238	23

Zimmer-Silver Grove-Red Bank Out: The single contingency outage of the Zimmer-Silver Grove-Red Bank 345 kV transmission line is summarized in Table 02-6. A power flow diagram for this contingency is shown as Figure 02-5A and 02-5B. For this contingency all loadings are within acceptable levels.

TABLE 02-6
2008 SUMMER PEAK CASE EVALUATION
Zimmer - Silver Grove - Red Bank Out

345 kV Transmission Line	Hillcrest Out MVA	% of Normal Rating	Hillcrest In MVA	% of Normal Rating
Stuart - Hillcrest	NA	NA	769	62
Stuart - Atlanta	682	55	680	55
Stuart - Clinton	916	74	912	74
Stuart - Killen	64	5	68	5
Stuart - Spurlock	164	13	169	14
Stuart - Foster	718	58	NA	NA
Foster - Hillcrest	NA	NA	619	52
Foster - Sugar Creek	741	63	740	62
Foster - Bath	647	52	645	52
Foster - Pierce	737	62	744	63
Foster - Port Union	164	14	177	15
Foster - Todhunter	248	21	262	22
Zimmer - Spurlock	194	16	197	16
Zimmer - Port Union	1109	89	1106	89
Zimmer - Silver Grove	NA	NA	NA	NA
Atlanta - Adkins	557	46	555	46
Adkins Beatty	865	83	863	83
Clinton - Greene	685	58	684	58
Killen - Marquis	524	42	521	42
Marquis - Bixby	679	56	679	56
Beatty - Bixby	187	18	187	18

Foster-Cedarville Outage: The system studies also reviewed performance with an outage of the 138 kV Foster-Cedarville 5884 transmission line with and without the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line. Power flow diagrams for these contingencies are shown as Figures 02-6A and 02-6B. The addition of the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line is found to have small effects on single contingency flows as compared to line ratings in the

Ohio and Kentucky systems. This contingency places higher loading on the Stuart 345/138 kV TB7 transformer than any other single contingency examined, with levels reaching 94.5% of the emergency rating. This loading is reduced to 66.2% with the Hillcrest-Eastwood project in place.

(c) **Double Contingency Stability Performance Analysis:** A system fault stability performance analysis was conducted for the Hillcrest Substation and associated Hillcrest-Eastwood 138 kV transmission line. Fault analyses were performed at the Stuart, Zimmer, and Spurlock Generating Stations' 345 kV buses. An ECAR dynamics base case representing the 2008 summer peak load conditions was used for this study. The dynamics case was assembled using data from the 2003 NERC Dynamics Database. Although the CCD stability criteria specifies phase to ground faults with a prior transmission element out of service, three phase faults were actually applied in the stability simulations. The satisfactory outcome of these more severe disturbances provides an additional measure of confidence that the transient stability of the proposed project will be acceptable.

This analysis concentrated on events at Stuart, Zimmer, and Spurlock Generating Stations and considered a total of six cases with results summarized below:

- **Stuart Generating Station**

Case ST1 – Permanent three phase fault at Stuart 345 kV on line to Clinton. Fault clearing at 3.75 cycles with one pole circuit breaker failure at Stuart. Backup fault clearing operation at 9.75 cycles following fault initiation also removing Stuart 345/138 kV.

Case ST2 – Prior outage of Spurlock-Zimmer 345 kV. Permanent phase-to-ground fault at Killen 345 kV on-line to Marquis. Fault clearing in 3.75 cycles with no high speed re-closing.

- **Zimmer Generating Station**

Case Z1 – Permanent three phase fault at Zimmer 345 kV on line to Silver Grove. Fault clearing at 3.75 cycles with one pole circuit breaker failure at Zimmer (CB

1315). Backup fault clearing operation at 9.75 cycles following fault initiation also removing line to Spurlock.

Case Z2 – Permanent three phase fault at Zimmer 345 kV on line to Spurlock. Fault clearing at 3.75 cycles with one pole circuit breaker failure at Zimmer (CB 1315). Backup fault clearing operation at 9.75 cycles following fault initiation also removing line to Silver Grove.

- Spurlock Generating Station

CASE SP1 – Permanent three phase fault at Spurlock 345 kV on line to Zimmer. Fault clearing at 3.75 cycles with one pole circuit breaker failure at Spurlock. Backup fault clearing operation at 9.75 cycles following fault initiation also removing Spurlock 345/138 kV transformer T9.

CASE SP2 – Permanent three phase fault at Spurlock 345 kV on line to Stuart. Fault clearing at 3.75 cycles with one pole circuit breaker failure at Spurlock. Backup fault clearing operation at 9.75 cycles following fault initiation also removing Spurlock 345/138 kV transformer T10.

The stability performance study results are presented as Figures 02-7A through 02-9B and for each case the transient stability was stable and the oscillatory stability satisfactory. On the figure plots, the solid-line curves represent the system prior to the installation of Hillcrest Substation and Hillcrest-Eastwood 138 kV transmission line. The dashed-line curves represent the system with project in-service. Note that in each case study the two stability curves are virtually identical. The transient and oscillatory stabilities of the proposed project were found to be acceptable. No adverse stability impacts were observed on the surrounding transmission system or on nearby generating plants.

(d) Projected Distribution Loads: The ultimate layout of the Hillcrest Substation will accommodate two 60 MVA 138-34.5 kV transformers with two or three circuits off of each, for a total of 120 MVA with four to six circuits. This will create additional distribution capacity needed to relieve the Eastwood 52 and Brown 51 34.5 kV feeders, Brown Substation TB1, and Eastwood Substation TB2. Based upon the preliminary findings of CG&E's yet to be released *34.5 kV Southern Area Comprehensive Planning Study (2005-2015)*, this capacity will be required for projected future growth and demand throughout the project area and further to the south within the CG&E "34.5 kV Southern Area" (Figure 02-10). The need for additional distribution capacity at Hillcrest

Substation is mainly dependent upon growth around Mount Orab and in the Route 32 and Route 68 corridors, but it is also dependent upon growth in areas to the south including, but not limited to, Pike, Jefferson, Pleasant, Franklin, Scott, Jackson, and Washington Townships in Brown County.

Natural gas service is not available in much of central and southern Brown County. Electric heating is used throughout this southeastern service area instead of natural gas, resulting in winter loadings much higher than in summer. As a consequence, this is one of the few regions in CG&E's service area that is experiencing peaks in winter electricity loads. It is critical that electricity availability and reliability be maintained for customers in this service area so that CG&E can continue to meet winter heating needs. The proposed project is crucial to insuring this need is met as Brown County continues to develop.

Within the 34.5 kV Southern Service Area, some of the equipment settings on the Eastwood 52 and Brown 51 34.5 kV feeders have been raised to keep these feeders in service in the short-term. In addition, during peak winter months some of the load from Brown 51 is transferred north to Eastwood 52 to help keep Brown 51 in-service. Also, CG&E is currently exploring options for additional local distribution substations to further relieve the Brown 51 34.5 kV feeder by 2006, because additional relief will be required before the 2008 in-service date of Hillcrest Substation. The need for 2006 relief of Brown 51 (which is closely tied to Eastwood 52) is largely the result of rapid growth in the Russellville area. Critical loading has been identified on the Brown 51 34.5 kV feeder, although this relief is actually needed sooner than Figure 02-11 indicates. Brown 51 and Brown 52 are fed off the same tertiary winding of Brown TB1. Loading on the tertiary winding of Brown TB1 is shown on Figure 02-12, which clearly indicates that the limits of the tertiary winding have been exceeded on a number of occasions. The proposed project will assist in providing needed load relief to distribution transformers and feeders throughout Brown County while also creating capacity for additional distribution substations and circuits that will serve the needs of the Mount Orab area for an additional ten to twenty years.

A single large retail or industrial customer in the Brown County Foreign Trade Zone could justify the installation of additional distribution or transmission capacity at any given time. The presence of an electric transmission and distribution system to support this would be expected to further increase the desirability of this Foreign Trade Zone to retail and industrial interests.

An additional consideration is that if construction of the Hillcrest-Eastwood transmission line occurs along the Preferred Route and if South Central Power converts its delivery point from 34.5 to 138 kV, this will free up an additional 10 MVA of capacity at CG&E's Eastwood Substation, which further defers the need for distribution capacity at Hillcrest. Without Hillcrest Substation, however, no additional distribution capacity from Hillcrest or future distribution substations would be possible in the area. The installation of Hillcrest Substation provides long-term reliable distribution from this source and at points along or near to the proposed Hillcrest-Eastwood 138 kV transmission line route in addition to providing a level of load relief to the Eastwood 52 and Brown 51 34.5 kV circuits and Brown TB1.

(4) East Central Area Reliability (ECAR) Base Case Model Data

An electronic copy of the 2008 load flow case is provided under separate cover to the OPSB Staff in Shaw Power Technologies, Inc. Power System Simulator for Engineering (PSS/E™) format.

(5) Base Case Data for Natural Gas Transmission Line

As the proposed project is an electric transmission line this section is not applicable.

(B) Expansion Plans

(1) Long-Term Forecast

The proposed project is included in the 2004 *CG&E Electric Long-Term Forecast Report*. The cover page of this report and Forms FE3-T10 (page 3-67), submitted to the PUCO under Ohio Administrative Code Rule (OAC) 4901:5-3-01, are included in Appendix 02-1. The project need is based upon projected residential, commercial, and industrial growth in the vicinity of Mount Orab and requires an in-service date for the project by June 2008 (as stated in the long-term forecast report).

The Hillcrest Substation (and Hillcrest-Eastwood 138 kV transmission line, the subject of Case No. 05-361-EL-BTX) will be internal to the CG&E transmission system and will not affect regional ECAR bulk power plans.

(C) Impact on Electric System Economy and Reliability

The proposed Hillcrest Substation (and Hillcrest-Eastwood 138 kV transmission line) will maintain system reliability and allow CG&E to cope with projected load growth demands, thereby eliminating projected system overloads throughout the Brown County area. The cost of the proposed project is significantly more than that of installing an additional or upgraded transformer at Stuart Generating Station. This additional cost to CG&E is outweighed by the improved system economy and reliability benefits of the proposed project which include additional needed distribution capacity at the eastern edge of CG&E's service area and increased reliability to existing and future distribution circuits.

As noted above in Section (A)(3)(b) the proposed project will have negligible impact on the facility loadings on the surrounding 345 kV system located in Ohio and Kentucky. For all contingencies, system voltages and loadings remain within acceptable levels with the

Hillcrest Substation and Hillcrest-Eastwood 138 kV transmission line operational as planned.

In addition, the Hillcrest Substation and associated new transmission line are planned to provide 138 kV service to the South Central Power Eastwood Substation located within 500 feet south of the intersection of the Norfolk and Western rail line and Eastwood Road (not to be confused with CG&E's Eastwood Substation on Tri-County Highway). This will increase the ability of the South Central Power Company to provide improved electricity economy and reliability to new and existing customers from its Eastwood Substation. A letter from South Central Power stating that company's support for this project is included in Appendix 02-2.

As an area becomes more densely populated and the distribution load density increases, the distribution feeders needed to serve a given load should become shorter. Reliability is predominantly a function of feeder length and exposure. Thus, as an area grows and distribution capacity and feeders are added, the load transfers result in shorter feeders and more reliable service. Load growth in combination with the additional distribution capacity from the proposed project will result in shorter feeders and better reliability from a load transfer perspective. Exposure is a measure of distribution susceptibility to outages. If additional capacity is installed when the existing circuits are loaded 100 percent, the new circuits split the load, thereby reducing exposure and reducing outages. Construction of the Hillcrest Substation and associated distribution circuits, and the potential for future distribution substations within the expanded project vicinity, will reduce distribution exposure and outages throughout the area as growth continues and thereby provide more reliable electricity delivery to customers.

(D) Options to Eliminate the Need for the Proposed Project

Alternatives to the proposed project are limited in that projected load growth throughout the Brown and Clermont County areas will require the construction of a 345/138-34.5 kV substation near the existing CCD Stuart-Foster 345 kV transmission line. There are no

other feasible alternatives that involve alternative generation or transmission options or changes to existing substations which meet the project needs of TB7 relief at the Stuart Generating Station, increased distribution reliability, and a new source of distribution capacity for load growth near the eastern limits of the CG&E service area.

Measures to delay the need for the project have been or are in the process of being implemented. Capacitor banks were placed in service at the Cedarville and Brown Substations in May 2004 to support voltage on line 5884 and reduce reactive loading on Stuart TB7. Factors determining the location and size of capacitor banks are voltage profiles, allowable voltage rise and overall cost. The primary reason the capacitor banks were chosen to be installed at Cedarville and Brown Substations because this is where the lowest voltages occurred during contingency analysis. Even with these additions, however, this line will approach low voltage limits during outages in 2009 without Clinton County Substation. The Clinton County Substation will be completed in 2006 and without this new substation the Stuart 345/138 kV transformer would approach the normal rating in 2005 and the emergency rating in 2007. Clinton County Substation will relieve 15-20 MVA from Cedarville Substation. Implementation of these other measures have delayed the need for this project which is now required to relieve the 345/138 kV TB7 at the Stuart Generating Station and to support the Stuart-Foster 138 kV corridor.

Installing an additional transformer or replacing the existing transformer at Stuart Generating Station was considered as alternatives to the project. These options provided a short-term solution that would not provide a transmission or distribution benefit to CG&E's system as does the proposed project. In addition, the additional transformer capacity and the accompanying increased power flow from Stuart on circuit 5884 would accelerate the need for a rebuild of circuit 5884 or construction of additional transmission from Stuart. Another alternative was the construction of a new substation and a 138 kV transmission line from the 345 kV Zimmer-Port Union transmission line circuit 4544 to Cedarville Substation. This option also required a new substation and provided benefits to TB7 at the Stuart Generating Station similar to that provided by the proposed project

but it did not provide increased distribution reliability and capacity for load growth near the eastern limits of the CG&E service area.

If South Central Power (SCP) is able to convert their delivery point from 34.5 to 138 kV, this will free up an additional 10 MVA of capacity at CG&E's Eastwood Substation, which currently supplies SCP's Eastwood Substation with a 34.5 kV feeder. Although this further defers the need for capacity at the proposed Hillcrest Substation, the need for additional reliable distribution circuits in the vicinity of Hillcrest and relief of Stuart TB7 will still be required based upon projected distribution demand and the load flow analyses, respectively.

(E) Facility Rationale

The proposed substation, which is the subject of this Application and the proposed Hillcrest-Eastwood 138 kV transmission line are inextricably linked. The locations of both facilities were selected to meet the needs of maintaining system reliability and projected load growth in Brown County. The proposed Preferred and Alternate Substation Site locations were selected north of Mount Orab to minimize transmission line length from CG&E's Eastwood Substation while avoiding concentrations of residential, institutional, and commercial land uses to the south.

The proposed project will include a 345/138 kV 240/320/400 MVA autotransformer at Hillcrest Substation that will allow CG&E to tap the CCD Stuart-Foster 345 kV transmission line and relieve the 345/138 kV TB7 at the Stuart Generating Station. In addition, the project will provide distribution capacity from Hillcrest Substation and the flexibility to accommodate potential future distribution substations at 138 kV high side voltage as Brown County continues to develop. Hillcrest Substation will also increase system reliability by shortening existing distribution lines.

(F) Facility Schedule

(1) Schedule

The overall project schedule for major activities and milestones is presented in bar chart form as Figure 02-13 with a projected in-service date of June 2008. This schedule applies to the new substation at either the Preferred or Alternate Sites and the 138 kV transmission line along both the Preferred and Alternate Routes.

(2) Impact of Delays

Any critical delays that affect the major activities as outlined in the schedule, for either the new substation or transmission line, would delay the in-service date of the project. Delays past the projected in-service date will result in decreased system reliability and a potential inability to meet growing customer demand throughout the project area.

Hillcrest Substation Out

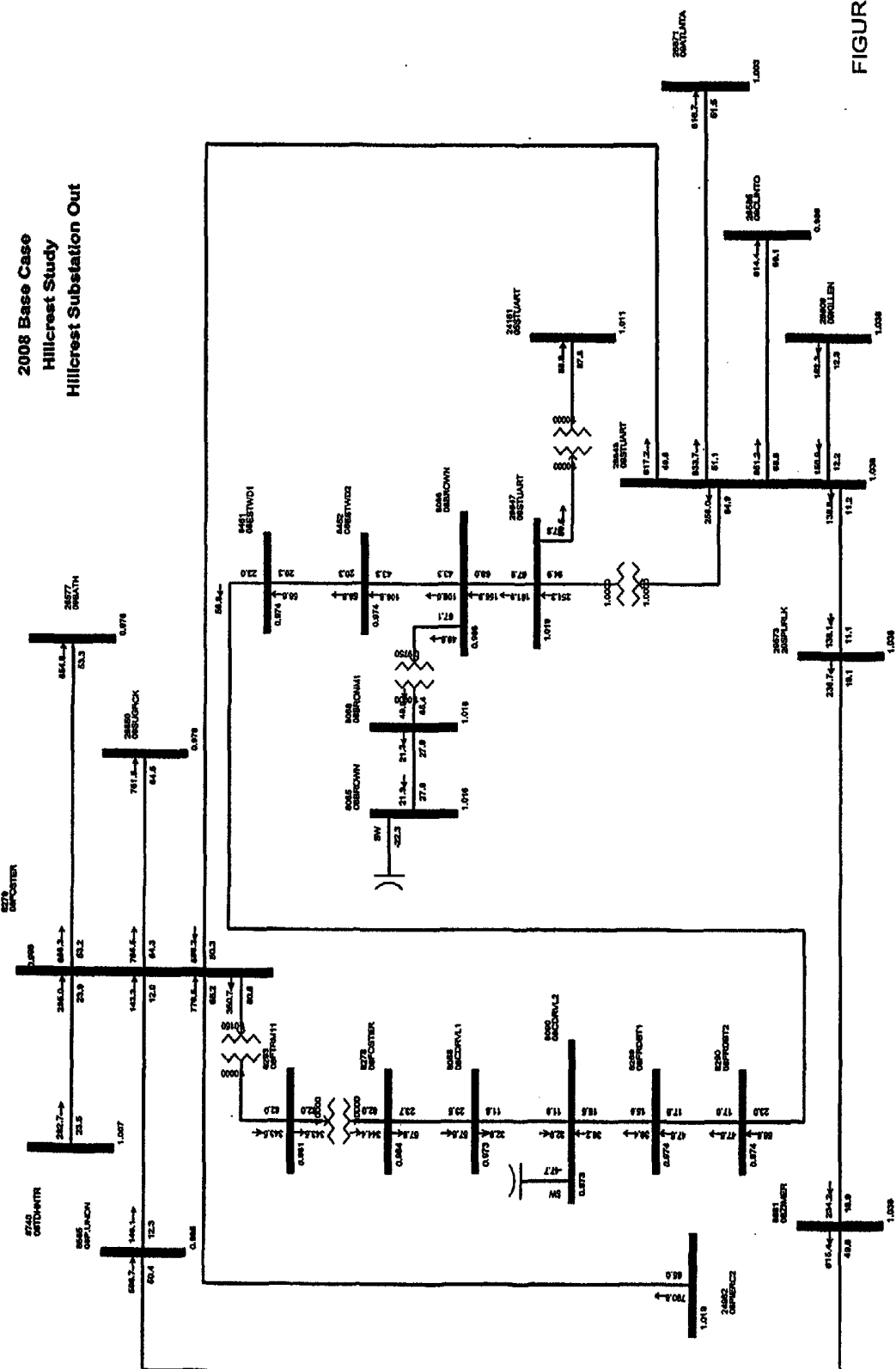


FIGURE 02-1

2008 Base Case
Hilcrest Substation In-Service
Pierce - Foster Outage

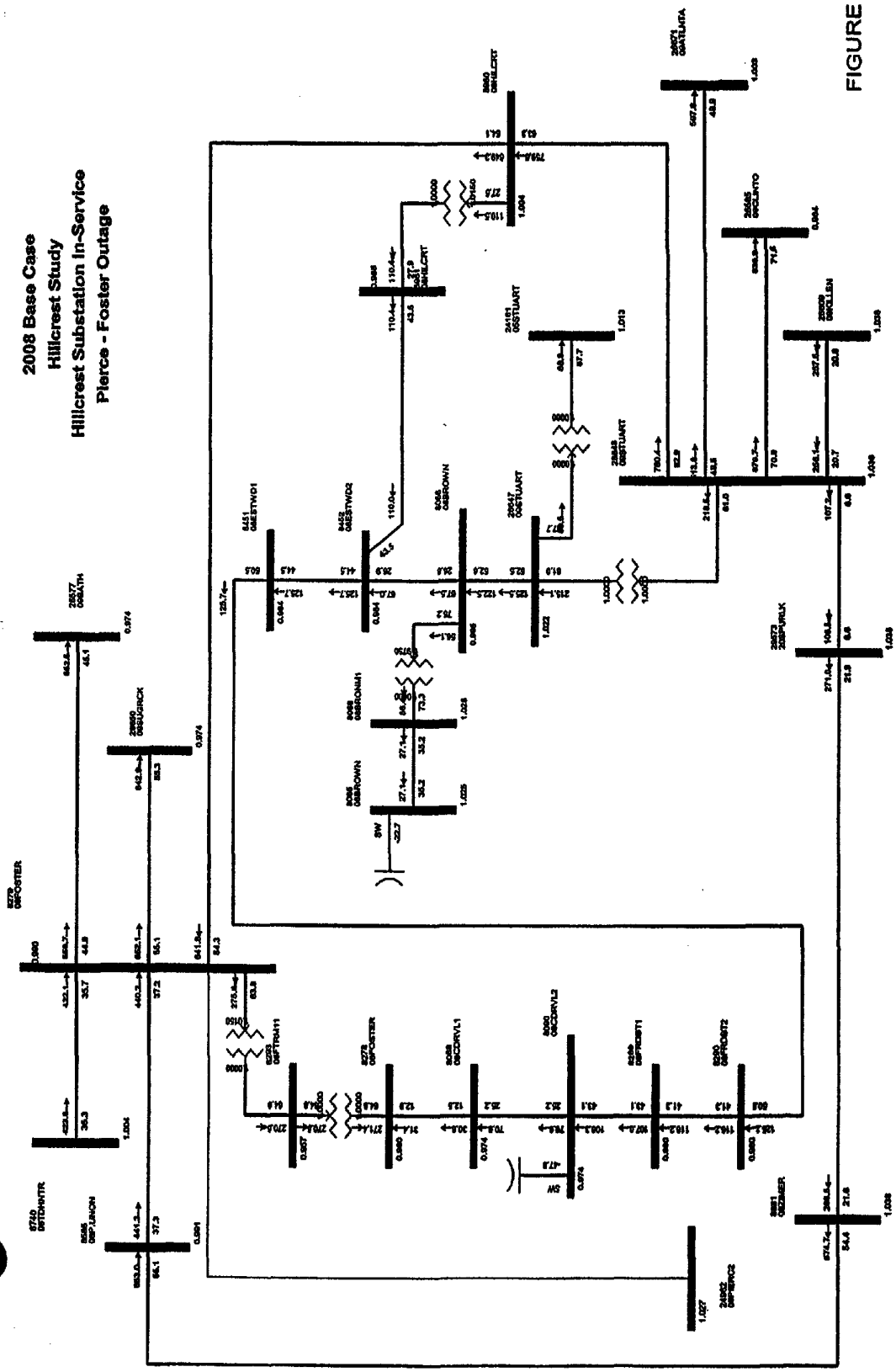
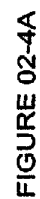
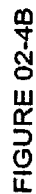
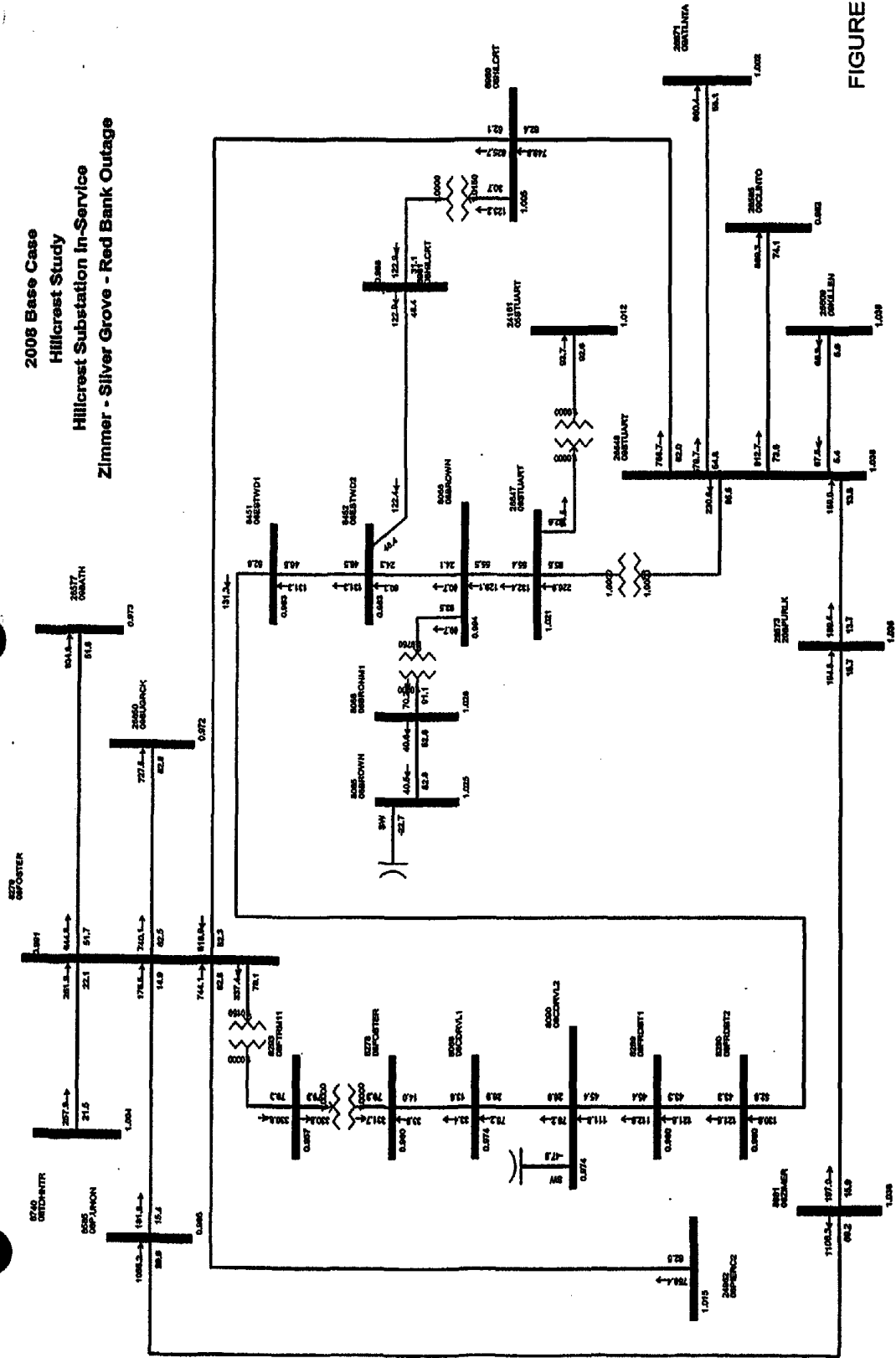


FIGURE 02-3B

6279
OLUFOSTER



2008 Base Case
Hillcrest Study
Hillcrest Substation In-Service
Zimmer - Silver Grove - Red Bank Outage



2008 Base Case
Hillcrest Study
Hillcrest Substation Out
Foster Cedarville Outage

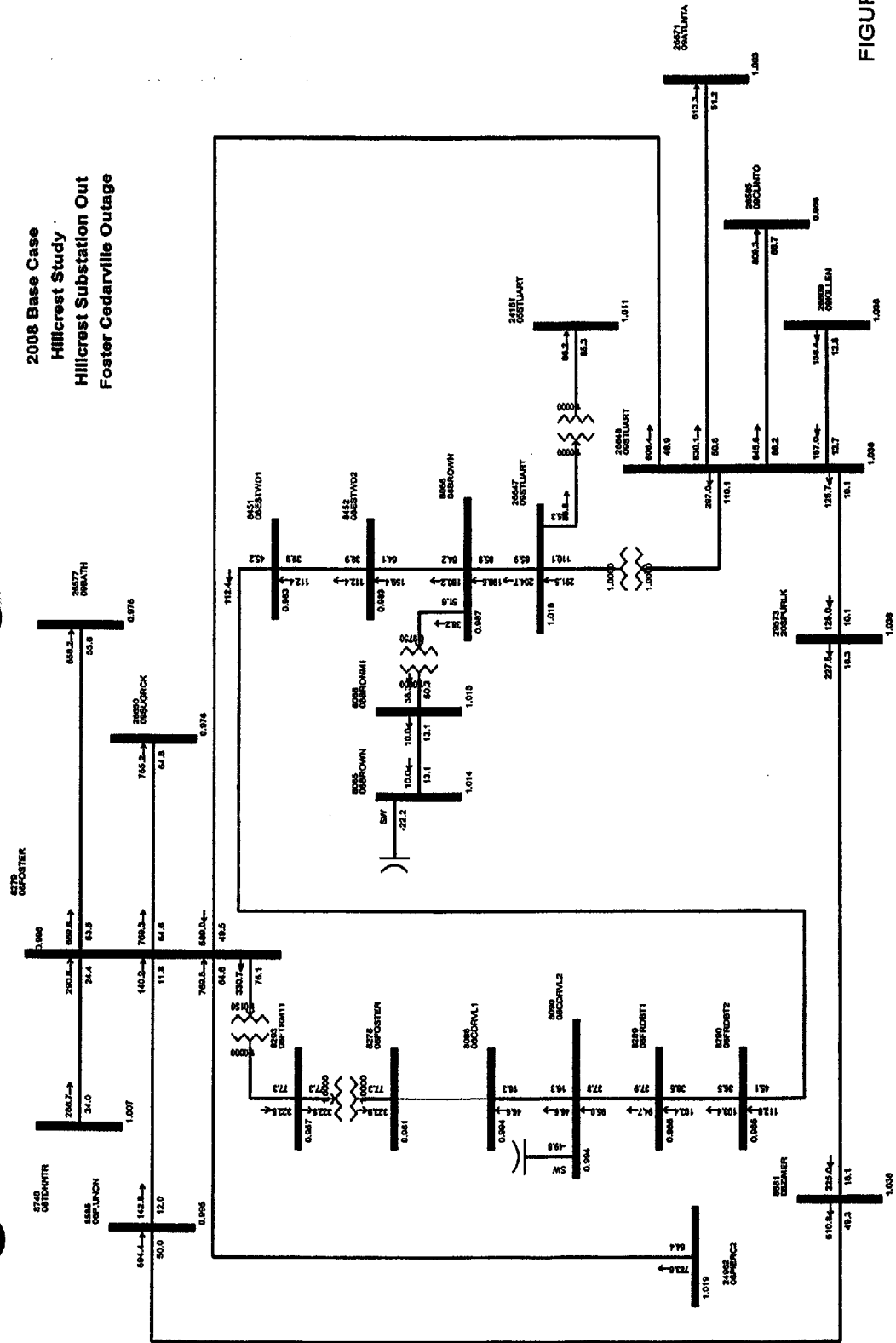
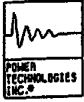


FIGURE 02-6A



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

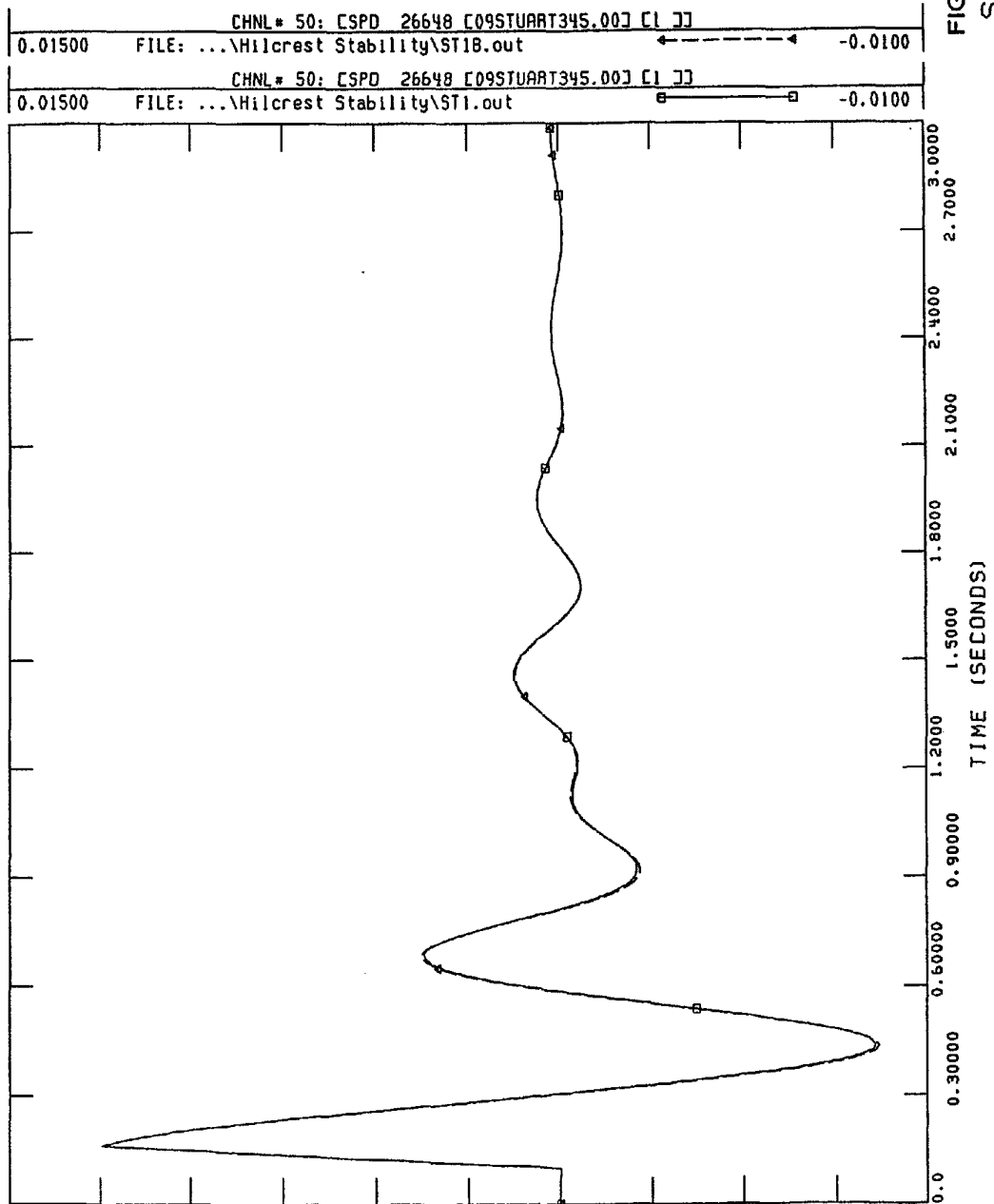
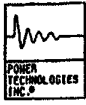


FIGURE 02-7A
STUART CASE ST1



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

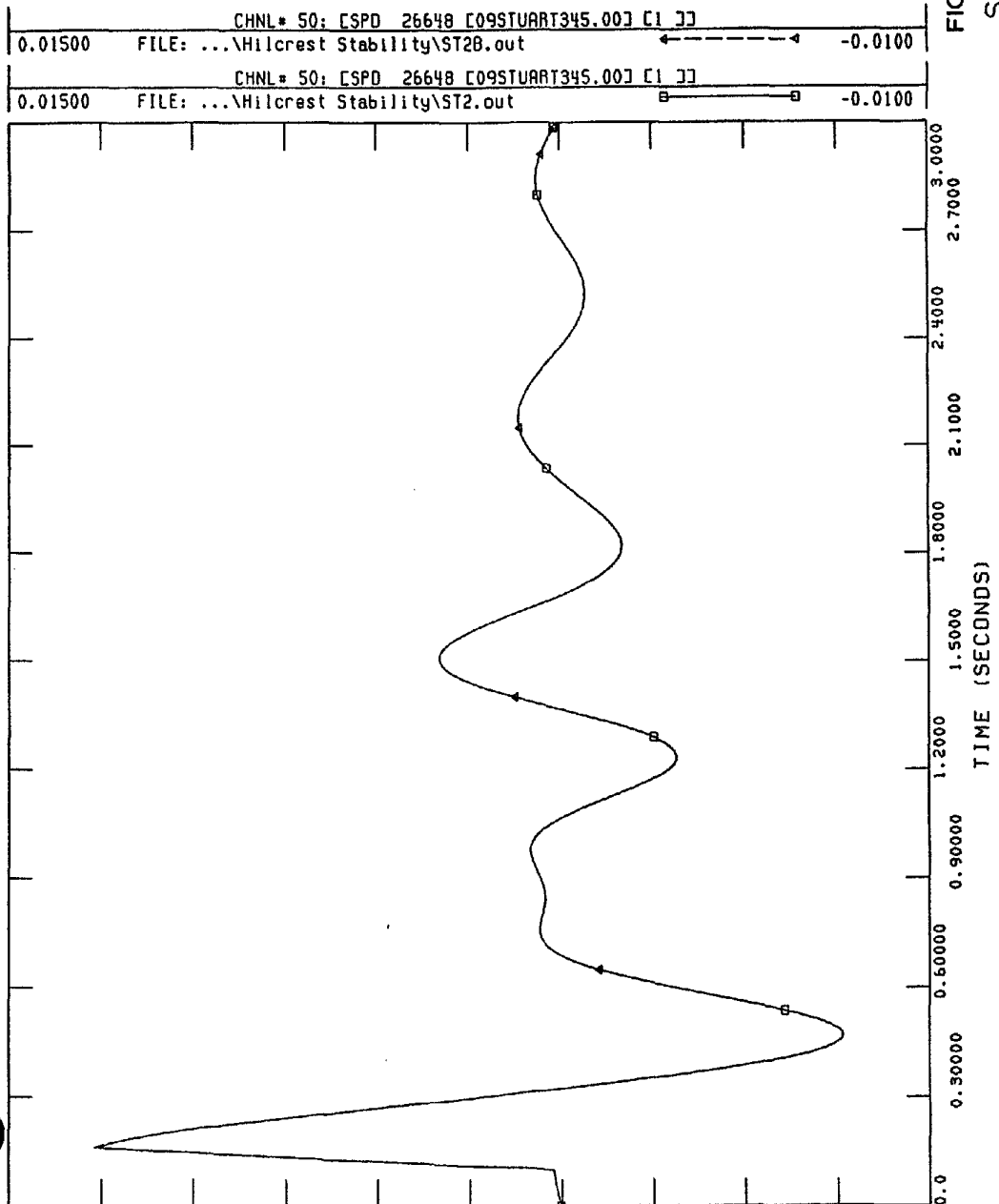
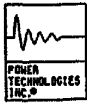


FIGURE 02-7B

STUART CASE ST2



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

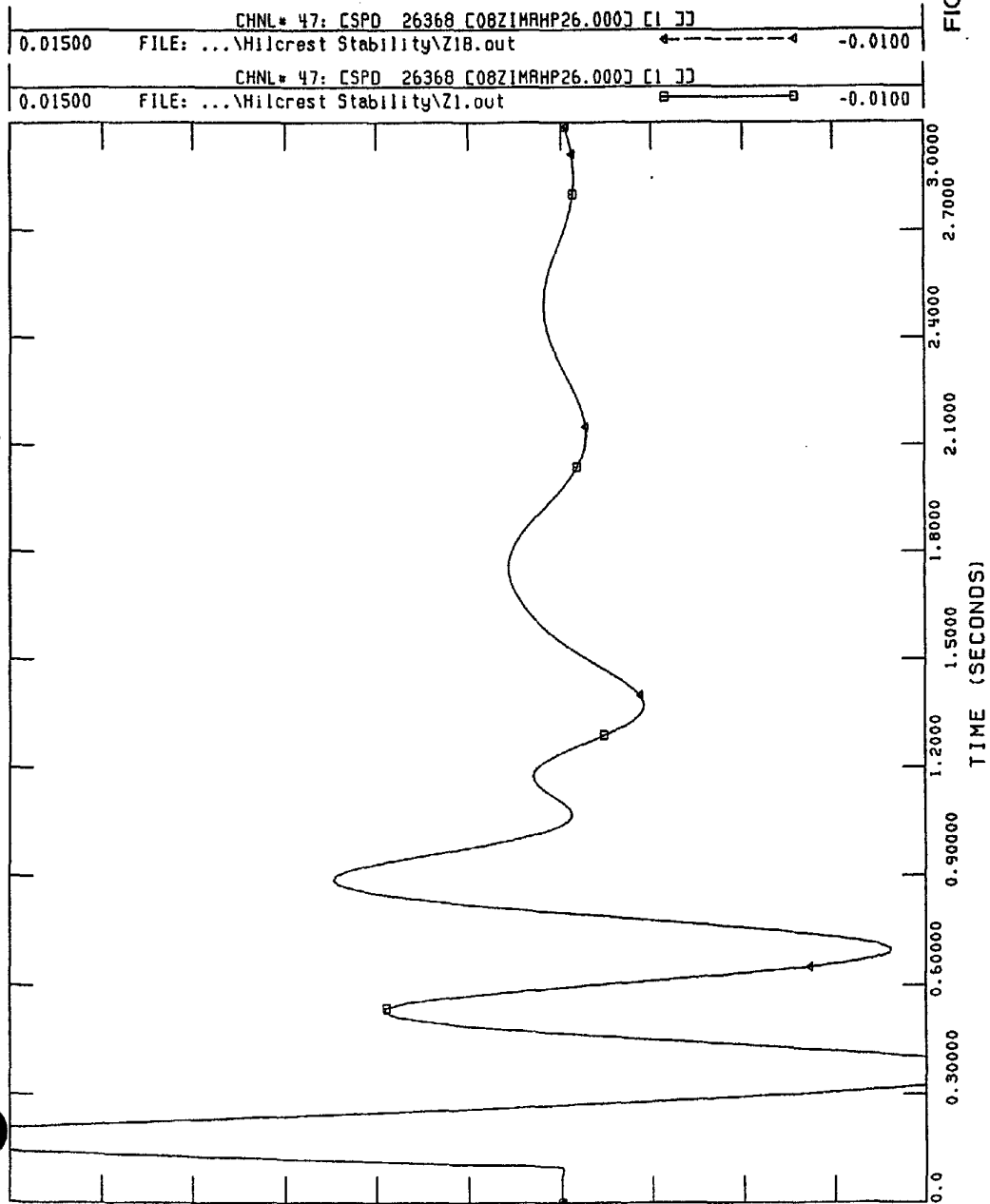


FIGURE 02-8A

ZIMMER CASE Z1



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

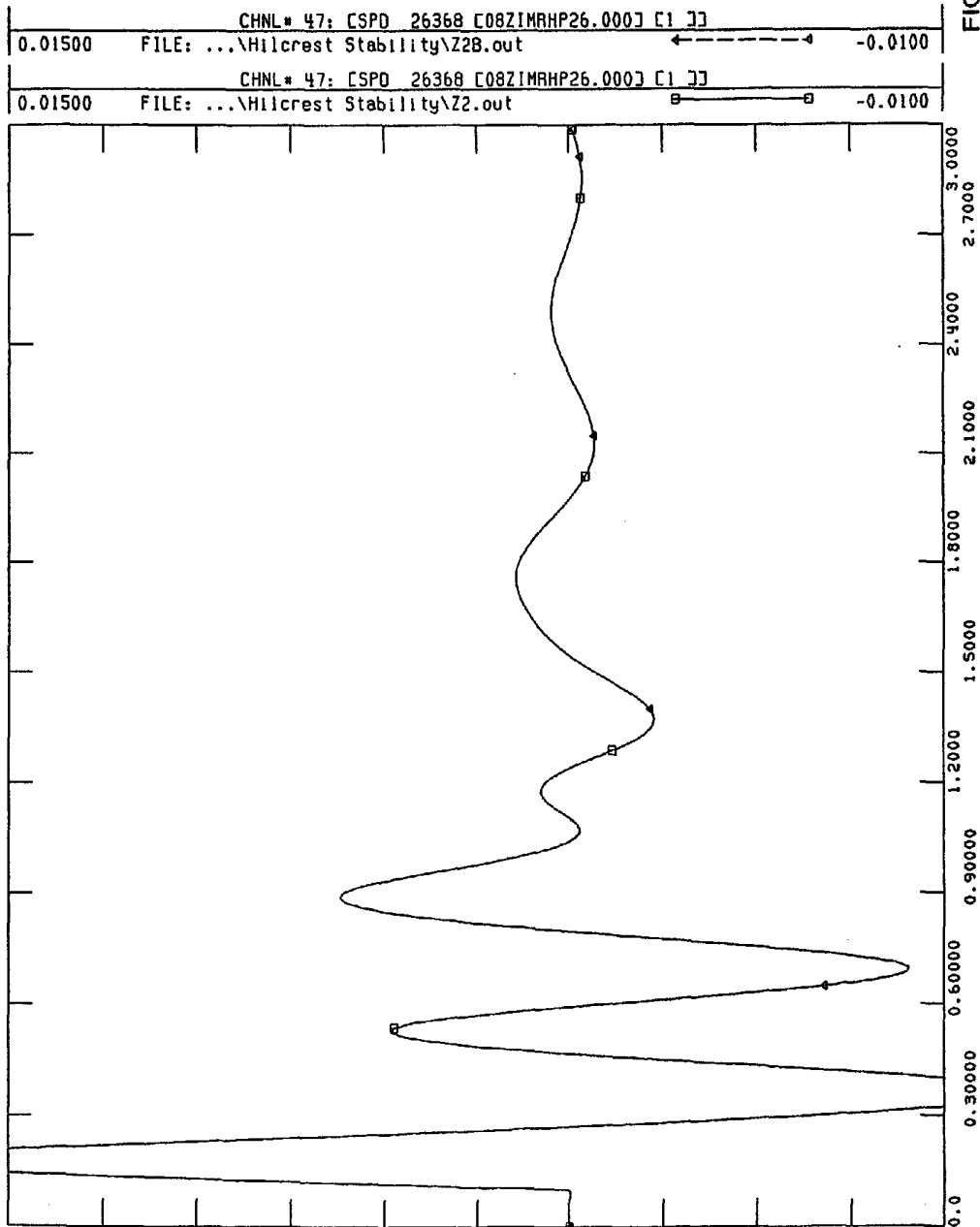


FIGURE 02-8B

ZIMMER CASE Z2



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

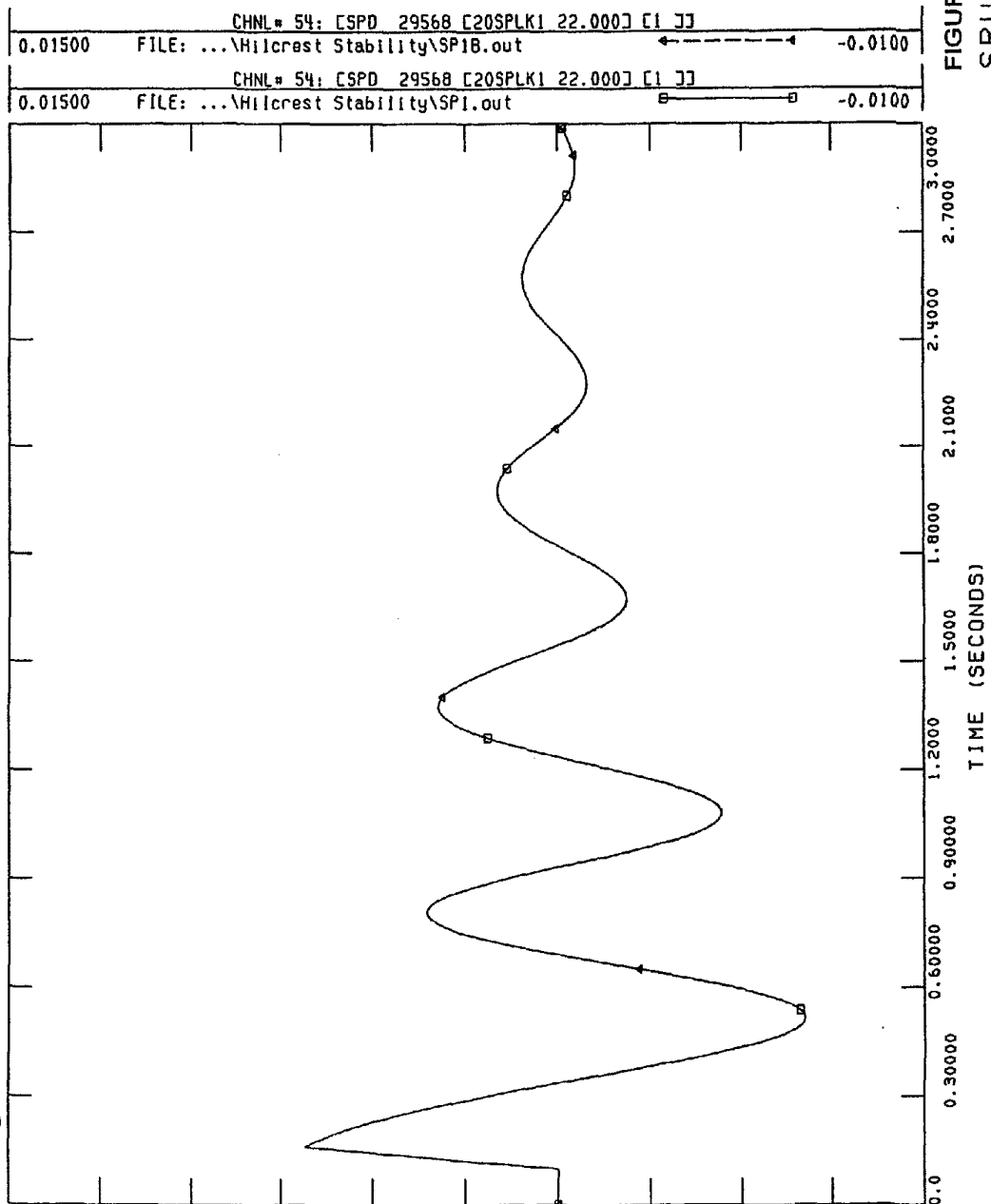
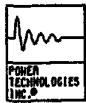


FIGURE 02-9A
SPURLOCK CASE SP1



09 SUMMER ECAR CASE
HILCREST STABILITY STUDY

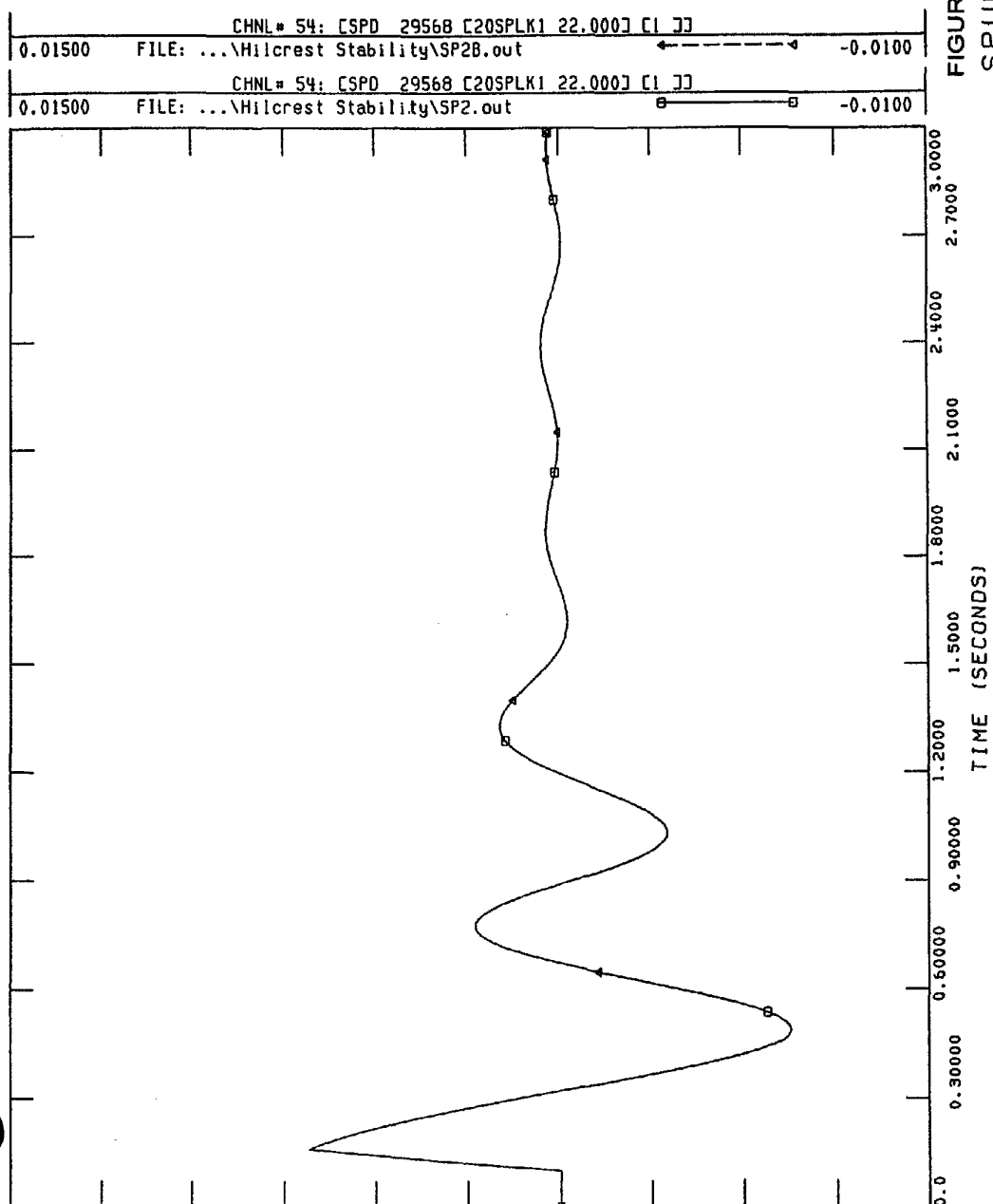


FIGURE 02-9B

SPURLOCK CASE SP2

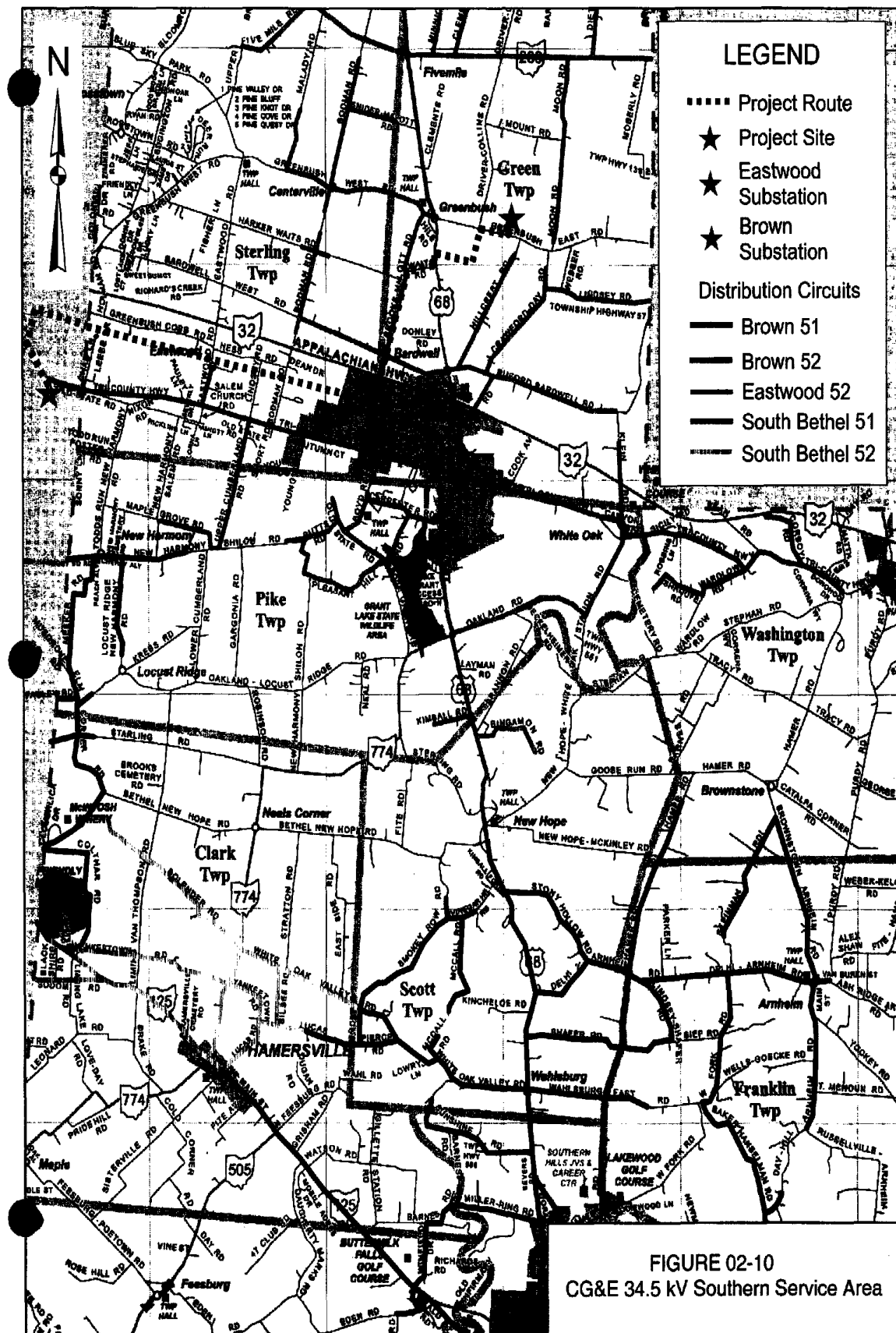
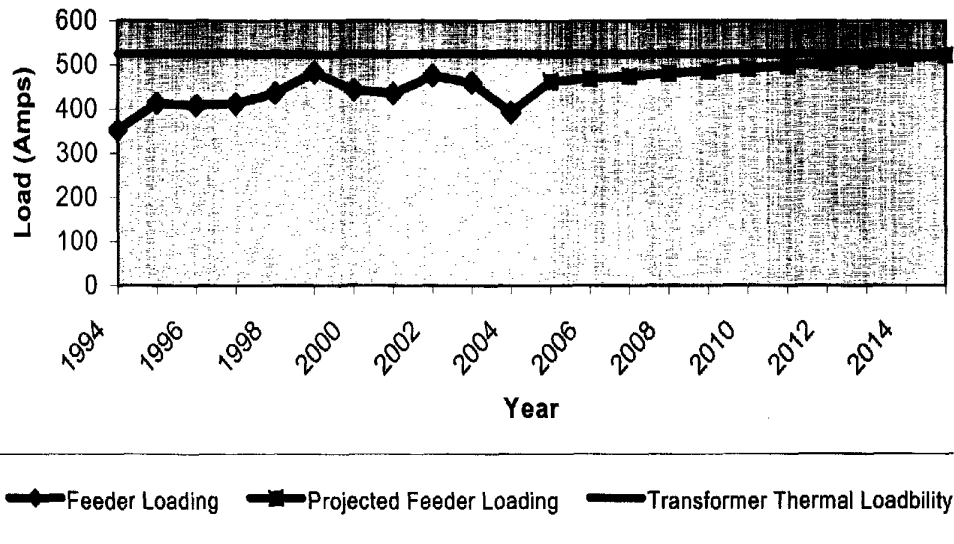


FIGURE 02-10
CG&E 34.5 kV Southern Service Area

Brown 51 Summer Loading



Brown 51 Winter Loading

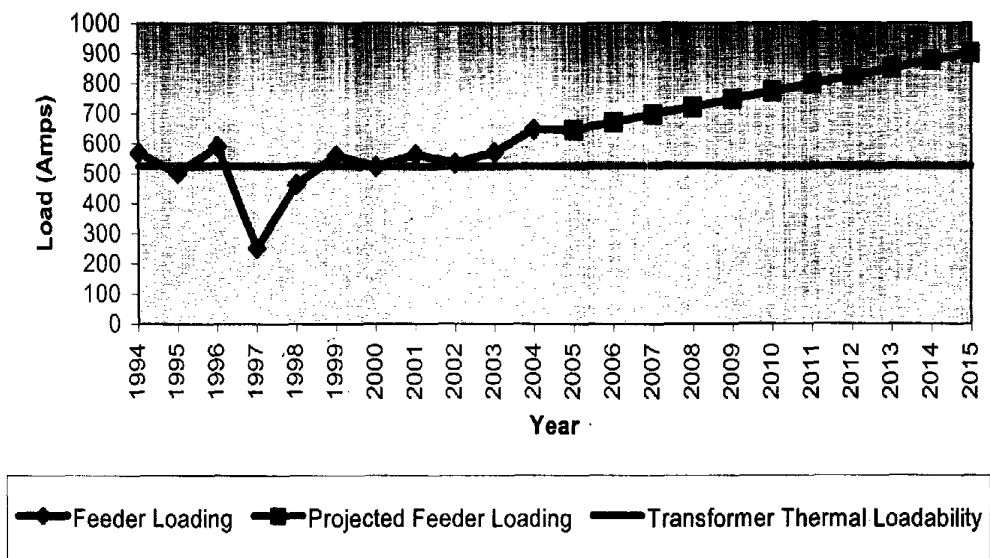
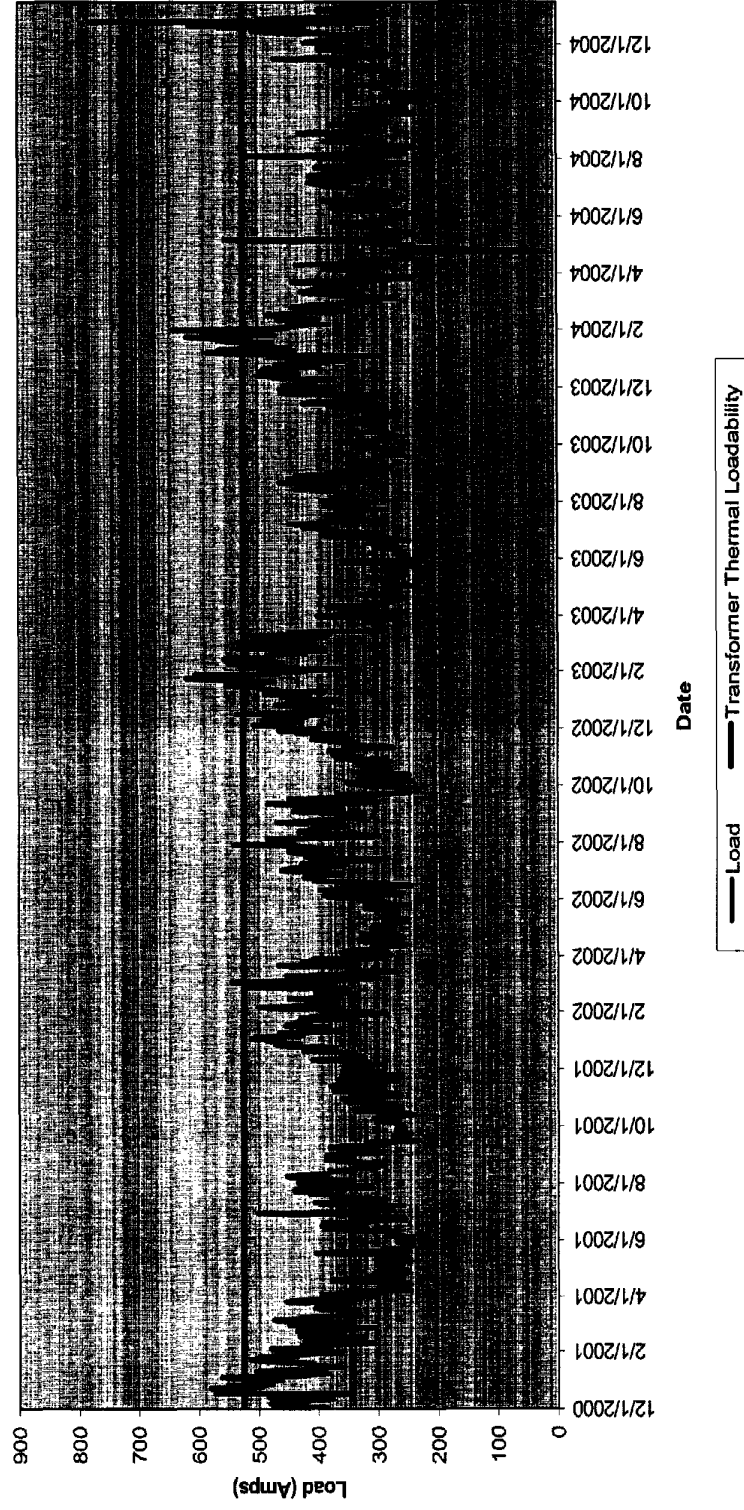


FIGURE 02-11

FIGURE 02-12
Brown TB1 Teritary Loading
12/1/00 - 1-15/05



**FIGURE 02-13: PROJECT SCHEDULE
HILLCREST EASTWOOD TRANSMISSION LINE PROJECT**

Project Schedule - March 15, 2005																																				
Task	Start	Finish	2004				2005				2006				2007				2008																	
Chinle Power Plant Board			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A		
Application Preparation	07/2004	06/2005																																		
Submital of Application for Certificate	04/2005	06/2005																																		
Issuance of Certificate	09/2005	09/2005																																		
Acquire Easements	07/2004	04/2005																																		
Hillcrest Substation	1/2005	6/2006																																		
Transmission Line	1/2005	1/2006																																		
Construction																																				
Construction Activities	7/2005	6/2006																																		
Restoration																																				
Restoration Activities	11/2006	6/2008																																		
to Service Path																																				
Hillcrest Substation	6/2006	6/2008																																		
Transmission Line	9/2006	6/2008																																		

Note: The letters above each column represent the month.

APPENDIX 02-1

LONG TERM FORECAST REPORT EXCERPT



**The Cincinnati Gas & Electric Company
The Union Light, Heat & Power Company
PSI Energy, Inc.**

2004

**ELECTRIC LONG-TERM FORECAST
REPORT**

OF

**THE CINCINNATI GAS & ELECTRIC
COMPANY**

April 15, 2004

**By: Cinergy Services, Inc.
Richard G. Stevie
General Manager, Market Analysis
139 East Fourth Street
P.O. Box 960
Cincinnati, Ohio 45201-0960**

4901:5-5-03

PUCO FORM FE3-T10: SUMMARY OF PROPOSED SUBSTATIONS

Substation Name:	Hillcrest
Voltage(s):	345, 138 and 34.5 kV
Type of Substation	
Distribution (D)	
Transmission (T)	T & D
Timing:	06/2008
Line Association(s):	Stuart-Foster 345 kV, CCD-B4511
Existing or	Existing
Proposed:	
Minimum Substation Site Acreage:	10

APPENDIX 02-2

SOUTH CENTRAL POWER COMPANY LETTER RESPONSE



Corporate Office
P. O. Box 250 • 2780 Coonpath Road
Lancaster, Ohio 43130-0250
(740) 653-4422 • Fax (740) 681-4488 • 1-800-282-5064

The Power of Human Connections

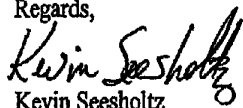
July 23, 2004

John McNabb
Staff Engineer – T&D Planning
Cinergy
P.O. Box 960
EM661
Cincinnati, Ohio 45202

Dear Mr. McNabb,

Thank you for contacting South Central Power (SCP) about your new route proposal for building a 138kV-transmission line to your future Hillcrest substation. SCP has been evaluating the need for a new 69 or 138kV tap for our existing 34.5kV Eastwood substation. This would provide SCP with more reliability to tie its existing distribution to our Duckwall substation. We have reviewed this information and have determined that due to the load center of the distribution facilities that our existing Eastwood substation location is adequate. SCP would prefer that the proposed route be between points B and K (along the Norfolk and Western Railroad) on your proposed maps with the alternative being between points C and I (St. Rt. 32). This would allow the 138kV tap to be at a close proximity to the existing SCP Eastwood substation. If there are any other questions or concerns that I may help you with please feel free to contact me at (740) 689-6123.

Regards,


Kevin Seesholtz
Staff Engineer
South Central Power Company

Cc: A. Kadakia
file

BRANCH OFFICES

Circleville, OH 43113-9199 2100 Chickasaw Drive (740) 474-6045 Fax (740) 477-2219 1-800-206-0745 (Ohio only)	Canal Winchester, OH 43110-9629 10229 Bussey Road (614) 837-4351 Fax (614) 837-2351 1-800-524-0802 (Ohio only)	Hillsboro, OH 45133-0220 110 Danville Pike • P.O. Box 220 (937) 393-3421 Fax (937) 393-1128 1-800-207-0020 (Ohio only)	Barnesville, OH 43713-0270 37801 Barnesville-Bethesda Road • P.O. Box 270 (740) 425-4018 Fax (740) 425-4552 1-800-468-4717
--	--	--	--

Member Owned

4906-15-03 Site and route alternatives analyses

(A) The applicant shall conduct a site and route selection study prior to submitting an application for an electric power transmission line, electric power transmission substation, gas or natural gas transmission line, or a gas compressor station. The study shall be designed to evaluate all practicable sites, routes, and route segments for the proposed facility identified within the project area.

(1) The applicant shall provide the following:

- (a) A description of the study area or geographic boundaries selected, including the rationale for the selection.
- (b) A map of suitable scale which includes the study area and which depicts the general routes, route segments, and sites which were evaluated.
- (c) A comprehensive list of all siting criteria utilized by the applicant, including any quantitative or weighting values assigned to each.
- (d) A description of relevant factors or constraints identified by the applicant and utilized in the route and site selection process.
- (e) A description of the process by which the applicant utilized the siting criteria to determine the preferred and alternate routes and sites.
- (f) A description of the routes and sites selected for evaluation, their final ranking, and the rationale for selecting the preferred and alternate routes and sites.
- (g) A description of any qualitative or other factors utilized by the applicant in the selection of the preferred and alternate routes or sites.

(2) The applicant shall provide one copy of any constraint map utilized for the study directly to the board staff for review.

(B) The applicant shall provide a summary table comparing the routes, route segments, and sites, utilizing the technical, financial, environmental, socioeconomic, and other factors identified in the study. Design and equipment alternatives shall be included where the use of such alternatives influenced the siting decision.

(C) The applicant may provide a copy of any route and site selection study produced by or for the applicant for the proposed project as an attachment to the application. The study may be submitted in response to paragraphs (A) and (B) of this rule, provided that the information contained therein is responsive to the requirements of paragraphs (A) and (B) of this rule.

Effective: 12/15/2003

R.C. 119.032 review dates: 09/30/2003 and 09/30/2008

Promulgated Under: 111.15

Statutory Authority: 4906.03

Rule Amplifies: 4906.06, 4906.03

Prior Effective Dates: 12/27/76, 11/6/78, 7/7/80, 7/7/88, 8/28/98

4906-15-03 SITE AND ROUTE ALTERNATIVES ANALYSIS

CG&E evaluated a number of potential sites for the proposed Hillcrest Substation. The objective of the site evaluation process was the selection of a Preferred and Alternate Substation Site which would minimize the overall effects on sensitive land uses, including residences, and known ecological and cultural features to the greatest extent possible, while at the same time providing economically and technically feasible sites. The Hillcrest Substation Application is part of a combined substation and transmission line project. The site and route selection study for both portions of the overall project is provided as Appendix 03-1 and satisfies the requirements of this chapter.

The Hillcrest Substation will tap the existing CCD Stuart-Foster 345 kV transmission line that runs generally southeast to northwest and comes within 1.5 miles east of the City of Mount Orab. The selection of a suitable site for the Hillcrest Substation directly under this Stuart-Foster 345 kV transmission line was preferred, thereby eliminating the need for additional 345kV transmission line engineering and construction. Early in the site evaluation process potential substation locations near the intersection of Hillcrest Road and Greenbush East Road were considered optimal for numerous reasons: this area is generally less developed than areas further to the south near Mount Orab; this area is located midway between the existing Foster Substation to the northwest and Stuart Generating Station to the southeast; a new substation in this area would minimize the length required for the new Hillcrest-Eastwood 138 kV transmission line from CG&E's Eastwood Substation; and the proposed substation, as a new electric distribution source from this area, will increase opportunities for future distribution that will support growth and improve service reliability at the eastern limit of CG&E's service area. Furthermore, land availability and landowner negotiations have identified a Preferred Substation Site north of Greenbush East Road and east of Driver Collins Road and an Alternate Substation Site at the southwest corner of the intersection of Greenbush East Road and Hillcrest Road. Additional discussion on the selection of the Preferred and Alternate

Substation Sites is presented in the site and route selection study attached as Appendix 03-1.

APPENDIX 03-1

SITE AND ROUTE SELECTION STUDY



SITE AND ROUTE SELECTION STUDY

**HILLCREST-EASTWOOD 138 kV
TRANSMISSION LINE PROJECT**

Prepared for:
CG&E

**JOB NO: 14945561
May 2005**

36 East 7th Street, Suite 2300
Cincinnati, Ohio 45202
Voice (513) 651-3440
Fax (513) 651-3452

CONTENTS

SECTION	PAGE
CONTENTS	1
1.0 INTRODUCTION	1
2.0 PURPOSE AND OBJECTIVES	1
3.0 HILLCREST SUBSTATION SITE SELECTION	2
4.0 TRANSMISSION LINE ROUTE SELECTION	3
4.1 ROUTE SELECTION STUDY AREA DELINEATION	4
4.2 SCREENING ATTRIBUTES	5
4.2.1 Environmental Attributes	6
4.2.2 Land Use Attributes	7
4.2.3 Cultural Attributes	7
4.2.4 Engineering Attributes	8
5.0 IDENTIFICATION OF POTENTIAL CORRIDORS	8
5.1 ROUTE CORRIDOR DESCRIPTIONS	9
6.0 ROUTE SCORING	11
6.1 ROUTE SCORING RATIONALE	11
6.2 DATA SOURCES AND SCORING	14
6.2.1 Ecological	14
6.2.2 Land Use	14
6.2.3 Cultural	16
6.2.4 Engineering	16
7.0 PUBLIC INVOLVEMENT AND PARTICIPATION	17
8.0 AGENCY COORDINATION	19
9.0 DISCUSSION OF PREFERRED AND ALTERNATE ROUTE SELECTION	21

TABLES (follow text)

Number	
1	RAW AND PROPORTIONAL SEGMENT DATA
2	SEGMENT SCORES
3	ROUTE SCORING MATRIX
4	FINAL ROUTE SCORES

FIGURES (follow tables)

Number	
1	CONSTRAINT MAP WESTERN PROJECT AREA
2	CONSTRAINT MAP EASTERN PROJECT AREA
3	ROUTE ALTERNATIVES WESTERN PROJECT AREA
4	ROUTE ALTERNATIVES EASTERN PROJECT AREA

APPENDICES (follow figures)

Number	
A	PUBLIC INFORMATION BROCHURE
B	AGENCY RESPONSES

1.0 INTRODUCTION

This document presents the Site and Route Selection Study conducted by Cincinnati Gas & Electric Company (CG&E) for the proposed Hillcrest Substation and Hillcrest-Eastwood 138 kV Electric Transmission Line Project. This study was developed to satisfy the requirements of the Ohio Administrative Code (OAC) Section 4906-15-03 for two separate Applications to the Ohio Power Siting Board (OPSB) for Certificates of Environmental Compatibility and Public Need. The first Application is for the Hillcrest-East Transmission Line and the second is for the proposed Hillcrest Substation. According to OPSB regulations, applicants must provide certain baseline information concerning environmental and social issues, followed by a description of steps taken to minimize adverse effects. Recognizing that some impacts are unavoidable, the applicant must then describe efforts to mitigate the potential impacts to the extent feasible. This Site and Route Selection Study identifies major constraints and uses an evaluation process to compare alternatives that avoid or minimize adverse effects to the extent possible. CG&E retained URS to assist with the evaluations and scoring of environmental, socio-economic, cultural, and engineering issues for this study.

2.0 PURPOSE AND OBJECTIVES

The purpose of the 138 kV transmission line and substation project is to provide increased service reliability and load capacity near the eastern limits of the CG&E service area in a growing area of western Brown County, Ohio. CG&E's projections indicate that load growth in eastern Clermont County and western Brown County will place significant pressure on the existing electric transmission and distribution system. The installation of the new Hillcrest Substation and the construction of the new Hillcrest-Eastwood 138 kV line will assist in alleviating these load issues and increase the electric transmission system's reliability in the area. The identification of a Preferred and Alternate new substation site along the existing CG&E, Columbus Southern Power Company, and Dayton Power and Light Company (collectively CCD) Stuart-Foster 345 kV transmission line and a Preferred and Alternate transmission line route between the existing Eastwood

Substation and the proposed Hillcrest Substation are the objectives of this Site and Route Selection Study.

3.0 HILLCREST SUBSTATION SITE SELECTION

The ideal substation site is one that provides adequate land area for construction, equipment layout, operation, and maintenance of the facility and opportunity for an economically and technically feasible tie-in with the existing electric transmission and distribution systems, while limiting effects on sensitive land uses, cultural features, and ecological characteristics.

The rural nature of Brown County provides numerous areas of cleared and relatively flat, agricultural land, not identified designated agricultural district lands, which are suitable for substation development. Construction site grading, erosion, and sedimentation issues are minimized on relatively flat parcels of land, and limiting woodlot clearing minimizes potential ecological impacts. Due to the need for adequate construction and maintenance access to the new substation, the site selection process also focused on locations near roads. Substation sites near to existing roads have the advantage of being readily accessible to distribution circuits that typically run adjacent to roadways.

The selection of a suitable site for the Hillcrest Substation near to the CCD Stuart-Foster 345 kV transmission line drives the siting process at the eastern project terminus. This transmission line runs generally southeast to northwest and comes within 1.5 miles east of the City of Mount Orab. Locations in the immediate vicinity of Mount Orab were not considered viable due to difficulties in routing a new transmission line through dense residential areas. Potential locations to the north of State Route 32 (SR 32), near the intersection of Hillcrest Road and Greenbush East Road, were given priority as this area is generally less developed than areas to the south and is located midway between the existing Foster Substation to the northwest and Stuart Generating Station to the southeast. A new substation in this area would also minimize the length required for the new Hillcrest-Eastwood 138 kV transmission line due to the general southeast to northwest trend of the Stuart-Foster line and increase opportunities for future distribution support and growth. In addition, substation sites adjacent to existing transmission lines are

considered ideal as they minimize the aesthetic impacts of additional transmission lines to and from a more distant substation location.

The 138 kV Hillcrest-Eastwood transmission line and future distribution circuits are planned to go west and south of the substation so there is also a need for much of the substation site acreage to be located west of the existing CCD line. If this equipment were located to the east of the existing 345 kV line, circuits traveling west and south would need to be constructed under the 345 kV line, requiring re-engineering and reconstruction of the 345 kV line with larger towers so that circuits beneath this line could be safely installed and operated.

Availability of suitable land is another important consideration in substation siting as it is CG&E policy that condemnation is to be avoided if at all practical. Negotiations between CG&E and landowners in the area of Hillcrest Road and Greenbush East Road has identified two available substation sites that met the abovementioned siting needs and preferences (Figures 2 and 4).

Approximately 18 acres of available land is located north of Greenbush East Road and east of Driver Collins Road. This site was selected as the Preferred Site for the Hillcrest Substation as it best meets the abovementioned project siting needs and preferences. Land previously purchased by CG&E as a possible distribution substation location and two additional parcels occupied by willing sellers are located at the southwest corner of the intersection of Greenbush East Road and Hillcrest Road. These parcels were selected as the Alternate Site for the Hillcrest Substation as it meets all the siting requirements, although is not considered ideal due to proximity to existing and planned residential development and a lack of a set back from the roadway reducing potential for aesthetic impact mitigation through visual screening plantings.

4.0 TRANSMISSION LINE ROUTE SELECTION

The Hillcrest-Eastwood Route Selection Study involved the collection and evaluation of environmental, cultural, land use, and engineering data in order to identify potential routes for the new 138 kV electric transmission line. The preliminary routes were scored

and ranked to facilitate the selection of a Preferred and Alternate Route which would minimize the overall effects on ecology, sensitive land uses, and cultural features to the greatest extent possible, while at the same time providing economically and technically feasible routes.

4.1 ROUTE SELECTION STUDY AREA DELINEATION

The route selection process is driven by the identification of two end points for the proposed Hillcrest-Eastwood 138 kV line. The transmission line will originate at the existing CG&E Eastwood Substation No. 84, located on the southern side of Tri-County Highway (Old State Route 32) approximately 1,000 feet west-northwest of Chad Lane in Clermont County. The Clermont-Brown County line is located approximately 400 feet east of the substation. Based on the selection of the new Hillcrest Substation site, the new 138 kV line is assumed to terminate at the Preferred Substation Site located north of Greenbush East Road and east of Driver Collins Road, approximately 3 miles north of the City of Mount Orab in Brown County. The Alternate Substation site is located at the southwest corner of Greenbush East Road and Hillcrest Road. As the Preferred and Alternate Sites for the Hillcrest Substation are in close proximity, the final selection of either site is not expected to significantly alter the conclusions of the Route Selection study if the Alternate Substation is selected.

With the terminus points for the proposed transmission line identified, the initial task of the route selection process was to define a working study area that would provide a viable route. The study area delineation was based on a review of United States Geologic Survey (USGS) maps, state and county road maps, aerial photographs, and visual observations of the region. Constraints such as transportation routes and urban areas played a key role in determining the lateral study area dimensions and routing selections.

The City of Mount Orab is located approximately 6 miles east of Eastwood Substation and 3 miles south of the proposed Hillcrest Substation Site. Avoidance of dense residential areas associated with Mount Orab, was identified as a major constraint for the project in the extended study area. Although no comparable barriers exist in other directions, the locations of the substation end points and a goal to minimize transmission

line length between those points, limited the study area to the east of Hagemans Crossing Road, south of Greenbush East Road, north of Tri-County Highway (Old State Route 32), and west of Hillcrest Road. Routes along Tri-County Highway were initially considered but were deemed undesirable due to a number of residences along this road and increasing frequency of residences towards Mount Orab. Residential development throughout the study area was a major deciding factor with respect to transmission line routing alternatives, particularly along State Route 68 to the southwest of the proposed Hillcrest Substation location. Routing near residential areas was avoided where possible, resulting in the elimination of many possible route segments. After initial consultation between CG&E and URS, only viable routes that could potentially be constructed were considered further and scored as part of this study.

4.2 SCREENING ATTRIBUTES

Once the study area was identified, the next phase was to identify screening attributes, or features of the study area, that represented possible constraints on the development of the electric transmission line. The attributes were classified as environmental, engineering, cultural, or land use characteristics, all of which require evaluation in the OPSB certificate applications.

Constraint maps were prepared for the study area. The base map for the constraint maps was prepared from the following USGS 7.5-minute topographic quadrangles:

- Mount Orab, Ohio, 1960 (photorevised 1982)
- Sardinia, Ohio 1961 (photorevised 1982)
- Williamsburg, Ohio, 1968 (photorevised 1986)

The information on the maps was updated through review of digital orthographic quarter quadrangles (DOQQs) obtained from the USGS (1994), and field reconnaissance conducted in August and September 2004 and in February 2005. The DOQQs are orthorectified black and white aerial photographs with a 1 meter resolution that directly overlay the USGS electronic quadrangle maps in Geographical Information Systems (GIS) software packages. This overlay ability greatly simplifies topographic map

updates. Updates included addition or deletion of woodlots, structures, water bodies, transportation infrastructure, commercial/industrial areas, and residential areas. The proposed routes are comprised of a combination of "segments" as shown on Figures 1 and 2. The segments are defined by lettered nodes which are placed where more than one possible route choice exists. Statistics related to these segments and the constraints evaluated are presented in Tables 1 and 2. The 1:24,000 USGS topographic constraint maps of the segments comprising these routes are presented on Figures 1 and 2. A tabular listing of the final route scores are presented in Tables 3 and 4. Aerial photographs of the study area showing the selected Preferred and Alternate Routes are included as Figures 3 and 4.

4.2.1 Environmental Attributes

Environmental attributes were identified by URS based on applicable regulations as specified in the OAC Sections 4906-15-01 through 4906-15-07. A list of these characteristics was developed with the intent that any electric transmission line route under consideration would avoid these areas to the extent possible. The following attributes were considered as environmental constraints in the siting process:

- Woodlots
- Mapped National Wetland Inventory (NWI) wetlands
- Perennial or intermittent surface drainage crossings
- Recorded endangered and threatened species locations
- Established nature preserves, refuges, wildlife management areas, etc.

Wooded areas and surface drainages were delineated based on available aerial photography, USGS topographic maps, and the field survey. NWI digital GIS coverage of the project area was superimposed on maps of the project area to determine potential wetland areas. Recorded endangered or threatened species communities, established nature preserves, refuges, wildlife management areas, etc. were identified within the project area based on GIS information provided by the Ohio Department of Natural Resources (ODNR).

4.2.2 Land Use Attributes

Land use attributes were identified by URS based on applicable regulations as specified in OAC Sections 4906-15-01 through 4906-15-07. A list of these features was developed with the intent that any potential route under consideration would avoid sensitive areas, while utilizing existing or planned facilities, to the extent possible. The following land use attributes were considered in the siting process:

- Sensitive land uses (e.g., recreational areas, airstrips, and communication facilities)
- Institutional land uses (e.g., churches, schools, and hospitals)
- Housing, including residential subdivisions and trailer parks
- Property ownership, tax parcels, and boundaries
- Route crossing or adjacent to the planned Foreign Trade Zone (FTZ) Industrial Park (Figure 2)

After the study area was delineated, a windshield land use survey of the area was conducted to update existing maps and aerial photography. Property boundaries were provided by the Clermont County and Brown County Auditors' offices. The limits of the FTZ were provided by Brown County Department of Economic Development.

4.2.3 Cultural Attributes

Cultural attributes were identified by URS based on applicable Federal and State regulations as specified in the OAC Sections 4906-15-01 through 4906-15-07. A list of these features was developed with the intent that any potential route under consideration would avoid these areas to the extent possible. The following attributes were considered as cultural constraints in the siting process.

- Mapped archaeological sites
- Sites listed on the National Register of Historic Places (NRHP)
- Known cemeteries

Recorded archaeological sites were collected for the Ohio State Historic Preservation Office (SHPO). This information is maintained by SHPO on topographic maps and was transferred to the GIS system used for this study. Properties on the National Register of Historic Places (NRHP) were obtained from the National Park Service electronic database. Cemeteries were identified by SHPO and USGS topographic maps and supplemented by the windshield land use survey.

4.2.4 Engineering Attributes

Engineering attributes were identified by URS in conjunction with CG&E. The list of attributes was developed with the intention to avoid routes involving increased engineering and right-of-way acquisition challenges resulting in increased construction and maintenance costs. The following attributes were engineering considerations in the siting process.

- Road and rail crossings
- Percentage of route adjacent to or within existing transmission or transportation right-of-way

These attributes were delineated based on available USGS topographic maps and aerial photography. In addition a qualitative assessment of sharp angles in the line that would require more substantial structures and the total length of each alternative were also considered in the route selection process.

5.0 IDENTIFICATION OF POTENTIAL CORRIDORS

After the constraint data was collected and plotted on the base map, the base map was reviewed to identify potential corridors for the electric transmission line. The primary focus was to identify potential corridors that avoided, to the extent possible, constraints described by the OPSB regulations or to minimize impact where they could not be avoided. In addition, potential corridors that connected the end points in the most direct manner possible would minimize the length of the corridor and thereby reduce overall impacts and construction costs.

Preferred locations for the routing of the transmission line included the following:

- Routes along or adjacent to existing utility or transportation easements
- Routes that avoid residences and associated aesthetic effects to the extent possible
- Routes with minimal impact on woodland and wetland areas

Using the constraint map, segments were selected that generally avoided sensitive areas. Where complete avoidance was not practical, the preferred segments were those which minimized the impacts and for which feasible mitigation steps are available. The location of specific constraints resulted in preferred segments that ran adjacent to or within existing road, transmission line, and railroad rights-of-way. For those areas without these features, cross-country portions were selected which followed field and property lines. Each individual segment was required to be technically feasible and viable from an engineering and construction perspective. Figures 1 and 2 show the viable segments selected to be scored for potential candidate routes.

5.1 ROUTE CORRIDOR DESCRIPTIONS

A review of the viable segments revealed three major east-west routes spanning the central portion of the project area. Two of these parallel the Norfolk and Western Railroad and State Route 32. The third was a cross-country route along the northern portion of the study area. Several options for connecting the central portion of the route to the end point substation were also evaluated. Based on possible combinations of the segments described below, 73 potential routes were selected for scoring. A general discussion of evaluated candidate routes is provided below.

i) Railroad: Segments B-N, N-K, and K-L are adjacent and parallel to the south of the Norfolk and Western railroad that runs west-northwest to east-southeast across the southern portion of the project area. These candidate route segments are 4.1 miles long in total. An existing railroad signal line currently runs along the south edge of the rail line which forms the southern boundary of the railroad ROW. If this route is selected the transmission line would be located 25 feet south of the railroad signal line.

ii) State Route 32: Segments C-I and I-J are adjacent and parallel to the south side of SR 32 which runs west-northwest to east-southeast 0.5 mile north-northeast of the railroad. These candidate route segments are also 4.1 miles long in total and are located on private property 25 feet to the south of the Ohio Department of Transportation (ODOT) ROW. Construction within an existing state route ROW is not generally permitted by ODOT.

iii) Cross Country: A cross-country route runs northeast and then east from SR 32 to Brooks Malott Road. The route includes segments C-E and E-P, and is 4.4 miles long. This route is not located adjacent to existing ROW. It runs across mostly agricultural land in the northern portion of the project area.

iv) Eastwood Substation: Three alternatives were considered between Eastwood Substation and the major east-west routes at the southwestern end of the project. Segment A-B exits Eastwood Substation heading northwest for 0.4 mile to Hagemans Crossing Road along the existing Eastwood-Cedarville 138 kV transmission line. The segment turns northward parallel to Hagemans Crossing Road for 0.5 mile. The segment then turns east along the southern edge of the railroad for 0.4 mile to Node B. Segments A-M and M-B run northward from Eastwood Substation for 0.8 mile to the railroad and segment B-C continues northward for another 0.3 mile to SR 32. Segment A-M exits Eastwood Substation heading northward for 0.1 mile to Node M. Segment M-N turns eastward before turning north following the backside of several residential properties west of Chad Lane. This residential subdivision is somewhat, but not entirely, shielded from this proposed segment by a wooded fencerow.

v) Hillcrest Substation: Several possible segments were identified between Brooks Malott Road and the proposed location of the Hillcrest Substation. Segments L-J, J-O, O-P, P-A1, and A1-B1 are located adjacent to the east side of Brooks Malott Road and provide viable north-south routes from the eastern end of the segments along the railroad and SR 32.

Segment B1-D1 runs east-northeast along the south side of Waits Road to the intersection of U.S. 68 and Waits Road. At this point, the route turns in a generally north direction along the west side of U.S. 68 to Node D1. Segment B1-C1 and B1-D1 originate at the

southeast corner of the intersection of Brooks-Malott and Waits Roads. Segment B1-D1 runs south along Waits Road before turning north along the western edge of U.S. Route 68 to Node D1. From Node B1, segment B1-C1 follows the north side of Waits Road west before turning north along the east side of Brooks-Malott Road for approximately 1,800 feet to the B1-C1 terminus. Segment C1-D1 runs east-southeast from this location for approximately 1,700 feet to Node D1.

Combinations of segments O-F, P-F, F-V, P-Y, Y-E1, Y-E1, V-H, and E1-F1 generally provide cross-country routes from Brooks-Malott Road across U.S. Route 68 and to the proposed location of the Hillcrest Substation. These segment combinations generally run southwest to northeast for approximately 2 miles, but lengths vary slightly depending upon the selected segment combination. Segment combinations that involved backtracking when more direct combinations were available were not scored.

6.0 ROUTE SCORING

6.1 ROUTE SCORING RATIONALE

The transmission line route selection process involves balancing the many conflicting constraints identified in the study area. One way to compare the alternatives is to develop a ranking system based on attributes that are linked to the objectives of the route selection. This approach is a multi-objective decision analysis and has been used in other decisions involving energy facilities.

The objective of this selection study is to identify a Preferred and Alternate Route for the electric transmission line that minimizes the overall effects on environmental, land use and cultural resources while still providing a technically and economically feasible route. Nineteen quantifiable attributes relating to these objectives were developed. Each attribute for every lettered segment was scored as described in the following sections. After the attribute table was completed, the objectives of the route selection study were revisited and the routes that most closely matched the objectives were selected as the Preferred and Alternate Routes. An additional goal of the route selection study is that the Preferred and Alternate Routes are selected such that they have not more than twenty

percent of their rights-of-way in common in accordance with OPSB rule 4906-05-04(A)(2)(a)(iii). This requirement can be waived if the route selection study reveals cause for the Preferred and Alternate Routes sharing more than twenty percent of their ROW in common.

Numerical scoring of the routes was conducted according to the following steps:

i) Step 1 Assembly of "Raw" Segment Data: For the purposes of scoring, viable route candidates were subdivided into segments, which were identified by lettered nodes. These nodes were located at the intersections of two or more potential segments. Residences and sensitive land uses were identified and scored within several distances from the segment centerline (generally 100, 500, and/or 1,000 feet). It should be noted that features scored within 100 feet were also scored within the 500 and 1,000-foot categories, thereby giving closer features a slightly higher weight compared to more distant features.

ii) Step 2 Adjustment of Data for Segment Length: Data were standardized to remove segment length as a factor in the scoring process. Without this adjustment, routes made up of many segments but of equal total route length would be scored more severely than the routes with fewer segments. However, total route length is an important factor and is considered qualitatively in the final selection of Preferred and Alternate Routes. Data pertaining to linear feet of constraint crossed by the centerline of a segment and the number of occurrences of attributes within specified distances of the route were gathered. Raw data was normalized for segment length based on calculating the segment length and scoring attributes on a per mile basis.

iii) Step 3 Grouping of Data to Assign Scores: In order to assign a score to the standardized data, the data had to be grouped into discrete ranges. There are numerous methods of deciding where these group thresholds will fall. Some are more arbitrary than others. Examples of group threshold determinations include: equal number in each group and equal breaks in the data distribution. However, a significant effort was made in this study to eliminate subjectivity in the scoring process. One way to achieve this is to take the data for each attribute (e.g., percent of route length occupied by woodland) for every

segment, and calculate the standard deviation. Multiples of the standard deviation were then used as the data group breaks.

Using the standard deviation, the scores developed are proportional between attributes. Ecological scores, for example, will not have a higher proportion of 10s than 5s. It is the range of data for each attribute that determines the grouping divisions, not an arbitrary outside reference. This allows comparison between segments, and ultimately between routes, for different attributes, which is the overriding purpose of a route selection study.

iv) Step 4 Scoring Constraints: Scores, instead of raw data, were used to allow all attributes to receive equal consideration in the route selection process. The number of available scores can be as many or as few as desired; however, simplicity usually achieves satisfactory results. In this study the raw data were normalized for length and then assigned a score of 0, 1, 5, or 10 depending on the magnitude of the attribute. Attributes with a lower score are more desirable. The standard deviation of the normalized segment data was calculated and used to group the data for scoring. One standard deviation from the mean received a score of 1, two standard deviations received a score of 5, more than two standard deviations received a score of 10. If there were no occurrences of the attribute, a score of 0 was assigned. The scores for each attribute and segment are shown in Table 2.

v) Step 5 Totaling Segments to Find Route Score: Once each segment has been scored, routes comprising multiple segments are averaged to come up with a total route score. Care was taken in the scoring process to ensure no attributes or group of attributes received greater emphasis than any other. Therefore, no attribute group weighting was conducted. Seventy-three possible combinations of segments were analyzed and are shown in Table 3. Constraint classes, individual attributes, and data sources are discussed in detail in the following section.

6.2 DATA SOURCES AND SCORING

6.2.1 Ecological

Wetland data was collected from published NWI maps. Other environmental data was collected from publicly available sources including the ODNR Division of Wildlife (DOW), ODNR Division of Natural Areas and Preserves (DNAP), U.S. Fish and Wildlife Service (USFWS) and U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS). USGS topographic maps and digital aerial photography were also reviewed to delineated streams, wooded areas, and ponds. The information obtained from these sources was used to score each segment of the candidate route according to the following scoring rationale:

Constraint	Score	Rationale
Percent woodland crossed by centerline	0	- No woodlands crossed by centerline
	1	- Less than 16.4% of centerline crossing woodlands
	5	- 16.4 to 24.6% of centerline crossing woodlands
	10	- More than 24.6% of centerline crossing woodlands
Percent wetland crossed by centerline	0	- No wetlands crossed by centerline
	1	- Less than 2.8% of centerline crossing wetlands
	5	- 2.8 to 4.2% of centerline crossing wetlands
	10	- More than 4.2% of centerline crossing wetlands
Stream crossings	0	- No streams in ROW corridor
	1	- Less than 2.4 streams crossed
	5	- 2.4 to 3.6 streams crossed
	10	- More than 3.6 streams crossed
Recorded protected species within corridor	0	- None within ROW corridor
	10	- One or more within 1,000 feet

6.2.2 Land Use

URS conducted a field survey of the area noting land uses on USGS maps and aerial photographs. The land use of the study area was supplemented by the following sources:

- USGS 7.5-minute topographic maps
- Aerial photographs (USGS DOQQs) of the study area

- Brown County Auditor parcel maps
- Brown County Department of Economic Development
- Clermont County GIS data

The information obtained from these sources was used to score each segment of the potential route according to the following scoring rationale:

Constraint	Score	Rationale
Residences within 100 feet of the centerline	0	- No residences within 100 ft
	1	- Less than 4.8 residences/mile within 100 ft
	5	- 4.8 to 7.2 residences/mile within 100 ft
	10	- More than 7.2 residences/mile within 100 ft
Residences within 500 feet of the centerline	0	- No residences within 500 ft
	1	- Less than 26.6 residences/mile within 500 ft
	5	- 26.6 to 39.9 residences/mile within 500 ft
	10	- More than 39.9 residences/mile within 500 ft
Residences within 1,000 feet of the centerline	0	- No residences within 1,000 ft
	1	- Less than 60.8 residences/mile within 1,000 ft
	5	- 60.8 to 91.2 residences/mile within 1,000 ft
	10	- More than 91.2 residences/mile within 1,000 ft
Properties crossed per mile by centerline	0	- No properties crossed
	1	- Less than 6 properties crossed
	5	- 6 to 9 properties crossed
	10	- More than 9 properties crossed
Institutional uses within 100 feet (e.g., schools, hospitals, churches, correctional facilities)	0	- No institutional land uses within 100 ft
	10	- One or more institutional land uses within 100 ft
Sensitive land uses within 100 ft (e.g., parks, preserves)	0	- No sensitive land uses within 100 feet
	1	- Less than 2 sensitive land/mile uses within 100 feet
	5	- 2 to 3 sensitive land uses/mile within 100 feet
	10	- More than 3 sensitive land uses/mile within 100 feet
Sensitive land uses within 500 ft (e.g., parks, preserves)	0	- No sensitive land uses within 500 ft
	1	- Less than 2 sensitive land/mile uses within 500 feet
	5	- 2 to 3 sensitive land uses/mile within 500 feet
	10	- More than 3 sensitive land uses/mile within 500 feet

Sensitive land uses within 1,000 ft (e.g., parks, preserves)	0	- No sensitive land uses within 1,000 ft
	1	- Less than 2 sensitive land/mile uses within 1,000 feet
	5	- 2 to 3 sensitive land uses/mile within 1,000 feet
	10	- More than 3 sensitive land uses/mile within 1,000 feet
Route crosses or adjacent to Foreign Trade Zone (FTZ)	0	- Crosses or adjacent to Foreign Trade Zone (FTZ)
	10	- Not adjacent to or crossing Foreign Trade Zone (FTZ)

6.2.3 Cultural

Recorded archaeological sites were collected for the Ohio State Historic Preservation Office (SHPO). This information is maintained by SHPO on topographic maps and was transferred to the GIS system used for this study. Properties on the National Register of Historic Places (NRHP) were obtained from the National Park Service electronic database. Cemeteries were identified using USGS topographic maps supplemented by the windshield land use survey. The information obtained from these sources was used to score each segment of the potential route according to the following scoring rationale:

Constraint	Score	Rationale
Previously recorded archaeological sites within corridor	0	- None
	10	- One or more
NRHP sites within 100 feet	0	- None
	10	- One or more
Cemeteries within 100 feet	0	- None
	10	- One or more

6.2.4 Engineering

Road, rail and stream crossing data was collected from USGS maps of the area, county engineering maps and the field reconnaissance. The data was collected and transferred to the constraint map of the study area. The information obtained from these sources was used to score each segment of the potential route according to the following scoring rationale:

Constraint	Score	Rationale
Percentage of route adjacent to an existing utility right-of-way	0	- 100 percent
	1	- 92.8 to 100 percent
	5	- 46.4 to 92.8 percent
	10	- Less than 46.4 percent
Number of road crossings per mile	0	- No road crossings
	1	- Less than 3.4 road crossings/mile
	5	- 3.4 to 5.1 road crossings/mile
	10	- More than 5.1 road crossings/mile
Number of railroad crossings per mile	0	- No railroad crossings
	1	- Less than 1.4 railroad crossings/mile
	5	- 1.4 to 2.1 railroad crossings/mile
	10	- More than 2.1 railroad crossings/mile

7.0 PUBLIC INVOLVEMENT AND PARTICIPATION

CG&E's public information program for this project included written correspondence and meetings with local residents and officials, information posters and brochures, newspaper notices, and a public information open house held on December 7, 2004.

During the preliminary route selection process, Environmental Technologies and Communications, Incorporated (ETC) sent questionnaires to 35 local officials and residents regarding the proposed project. Of the 17 responses received, 10 individuals expressed support for the project, 5 expressed a neutral position, and 2 were of mixed opinion. Most respondents understood the need for additional electric supply in their area, which is experiencing residential, commercial, and industrial growth. A copy of the questionnaire, which includes comments received, and a list of the contacted individuals are included in Appendix A.

A public information open house was held on December 7, 2004 at the Western Brown High School Community Room at 476 West Main Street, Mount Orab, Ohio. Public notification for the open house included advertisements in the New Democrat and Clermont County Sun on Thursday December 2, 2004, and The Brown County Press on Sunday December 5, 2004. Copies of these advertisements are included in Appendix A. CG&E sent letters to the local officials informing them of the open house, and ETC followed up by telephone to confirm they received the letters.

CG&E coordinated with ETC to produce a poster notice and information brochure for the open house. Copies of these are provided in Appendix A. The poster included a map showing the proposed route alternatives, and information on the location and time of the open house. Posters were placed in five commercial businesses local to the project area including the Kroger's in Mount Orab, the Sunoco Service Station on U.S. 68, the Five Mile Marker Convenient Store, Howser's Convenient Store, and Appalachian Marathon Service Station. The information brochure provided a project description, a summary of routing and siting, purpose and need, schedule, construction sequence, power line safety, easement acquisition, and property restoration.

Six members of the public attended the December 7, 2004 public open house. These included the Mayor of Mount Orab, two Green Township Trustees, a representative from the Brown County Department of Economic Development, a reporter from the News Democrat, and one local resident. All attendees recognized the need for additional electric service in the area and none expressed opposition to the project. The Mayor of Mount Orab expressed a particular interest in routes following the Norfolk and Western rail line stating that commercial and industrial opportunities would be enhanced within the Foreign Trade Zone by these potential routes. Additional brochures and one of the poster-sized routing maps were given to the Green Township Trustees so that project information would be available if local residents asked about the project at the Green Township office.

CG&E mailed letters to nearby property owners notifying them that CG&E recently acquired property at the southwest corner of the intersection of Hillcrest and Greenbush Roads that would potentially be used to build the Hillcrest substation. Approximately 10 letters were sent.

CG&E contacted the South Central Power Company (SCP) during the route selection process for comments on the proposed project because the SCP Eastwood Substation is located within the project area on Eastwood Road (not to be confused with CG&E's Eastwood Substation on Tri-County Highway). SCP indicated that they have been

evaluating the need for a new 69kV or 138kV tap at their existing Eastwood Substation and have determined that this would provide more reliability to tie-in with their existing Duckwall Substation. SCP indicated a preference for a 138 kV transmission line route along the southern edge of the Norfolk and Western Railroad because this route is within 500 feet north of the SCP Eastwood Substation. If the Preferred Route is selected, a 138 kV transmission line to the SCP Eastwood Substation would follow this project. A copy of the SCP response letter is included in Appendix A.

8.0 AGENCY COORDINATION

CG&E and URS provided state and local agencies and officials with a letter summarizing the proposed project including a map of the project area. The letters were intended to solicit any comments the agencies and officials might have, and to provide them with the opportunity to provide preliminary comments and suggest preferences regarding possible routes. Copies of responses received are included in Appendix B.

The USFWS responded by letter, dated August 11, 2004, regarding the occurrence or possible occurrence of Federally-listed threatened or endangered species within the vicinity of the proposed project. The USFWS reported that there are no federal wildlife refuges, wilderness areas, or critical habitats within the project area. The USFW identified four federally-listed endangered or candidate species in the project range, including the Indiana bat (*Myotis sodalis*), running buffalo clover (*Trifolium stoloniferum*), rayed bean mussel (*Villosa fabalis*), and the sheepnose mussel (*Plethobasus cyphus*). These species are discussed further in Section 4906-15-07(B)(3)(e) of this Application.

The Ohio Department of Natural Resources, Division of Wildlife responded by mail on July 8, 2004 regarding the proposed project. ODNR-Division of Wildlife was not aware of any natural areas, preserves, or ecologic resources in the project vicinity.

The ODNR, Division of Real Estate and Land Management (REALM) responded by electronic mail on September 22, 2004. Comments about the project were generated by

an inter-disciplinary review in consultation with the DOW and other divisions within the ODNR. These comments were prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Environmental Policy Act and other applicable laws and regulations. The ODNR-REALM had the following comments about the project:

- A Natural Heritage Database search indicated no records of rare species or unique natural features within the proposed project area. ODNR reported no state nature preserves or scenic rivers in the vicinity of the proposed substation site.
- The ODNR, Division of Geological Survey is unaware of any geologic constraints that would require special consideration at the site proposed for the development of the Hillcrest Substation.
- The ODNR stated the hillsides in the project area are underlain by Kope Formation bedrock and soils derived from the Kope Formation. Soils that are developed on, or derived from this formation, are prone to landsliding, especially under disturbed-slope conditions. ODNR recommended that prior to commencing construction activities, a thorough geotechnical assessment of the site conditions should be performed.
- The ODNR stated that the proposed project area might be located in a Special Flood Hazard Area. Thus, ODNR recommended that local floodplain administrators be contacted and Flood Insurance Rate Maps be consulted.

The Ohio Historic Preservation Office (SHPO) responded by mail on August 16, 2004 regarding the proposed project. A review of state records showed no previously recorded sites or surveys in the project study area. SHPO indicated that prehistoric sites have been identified south of the project study area and may potentially be present in the project area.

9.0 DISCUSSION OF PREFERRED AND ALTERNATE ROUTE SELECTION

The results of the Route Selection Study are provided in Tables 3 and 4. For all the attributes considered, the set of routes including Routes 1, 2, 3, 4, 69, 70, 71, and 72 (all routes that follow the railroad) were the lowest scoring routes, indicating all of them to be excellent candidates for selection as the Preferred Route. The difference between the eight routes is in the eight different routing options available from Node O at the northeast end of the project area.

The selected Preferred Route is Route 70. Route 70 parallels the existing 138 kV electric transmission line from Node A at Eastwood Substation heading northwest for 0.4 mile to Hagemans Crossing Road. The route turns northward along Hagemans Crossing Road for 0.5 mile before turning east along the southern edge of the railroad for 0.4 mile to Node B. The route continues east-southeast along segments B-N, N-K, and K-L along the southern edge of the Norfolk and Western railroad. At Node L, the Route turns northward along the eastern side of Brooks-Malott Road, following segment L-J, J-O, and O-P. From Node P, the route continues northward parallel to Brooks-Malott Road for approximately 0.4 mile before veering northeast along the south side of Waits Road to the U.S. 68 and Waits Road intersection. At this point, the route turns in a generally north direction along the west side of U.S. 68 to Node D1. From Node D1, the route crosses U.S. 68 and travels in an east-southeast direction along the north side of a tree line for approximately 0.6 mile past Node E1. The route then proceeds north through an agricultural field for 0.45 mile to the northern side of Greenbush East Road. The route follows the northern side of Greenbush East Road for approximately 800 feet before veering north for an additional 900 feet to the Preferred Hillcrest Substation site.

Route 70 is the fourth lowest scoring route. There is an existing distribution line along the eastern edge of Brooks-Malott Road that CG&E is considering overbuilding and upgrading as part of this project. The use of this existing line would minimize the need for acquiring new ROW and would consolidate the amount of construction and maintenance tree trimming that would be required in the area. In addition, Routes 2, 3, and 4 also extend along the rear of a new subdivision delineated on Brown County tax maps near the Alternate Hillcrest Substation site. It is possible that additional residential

development in this area in the near future will result in additional land use impacts from the proposed line. Based on the results of the route selection study and these qualitative reasons, Route 70 was selected as the Preferred Route.

According to OPSB rule 4906-05-04(A)(2)(a)(iii) the Preferred and Alternate Routes may not have more than twenty percent of their rights-of-way in common. The top 35 scoring routes share more than 20 percent of the length of the Preferred Route in common. Based upon this, a waiver of the 20 percent rule will be requested by CG&E. Without such a waiver the Alternate Route would default to one of the higher, i.e., worse, scoring routes.

For all the attributes considered, all of the routes that follow the railroad and/or SR 32 were generally the next sets of lowest scoring routes, indicating any of them to be excellent candidates for selection as the Alternate Route. Route 73 was selected as the Alternate Route. Similar to the Preferred Route, this route has the advantage of overbuilding and upgrading the existing distribution lines along the east side of Books-Malott Road, thus minimizing the need to acquire new ROW and further consolidate the amount of construction and maintenance tree trimming that would be required in the area.

Route 73 runs northward from Node A at Eastwood Substation for 0.8 mile to Node B, located immediately south of the Norfolk and Western Railroad. The route continues northward for another 0.3 mile to SR 32. From Node C, the route turns east-southeast along Segments C-I and I-J, paralleling and adjacent to the south side of State Route 32 for approximately 4.1 miles. These segments are located outside of the Ohio Department of Transportation ROW for State Route 32. If Route 73 is selected for construction, the proposed transmission line would be constructed on private property adjacent to the south of SR 32 and would require spanning or relocation of numerous billboards. From Node J, this route follows the Preferred Route along the east side of Brooks-Malott Road for approximately 1.4 miles to Node B1. From Node B1, the route spans the intersection of Brooks-Malott and Waits Roads and subsequently follows the north side of Waits Road in a westerly heading for approximately 200 feet. The segment will then proceed north along the east side of Brooks-Malott Road for approximately 1,800 feet to the B1-C1 terminus. The segment turns east-southeast from this location for approximately 1,700

feet to Node D1. At Node D1, Route 73 continues to follow the Preferred Route to the Preferred Hillcrest Substation site located north of Greenbush East Road.

TABLE 1
RAW AND PROPORTIONAL SEGMENT DATA

SEGMENT			ECOLOGICAL							
End Nodes	Segment Length (ft)	Segment Length (mi)	Length Woodlands Crossed by Contourline (ft) (a)	Percent Woodlands Crossed	Length NWI Wetlands Crossed (ft) (b)	Percent NWI Wetlands Crossed	Stream Crossings	Streams Crossings per Mile	Endangered Species Records within 1,000 ft (d)	Endangered Species Per Mile
A-B	7,130	1.4	580	8.1	0	0.0	4	3.0	0	0.0
A-M	890	0.2	0	0.0	70	7.9	0	0.0	0	0.0
B-C	1,810	0.3	0	0.0	0	0.0	0	0.0	0	0.0
B-N	850	0.2	0	0.0	0	0.0	0	0.0	0	0.0
C-E	9,420	1.8	1,090	11.6	0	0.0	3	1.7	0	0.0
C-I	7,920	1.5	850	10.7	90	1.1	4	2.7	0	0.0
E-F	13,790	2.6	1,140	8.3	0	0.0	4	1.5	0	0.0
F-V	3,250	0.6	420	12.9	0	0.0	0	0.0	0	0.0
I-E	3,800	0.7	200	5.3	0	0.0	1	1.4	0	0.0
J-J	13,790	2.6	3,870	28.1	90	0.7	2	0.8	0	0.0
J-O	3,450	0.7	150	4.3	0	0.0	1	1.5	0	0.0
K-I	2,550	0.5	200	7.8	0	0.0	0	0.0	0	0.0
K-L	13,950	2.6	2,720	19.5	0	0.0	4	1.5	0	0.0
L-J	2,660	0.5	510	19.2	30	0.9	0	0.0	0	0.0
M-B	3,200	0.6	90	2.8	0	0.0	2	3.3	0	0.0
M-N	3,990	0.8	800	20.1	0	0.0	1	1.3	0	0.0
N-K	6,970	1.3	320	4.6	0	0.0	0	0.0	0	0.0
O-F	3,650	0.7	840	23.0	0	0.0	2	2.9	0	0.0
O-P	1,770	0.3	330	18.6	0	0.0	1	3.0	0	0.0
P-F	2,770	0.5	330	11.9	0	0.0	1	1.9	0	0.0
P-Y	4,890	0.9	110	2.2	0	0.0	1	1.1	0	0.0
P-Y (alt)	5,410	1.0	498	9.2	0	0.0	1	1.0	0	0.0
V-G1	5,720	1.1	720	12.6	0	0.0	0	0.0	0	0.0
Y-G1	8,220	1.6	170	2.1	0	0.0	2	1.3	0	0.0
P-A1	1,730	0.3	490	28.3	0	0.0	0	0.0	0	0.0
A1-B1	510	0.1	0	0.0	0	0.0	0	0.0	0	0.0
B1-C1	1,960	0.4	223	11.4	0	0.0	1	2.7	0	0.0
C1-D1	1,700	0.3	104	6.1	0	0.0	0	3.1	0	0.0
B1-D1	3,100	0.6	116	3.7	0	0.0	2	3.4	0	0.0
D1-F1	5,500	1.0	0	0.0	0	0.0	0	0.0	0	0.0
F1-G1	1,600	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Y-F1	5,460	1.0	167	3.1	0	0.0	0	0.0	0	0.0
Y-V	1,730	0.3	140	8.1	0	0.0	1	3.1	0	0.0
Std Deviation			798	8.2	23	1.4	1	1.2	0	0.0

(a) source: USGS topographic quadrangles, USGS digital orthophoto quadrangles, and field observation

(b) source: National Wetland Inventory quadrangle maps

(c) source: USGS topographic quadrangle maps

(d) source: ODNR threatened and endangered species database

TABLE 1 (CONTINUED)
RAW AND PROPORTIONAL SEGMENT DATA

SEGMENT			CULTURAL					
End Nodes	Segment Length (ft)	Segment Length (mi)	Cultural Resource Sites within 100-ft ROW (e)	Cultural Resource Sites per Mile(f)	National Register of Historic Places within 100-ft ROW (f)	National Register of Historic Places Per Mile	Cemeteries within 100-ft ROW (g)	Cemeteries Per Mile
A-B	7130.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
A-M	890.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
B-C	1810.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
B-N	850.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
C-E	9420.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
C-I	7920.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
E-P	13790.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
F-V	3250.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
I-E	3800.0	0.7	1.0	1.4	0.0	0.0	0.0	0.0
I-J	13790.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
J-O	3450.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
K-I	2550.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
K-L	13950.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
L-J	2660.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
M-B	3200.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
M-N	3990.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
N-K	6970.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
O-F	3650.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
O-P	1770.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
P-F	2770.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
P-Y	4890.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
P-Y (alt)	5410.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
V-G1	5720.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Y-G1	8220.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
P-A1	1730.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
A1-B1	510.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
B1-C1	1960.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
C1-D1	1700.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
B1-D1	3100.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
D1-F1	5500.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
F1-G1	1600.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Y-F1	5460.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Y-V	1730.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
			0.2	0.2	0.0	0.0	0.0	0.0

(e) source: OHPO known archeology site database

(f) source: NHP and OHPO databases

(g) source: OHPO database; USGS topographic quadrangles, and field observation

TABLE 1 (CONTINUED)
RAW AND PROPORTIONAL SEGMENT DATA

SEGMENT			LAND USE										
End Nodes	Segment Length (mi)	Segment Length (ft)	Residence within 100 ft (h)	Residential Density per mile	Residence within 500 ft (h)	Residential Density per mile	Residence within 1,000 ft (h)	Residential Density per mile	Properties Crossed by Centerline (h)	Properties Crossed Per Mile	Institutional Land Uses within 100 ft (U)	Institutional Land Uses within 500 ft (U)	Institutional Per Mile
A-B	7130.0	1.4	3	2.2	22	16.3	36	26.7	14	10.4	0	0	0.0
A-M	890.0	0.2	0	0.0	4	23.7	13	77.1	1	5.9	0	0	0.0
B-C	1810.0	0.3	0	0.0	1	2.9	4	11.7	3	8.8	0	0	0.0
B-N	850.0	0.2	0	0.0	0	0.0	2	12.4	2	12.4	0	0	0.0
C-E	9420.0	1.8	0	0.0	2	1.1	12	6.7	11	6.2	0	0	0.0
C-I	7920.0	1.5	0	0.0	1	0.7	5	3.3	4	2.7	0	0	0.0
E-P	13790.0	2.6	0	0.0	3	1.1	17	6.8	7	4.9	0	0	0.0
F-V	3250.0	0.6	0	0.0	5	8.1	12	19.5	3	4.9	0	0	0.0
I-E	3800.0	0.7	0	0.0	6	8.3	27	37.5	9	12.5	0	0	0.0
I-J	13790.0	2.6	4	1.5	11	4.2	19	7.3	18	6.9	0	0	0.0
J-O	3450.0	0.7	0	0.0	3	4.6	5	7.7	5	7.7	0	0	0.0
K-I	2550.0	0.5	0	0.0	2	4.1	5	10.4	4	8.3	0	0	0.0
K-L	13950.0	2.6	0	0.0	10	3.8	35	13.2	13	4.0	0	0	0.0
L-J	2660.0	0.5	0	0.0	0	0.0	1	2.0	4	7.9	0	0	0.0
M-B	3200.0	0.6	0	0.0	0	0.0	4	6.6	3	5.0	0	0	0.0
M-N	3990.0	0.8	0	0.0	28	37.1	47	62.2	3	4.0	0	0	0.0
N-K	6970.0	1.3	0	0.0	1	0.8	7	5.3	4	3.0	0	0	0.0
O-F	3650.0	0.7	0	0.0	6	8.7	12	17.4	3	3.0	0	0	0.0
O-P	1770.0	0.3	1	3.0	2	6.0	2	6.0	1	3.0	0	0	0.0
P-F	2770.0	0.5	0	0.0	3	5.7	9	17.2	7	7.6	0	0	0.0
P-Y	4890.0	0.9	0	0.0	6	6.5	23	24.8	5	4.9	0	0	0.0
P-Y (alt)	5410.0	1.0	0	0.0	12	11.7	35	24.4	5	4.9	0	0	0.0
V-G1	5720.0	1.1	0	0.0	5	4.6	13	12.0	4	3.7	0	0	0.0
V-G1	8220.0	1.6	2	1.3	17	10.9	30	19.3	12	7.7	0	0	0.0
P-A1	1730.0	0.3	0	0.0	2	6.1	7	21.4	2	6.1	0	0	0.0
A1-B1	510.0	0.1	0	0.0	4	41.4	14	144.9	1	10.4	0	0	0.0
B1-C1	1960.0	0.4	4	10.8	18	48.5	25	67.3	5	13.5	0	0	0.0
C1-D1	1700.0	0.3	0	0.0	9	28.0	26	80.8	2	6.2	0	0	0.0
B1-D1	3100.0	0.6	5	8.5	23	39.2	32	54.5	6	10.2	0	0	0.0
D1-F1	5500.0	1.0	0	0.0	3	2.9	15	14.4	4	3.8	0	0	0.0
E1-G1	1600.0	0.3	0	0.0	2	9.9	8	26.4	2	6.6	0	0	0.0
Y-F1	5460.0	1.0	0	0.0	1	1.9	7	6.8	4	3.9	0	0	0.0
Y-V	1730.0	0.3	1	2.4	7	3.1	3	9.2	1	3.1	0	0	0.0
Std Deviation						13.3	12	30.4	4	3.0	0	0	0.0

(h) sources: plat maps, aerial photography, and field observation
(i) sources: Brown and Clement County plat maps
(j) includes schools, churches, hospitals and correctional facilities

TABLE 1 (CONTINUED)
RAW AND PROPORTIONAL SEGMENT DATA

SEGMENT			LAND USE									
End Nodes	Segment Length (mi)	Segment Length (mi)	Institutional Land Uses within 1,000 ft (i)	Institutional Per Mile	Sensitive Land Uses within 100 ft (k)	Sensitive Land Uses per mile	Sensitive Land Uses within 800 ft (k)	Sensitive Land Uses per mile	Sensitive Land Uses within 1,000 ft (k)	Sensitive Land Uses per mile	Route Length Corridor Adjacent to FTZ (i)	Percent of Route Corridor Adjacent to FTZ (i)
A-B	7,130	1.4	0	0.0	1	0.7	1	0.7	1	0.7	0	0.0
A-M	880	0.2	0	0.0	1	5.9	1	5.9	1	5.9	0	0.0
B-C	1,810	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
B-N	850	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
C-E	9,420	1.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
C-J	7,920	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E-P	13,790	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
F-V	3,250	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
F-Y	3,800	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
I-E	11,790	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
I-J	3,490	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
J-O	2,590	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
K-L	13,950	2.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
L-J	2,660	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
M-B	3,200	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
M-N	3,990	0.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
N-K	6,970	1.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
O-F	3,650	0.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
O-P	1,770	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
P-F	2,770	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
P-Y	4,890	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
P-Y (alt)	5,410.0	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
V-H	4,610	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Y-H	8,220	1.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
P-A1	1,730	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
A1-B1	510	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
B1-C1	1,960	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
C1-D1	1,700	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
B1-D1	3,100	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
D1-F1	5,500	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
F1-G1	1,600	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Y-F1	5,460	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Y-V	1,730	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Std Deviation				0.0	0	1.0	0	1.0	0	1.0	910.6	18.1

(i) includes schools, churches, hospitals and correctional facilities

(k) includes airports, parks, preserves and golf courses

(k) sources: Brown and Clermont County Auditors

(i) source: Brown County Department of Economic Development

TABLE 1 (CONTINUED)
RAW AND PROPORTIONAL SEGMENT DATA

SEGMENT			ENGINEERING					
End Nodes	Segment Length (ft)	Segment Length (mi)	Centerline Road Crossings (m)	Road Crossings per mile	Centerline Railroad Crossings (m)	Railroad Crossings per mile	Road Length Adjacent to ROW (ft)	ROW Length as percent of segment length
A-B	7130.0	1.4	1	0.7	0	0.0	7130	100.0
A-M	890.0	0.2	1	5.9	0	0.0	0	0.0
B-C	1810.0	0.3	2	5.8	1	2.9	0	0.0
B-N	850.0	0.2	0	0.0	0	0.0	850	100.0
C-E	9420.0	1.8	2	1.1	0	0.0	0	0.0
C-I	7920.0	1.5	1	0.7	0	0.0	7920	100.0
E-P	13790.0	2.6	3	1.1	0	0.0	0	0.0
F-V	3250.0	0.6	1	1.6	0	0.0	0	0.0
I-E	3800.0	0.7	2	2.8	0	0.0	0	0.0
I-J	13790.0	2.6	3	1.1	0	0.0	13790	100.0
J-O	3450.0	0.7	2	3.1	0	0.0	3450	100.0
K-I	2550.0	0.5	3	6.2	1	2.1	0	0.0
K-L	13950.0	2.6	4	1.5	1	0.0	13950	100.0
L-J	2660.0	0.5	1	2.9	0	0.0	2660	100.0
M-B	3200.0	0.6	0	0.0	0	0.0	0	0.0
M-N	3990.0	0.8	0	0.0	0	0.0	0	0.0
N-K	6970.0	1.3	0	0.0	0	0.0	6970	100.0
O-F	3650.0	0.7	0	0.0	0	0.0	0	0.0
O-P	1770.0	0.3	0	0.0	0	0.0	0	0.0
P-F	2770.0	0.5	0	0.0	0	0.0	0	0.0
P-Y	4890.0	0.9	2	2.2	0	0.0	1770	100.0
P-Y (alt)	5410.0	1.0	1	1.0	0	0.0	0	0.0
Y-GI	5720.0	1.1	1	0.9	0	0.0	1640	33.5
Y-GI	8220.0	1.6	2	1.3	0	0.0	1810	33.5
P-M	1730.0	0.3	0	0.0	0	0.0	620	10.8
AI-BI	510.0	0.1	0	0.0	0	0.0	4200	51.1
BI-CI	1960.0	0.4	0	0.0	0	0.0	1730	100.0
CI-DI	1700.0	0.3	0	0.0	0	0.0	510	30.0
BI-DI	3100.0	0.6	0	0.0	0	0.0	1430	73.0
DI-FI	5500.0	1.0	1	1.7	0	0.0	0	0.0
FI-GI	1600.0	0.3	2	1.9	0	0.0	3100	100.0
Y-FI	5460.0	1.0	0	0.0	0	0.0	730	45.6
Y-V	1730.0	0.3	0	0.0	0	0.0	0	0.0
Std Deviation			1	1.3	0	0.7	3717	46.1

(m) source: USGS topographic quadrangles, USGS digital orthophoto quadrangles and field observation
(n) ROW includes existing roads, rail tracks, transmission lines or pipelines

TABLE 2
SEGMENT SCORES

SEGMENTS			ECOLOGICAL			
End Nodes	Segment Length (ft)	Segment Length (mi)	Woodland Crossed by Centerline (a)(b)	NWI Wetland Crossed by Centerline (a)(b)	Stream Crossings (a)(b)	Endangered Species Records in Corridor (a)(c)
A-B	7,130	1.4	1	0	5	0
A-M	890	0.2	0	10	0	0
B-C	1,810	0.3	0	0	0	0
B-N	850	0.2	0	0	0	0
C-E	9,420	1.8	1	0	1	0
C-I	7,920	1.5	1	1	5	0
E-P	13,790	2.6	1	0	1	0
F-Y	3,250	0.6	1	0	0	0
I-E	3,800	0.7	1	1	1	0
I-J	13,790	2.6	10	1	1	0
I-Q	3,450	0.7	1	0	1	0
K-I	2,550	0.5	1	0	0	0
K-L	13,950	2.6	5	0	1	0
L-J	2,660	0.5	5	0	0	0
M-B	3,200	0.6	1	1	5	0
M-N	3,990	0.8	5	0	1	0
N-K	6,970	1.3	1	0	0	0
O-F	3,650	0.7	5	0	5	0
O-P	1,770	0.3	5	0	5	0
P-F	2,770	0.5	1	0	1	0
P-Y	4,890	0.9	1	0	1	0
P-Y (alt)	5,410	1.0	1	0	1	0
V-G1	5,720	1.1	1	0	0	0
Y-G1	8,220	1.6	1	0	1	0
P-A1	1,730	0.3	10	0	0	0
A1-B1	510	0.1	0	0	0	0
B1-C1	1,960	0.4	1	0	0	0
C1-D1	1,700	0.3	1	0	5	0
B1-D1	3,100	0.6	1	0	5	0
D1-F1	5,500	1.0	0	0	0	0
F1-G1	1,600	0.3	0	0	0	0
Y-F1	5,460	1.0	1	0	0	0
Y-V	1,730	0.3	1	0	5	0

(a) maximum score = 10, minimum score = 0

(b) scoring rationale: ≥ 3 standard deviations = score 10, >2 and <3 standard deviations, score 5, ≥ 1 and <2 standard deviations, score 1; 0, scored.

(c) scoring rationale: no record, score=0; one or more records, score=10

TABLE 2 (CONTINUED)
SEGMENT SCORES

SEGMENTS			CULTURAL		
End Nodes	Segment Length (ft)	Segment Length (mi)	Cultural Resource Records within 100 feet (a)(c)	NRHP within 100 feet (a)(c)	Cemeteries within 100 feet (a)(c)
A-B	7,130	1.4	0	0	0
A-M	890	0.2	0	0	0
B-C	1,810	0.3	0	0	0
B-N	850	0.2	0	0	0
C-E	9,420	1.8	0	0	0
C-I	7,920	1.5	0	0	0
E-P	13,790	2.6	0	0	0
F-V	3,250	0.6	0	0	0
I-E	3,800	0.7	10	0	0
I-J	13,790	2.6	0	0	0
I-O	3,450	0.7	0	0	0
K-I	2,550	0.5	0	0	0
K-L	13,950	2.6	0	0	0
L-J	2,660	0.5	0	0	0
M-B	3,200	0.6	0	0	0
M-N	3,990	0.8	0	0	0
N-K	6,970	1.3	0	0	0
O-F	3,650	0.7	0	0	0
O-P	1,770	0.3	0	0	0
P-F	2,770	0.5	0	0	0
P-Y	4,890	0.9	0	0	0
P-Y (alt)	5,410	1.0	0	0	0
V-G1	5,720	1.1	0	0	0
Y-G1	8,220	1.6	0	0	0
P-A1	1,730	0.3	0	0	0
A1-B1	510	0.1	0	0	0
B1-C1	1,960	0.4	0	0	0
C1-D1	1,700	0.3	0	0	0
B1-D1	3,100	0.6	0	0	0
D1-F1	5,500	1.0	0	0	0
F1-G1	1,600	0.3	0	0	0
Y-F1	5,460	1.0	0	0	0
Y-V	1,730	0.3	0	0	0

(a) maximum score = 10; minimum score = 0

(c) scoring rational: no record, score=0; one or more records, score=10

TABLE 2 (CONTINUED)
SEGMENT SCORES

SEGMENTS			LAND USE						
End Nodes	Segment Length (ft)	Segment Length (mi)	Residential Density within 100 feet (a)/(b)	Residential Density within 500 feet (a)/(b)	Residential Density within 1,000 feet (a)/(b)	Properties Crossed per mile by Centerline (a)/(b)	Institutional Land Uses within 100 feet (a)/(c)	Institutional Land Uses within 500 feet (a)/(c)	Institutional Land Uses within 1000 feet (a)/(c)
A-B	7,130	1.4	1	1	1	10	0	0	0
A-M	890	0.2	0	1	5	1	0	0	0
B-C	1,810	0.3	0	1	1	5	0	0	0
B-N	850	0.2	0	0	1	10	0	0	0
C-E	9,420	1.8	0	1	1	5	0	0	0
C-I	7,920	1.5	0	1	1	1	0	0	0
E-F	13,790	2.6	0	1	1	1	0	0	0
F-Y	3,250	0.6	0	1	1	1	0	0	0
I-E	3,800	0.7	0	1	1	10	0	0	0
I-J	13,790	2.6	1	1	1	5	0	0	0
J-O	3,450	0.7	0	1	1	5	0	0	0
K-I	2,550	0.5	0	1	1	5	0	0	0
K-L	13,950	2.6	0	1	1	1	0	0	0
L-J	2,660	0.5	0	0	1	5	0	0	0
M-B	3,200	0.6	0	0	1	1	0	0	0
M-N	3,990	0.8	0	5	5	1	0	0	0
N-K	6,970	1.3	0	1	1	1	0	0	0
O-F	3,650	0.7	0	1	1	1	0	0	0
O-P	1,770	0.3	1	1	1	1	0	0	0
P-F	2,770	0.5	0	1	1	5	0	0	0
P-Y	4,890	0.9	0	1	1	5	0	0	0
P-Y (alt)	5,410	1.0	0	1	1	1	0	0	0
V-G1	5,720	1.1	0	1	1	1	0	0	0
Y-G1	8,220	1.6	1	1	1	1	0	0	0
P-A1	1,730	0.3	0	1	1	5	0	0	0
A1-B1	510	0.1	0	10	10	5	0	0	0
B1-C1	1,960	0.4	10	10	5	10	0	0	0
C1-D1	1,700	0.3	0	5	5	5	0	0	0
B1-D1	3,100	0.6	10	5	1	10	0	0	0
D1-F1	5,500	1.0	0	1	1	1	0	0	0
F1-G1	1,600	0.3	0	1	1	5	0	0	0
Y-F1	5,460	1.0	0	1	1	1	0	0	0
Y-V	1,730	0.3	0	1	1	1	0	0	0

(a) maximum score = 10, minimum score = 0
(b) scoring rationale: ≥ 3 standard deviations = score 10, >2 and <3 standard deviations, score 5, ≥ 1 and <2 standard deviations, score 1; 0, scored.
(c) scoring rationale: no record, score=0; one or more records, score=10

TABLE 2 (CONTINUED)
SEGMENT SCORES

SEGMENTS			LAND USE CONTINUED			
End Nodes	Segment Length (ft)	Segment Length (mi)	Sensitive Land Uses within 100 feet (c)	Sensitive Land Uses within 500 feet (c)	Sensitive Land Uses within 1,000 feet (c)	Route Adjacent to or Crossing Foreign Trade Zone (c)
A-B	7,130	1.4	1	1	1	10
A-M	890	0.2	10	10	10	10
B-C	1,810	0.3	0	0	0	10
B-N	850	0.2	0	0	0	10
C-E	9,420	1.8	0	0	0	10
C-I	7,920	1.5	0	0	0	10
E-P	13,790	2.6	0	0	0	10
F-Y	3,250	0.6	0	0	0	10
I-E	3,800	0.7	0	0	0	10
I-J	13,790	2.6	0	0	0	0
J-O	3,450	0.7	0	0	0	10
K-I	2,550	0.5	0	0	0	10
K-L	13,950	2.6	0	0	0	0
L-J	2,660	0.5	0	0	0	0
M-B	3,200	0.6	0	0	0	10
M-N	3,990	0.8	0	0	0	10
N-K	6,970	1.3	0	0	0	10
O-F	3,650	0.7	0	0	0	10
O-P	1,770	0.3	0	0	0	10
P-F	2,770	0.5	0	0	0	10
P-Y	4,890	0.9	0	0	0	10
P-Y (alt)	5,410	1.0	0	0	0	10
V-G1	5,720	1.1	0	0	0	10
Y-G1	8,220	1.6	0	0	0	10
P-A1	1,730	0.3	0	0	0	10
A1-B1	510	0.1	0	0	0	10
B1-C1	1,960	0.4	0	0	0	10
C1-D1	1,700	0.3	0	0	0	10
B1-D1	3,100	0.6	0	0	0	10
D1-F1	5,500	1.0	0	0	0	10
F1-G1	1,600	0.3	0	0	0	10
Y-F1	5,460	1.0	0	0	0	10
Y-V	1,730	0.3	0	0	0	10

(a) maximum score = 10, minimum score = 0

(b) scoring rationale: ≥ 3 standard deviations = score 10, ≥ 2 and < 3 standard deviations, score 5, ≥ 1 and < 2 standard deviations, score 1; 0, score 0.

(c) scoring rationale: no record, score=0; one or more records, score=10

TABLE 2 (CONTINUED)
SEGMENT SCORES

SEGMENTS		ENGINEERING (d)		
End Nodes	Segment Length (ft)	Centerline Road Crossings (b)	Centerline Railroad Crossings (b)	Route Length Adjacent to ROW (ft) (f)
A-B	7,130	1	0	0
A-M	890	10	0	10
B-C	1,810	10	10	10
B-N	850	1	0	0
C-E	9,420	1	0	10
C-I	7,920	1	0	0
E-P	13,790	1	0	10
F-Y	3,250	1	0	10
I-E	3,800	1	0	10
I-J	13,790	1	0	0
I-O	3,450	1	0	0
K-I	2,550	10	5	10
K-L	13,950	1	0	0
L-J	2,660	1	5	0
M-B	3,200	1	0	10
M-N	3,990	1	0	10
N-K	6,970	1	0	0
O-F	3,650	1	0	10
O-P	1,770	1	0	0
P-F	2,770	1	0	10
P-Y	4,890	1	0	10
P-Y (alt)	5,410	1	0	10
V-G1	5,720	1	0	10
Y-G1	8,220	1	0	5
P-A1	1,730	1	0	0
A1-B1	510	1	0	0
B1-C1	1,960	1	0	5
C1-D1	1,700	1	0	10
B1-D1	3,100	1	0	0
D1-F1	5,500	1	0	10
F1-G1	1,600	1	0	10
Y-F1	5,460	1	0	10
Y-V	1,730	1	0	10

(a) maximum score = 10, minimum score = 0
(b) scoring rationale: ≥ 3 standard deviations = score 10, ≥ 2 and < 3 standard deviations, score 5, ≥ 1 and < 2 standard deviations, score 1; 0, score 0.
(c) scoring rationale: no record, score=0; one or more records, score=10
(d) length and turns scored on Table 2B

TABLE 2 (CONTINUED)
SEGMENT SCORES

SEGMENTS	AVERAGE CATEGORY SCORES			
	Ecological Score Total (a)	Cultural Total Score (a)	Land Use Score (a)	Engineering Total (a)
A-B	1.5	0.0	2.4	0.3
A-M	2.5	0.0	4.3	6.7
B-C	0.0	0.0	1.5	10
B-N	0.0	0.0	1.9	0.3
C-E	0.5	0.0	1.5	3.7
C-I	1.8	0.0	1.2	0.3
E-P	0.5	0.0	1.2	3.7
F-V	0.3	0.0	1.2	3.7
I-E	0.5	3.3	2.0	3.7
I-J	3.0	0.0	0.7	0.3
J-O	0.5	0.0	1.5	0.3
K-I	0.3	0.0	1.5	8.3
K-L	1.5	0.0	0.3	0.3
L-J	1.3	0.0	0.5	2
M-B	1.8	0.0	1.1	3.7
M-N	1.5	0.0	1.9	3.7
N-K	0.3	0.0	1.2	0.3
O-F	2.5	0.0	1.2	3.7
O-P	2.5	0.0	1.3	0.3
P-F	0.5	0.0	1.5	3.7
P-Y	0.5	0.0	1.5	3.7
P-Y (alt)	0.5	0.0	1.2	3.7
V-G1	0.3	0.0	1.2	3.7
Y-G1	0.5	0.0	1.6	2
P-A1	2.5	0.0	1.5	0.3
A1-B1	0.0	0.0	3.6	0.3
B1-C1	1.5	0.0	4.1	2
C1-D1	1.5	0.0	2.3	3.7
B1-D1	1.5	0.0	3.3	0.3
D1-F1	0.0	0.0	1.2	3.7
F1-G1	0.0	0.0	1.5	3.7
Y-F1	0.3	0.0	1.2	3.7
Y-V	1.5	0.0	1.2	3.7

(a) maximum score = 10, minimum score = 0

TABLE 3
ROUTE SCORING MATRIX[illegible]

TABLE 3
ROUTE SCORING MATRIX[illegible]

[illegible]

TABLE 3
ROUTE SCORING MATRIX

ROUTE 2	TOTAL LENGTH (km)	Urban (km)	Exurban Area	Central Area	Suburban Area	TOTAL EGGS
A-1	4.4	1.5	2.9	0.0	0.0	15.0
B-1	5.1	1.5	3.6	0.0	0.0	15.0
C-1	4.8	1.5	3.3	0.0	0.0	15.0
D-1	4.2	1.5	2.7	0.0	0.0	15.0
E-1	4.2	1.5	2.7	0.0	0.0	15.0
F-1	4.4	1.5	2.9	0.0	0.0	15.0
G-1	4.4	1.5	2.9	0.0	0.0	15.0
H-1	4.4	1.5	2.9	0.0	0.0	15.0
I-1	4.4	1.5	2.9	0.0	0.0	15.0
J-1	4.4	1.5	2.9	0.0	0.0	15.0
K-1	4.4	1.5	2.9	0.0	0.0	15.0
L-1	4.4	1.5	2.9	0.0	0.0	15.0
M-1	4.4	1.5	2.9	0.0	0.0	15.0
N-1	4.4	1.5	2.9	0.0	0.0	15.0
O-1	4.4	1.5	2.9	0.0	0.0	15.0
P-1	4.4	1.5	2.9	0.0	0.0	15.0
Q-1	4.4	1.5	2.9	0.0	0.0	15.0
R-1	4.4	1.5	2.9	0.0	0.0	15.0
S-1	4.4	1.5	2.9	0.0	0.0	15.0
T-1	4.4	1.5	2.9	0.0	0.0	15.0
U-1	4.4	1.5	2.9	0.0	0.0	15.0
V-1	4.4	1.5	2.9	0.0	0.0	15.0
W-1	4.4	1.5	2.9	0.0	0.0	15.0
X-1	4.4	1.5	2.9	0.0	0.0	15.0
Y-1	4.4	1.5	2.9	0.0	0.0	15.0
Z-1	4.4	1.5	2.9	0.0	0.0	15.0

ROUTE #	TOTAL LENGTH	Land Use Sum	Building Area	Canal Sum	Estimate Area	1974, \$/Acre
1	1.4	2.40	2	0.00	0.00	2
2	1.4	2.40	2	0.00	0.00	2
3	1.4	2.40	2	0.00	0.00	2
4	1.4	2.40	2	0.00	0.00	2
5	6.55	6.55	6.55	0.00	0.00	5
6	6.55	6.55	6.55	0.00	0.00	5
7	0.4	1.20	2.50	0.00	0.00	2
8	0.4	1.20	2.50	0.00	0.00	2
9	0.4	1.20	2.50	0.00	0.00	2
10	0.4	1.20	2.50	0.00	0.00	2
11	0.4	1.20	2.50	0.00	0.00	2
12	0.4	1.20	2.50	0.00	0.00	2
13	0.4	1.20	2.50	0.00	0.00	2
14	0.4	1.20	2.50	0.00	0.00	2
15	0.4	1.20	2.50	0.00	0.00	2
16	0.4	1.20	2.50	0.00	0.00	2
17	0.4	1.20	2.50	0.00	0.00	2
18	0.4	1.20	2.50	0.00	0.00	2
19	0.4	1.20	2.50	0.00	0.00	2
20	0.4	1.20	2.50	0.00	0.00	2
21	0.4	1.20	2.50	0.00	0.00	2
22	0.4	1.20	2.50	0.00	0.00	2
23	0.4	1.20	2.50	0.00	0.00	2
24	0.4	1.20	2.50	0.00	0.00	2
25	0.4	1.20	2.50	0.00	0.00	2
26	0.4	1.20	2.50	0.00	0.00	2
27	0.4	1.20	2.50	0.00	0.00	2
28	0.4	1.20	2.50	0.00	0.00	2
29	0.4	1.20	2.50	0.00	0.00	2
30	0.4	1.20	2.50	0.00	0.00	2
31	0.4	1.20	2.50	0.00	0.00	2
32	0.4	1.20	2.50	0.00	0.00	2
33	0.4	1.20	2.50	0.00	0.00	2
34	0.4	1.20	2.50	0.00	0.00	2
35	0.4	1.20	2.50	0.00	0.00	2
36	0.4	1.20	2.50	0.00	0.00	2
37	0.4	1.20	2.50	0.00	0.00	2
38	0.4	1.20	2.50	0.00	0.00	2
39	0.4	1.20	2.50	0.00	0.00	2
40	0.4	1.20	2.50	0.00	0.00	2
41	0.4	1.20	2.50	0.00	0.00	2
42	0.4	1.20	2.50	0.00	0.00	2
43	0.4	1.20	2.50	0.00	0.00	2
44	0.4	1.20	2.50	0.00	0.00	2
45	0.4	1.20	2.50	0.00	0.00	2
46	0.4	1.20	2.50	0.00	0.00	2
47	0.4	1.20	2.50	0.00	0.00	2
48	0.4	1.20	2.50	0.00	0.00	2
49	0.4	1.20	2.50	0.00	0.00	2
50	0.4	1.20	2.50	0.00	0.00	2
51	0.4	1.20	2.50	0.00	0.00	2
52	0.4	1.20	2.50	0.00	0.00	2
53	0.4	1.20	2.50	0.00	0.00	2
54	0.4	1.20	2.50	0.00	0.00	2
55	0.4	1.20	2.50	0.00	0.00	2
56	0.4	1.20	2.50	0.00	0.00	2
57	0.4	1.20	2.50	0.00	0.00	2
58	0.4	1.20	2.50	0.00	0.00	2
59	0.4	1.20	2.50	0.00	0.00	2
60	0.4	1.20	2.50	0.00	0.00	2
61	0.4	1.20	2.50	0.00	0.00	2
62	0.4	1.20	2.50	0.00	0.00	2
63	0.4	1.20	2.50	0.00	0.00	2
64	0.4	1.20	2.50	0.00	0.00	2
65	0.4	1.20	2.50	0.00	0.00	2
66	0.4	1.20	2.50	0.00	0.00	2
67	0.4	1.20	2.50	0.00	0.00	2
68	0.4	1.20	2.50	0.00	0.00	2
69	0.4	1.20	2.50	0.00	0.00	2
70	0.4	1.20	2.50	0.00	0.00	2
71	0.4	1.20	2.50	0.00	0.00	2
72	0.4	1.20	2.50	0.00	0.00	2
73	0.4	1.20	2.50	0.00	0.00	2
74	0.4	1.20	2.50	0.00	0.00	2
75	0.4	1.20	2.50	0.00	0.00	2
76	0.4	1.20	2.50	0.00	0.00	2
77	0.4	1.20	2.50	0.00	0.00	2
78	0.4	1.20	2.50	0.00	0.00	2
79	0.4	1.20	2.50	0.00	0.00	2
80	0.4	1.20	2.50	0.00	0.00	2
81	0.4	1.20	2.50	0.00	0.00	2
82	0.4	1.20	2.50	0.00	0.00	2
83	0.4	1.20	2.50	0.00	0.00	2
84	0.4	1.20	2.50	0.00	0.00	2
85	0.4	1.20	2.50	0.00	0.00	2
86	0.4	1.20	2.50	0.00	0.00	2
87	0.4	1.20	2.50	0.00	0.00	2
88	0.4	1.20	2.50	0.00	0.00	2
89	0.4	1.20	2.50	0.00	0.00	2
90	0.4	1.20	2.50	0.00	0.00	2
91	0.4	1.20	2.50	0.00	0.00	2
92	0.4	1.20	2.50	0.00	0.00	2
93	0.4	1.20	2.50	0.00	0.00	2
94	0.4	1.20	2.50	0.00	0.00	2
95	0.4	1.20	2.50	0.00	0.00	2
96	0.4	1.20	2.50	0.00	0.00	2
97	0.4	1.20	2.50	0.00	0.00	2
98	0.4	1.20	2.50	0.00	0.00	2
99	0.4	1.20	2.50	0.00	0.00	2
100	0.4	1.20	2.50	0.00	0.00	2

TABLE 4
FINAL ROUTE SCORES (RANKED ACCORDING TO FINAL SCORE)

Route	Route Length	Land Use	Ecological	Cultural	Environmental Subtotal	Engineering	Final Score	Notes
1	8.98	1.36	0.96	0.00	2.31	1.06	3.37	Railroad
2	9.19	1.34	0.89	0.00	2.23	1.32	3.55	Railroad
72	9.33	1.30	0.84	0.00	2.14	1.49	3.63	Railroad
70	9.32	1.68	0.97	0.00	2.65	1.01	3.66	Railroad
71	9.23	1.33	0.84	0.00	2.17	1.49	3.66	Railroad
3	9.30	1.34	1.01	0.00	2.35	1.32	3.67	Railroad
4	9.02	1.31	0.93	0.00	2.24	1.43	3.68	Railroad
69	9.43	1.79	1.01	0.00	2.80	1.35	4.15	Railroad
35	8.92	1.49	0.82	0.00	2.31	1.94	4.26	Rail & SR32
36	9.14	1.46	0.77	0.00	2.23	2.12	4.35	Rail & SR32
37	9.25	1.46	0.89	0.00	2.35	2.12	4.47	Rail & SR32
38	8.97	1.44	0.80	0.00	2.24	2.32	4.57	Rail & SR32
5	8.40	1.52	1.14	0.00	2.66	1.96	4.62	Railroad
6	8.61	1.49	1.06	0.00	2.55	2.12	4.67	Railroad
7	8.33	1.49	1.17	0.00	2.66	2.12	4.78	Railroad
13	8.80	1.44	1.08	0.00	2.51	2.36	4.88	SR32
8	8.45	1.48	1.12	0.00	2.60	2.30	4.90	Railroad
14	9.02	1.41	0.99	0.00	2.40	2.51	4.91	SR32
47	8.35	1.69	0.76	0.48	2.92	2.00	4.92	SR32 & X Country
9	8.39	1.57	1.23	0.00	2.80	2.14	4.94	Railroad
48	8.57	1.63	0.70	0.42	2.74	2.21	4.95	SR32 & X Country
10	8.60	1.53	1.14	0.00	2.67	2.30	4.97	Railroad
15	9.13	1.41	1.12	0.00	2.53	2.51	5.04	SR32
11	8.72	1.53	1.26	0.00	2.79	2.30	5.09	Railroad
49	8.68	1.63	0.85	0.42	2.89	2.21	5.10	SR32 & X Country
16	8.85	1.39	1.05	0.00	2.44	2.79	5.23	SR32
12	8.43	1.52	1.21	0.00	2.73	2.52	5.26	Railroad
60	8.34	1.63	0.49	0.42	2.53	2.79	5.32	Rail & X Country
58	8.87	1.61	0.49	0.37	2.47	2.89	5.36	Rail & X Country
57	8.66	1.66	0.51	0.42	2.59	2.79	5.38	Rail & X Country
40	8.56	1.60	0.95	0.00	2.55	2.85	5.40	Rail & SR32
39	8.35	1.64	1.02	0.00	2.66	2.76	5.42	Rail & SR32
59	8.98	1.61	0.62	0.37	2.60	2.89	5.49	Rail & X Country
41	8.68	1.60	1.06	0.00	2.66	2.85	5.51	Rail & SR32
42	8.39	1.60	1.00	0.00	2.60	3.10	5.70	SR32 & X Country
22	8.75	1.67	1.04	0.00	2.71	3.00	5.71	X Country
21	8.54	1.72	1.11	0.00	2.83	2.93	5.76	X Country
44	8.55	1.65	1.02	0.00	2.67	3.10	5.77	SR32 & X Country
23	8.87	1.67	1.15	0.00	2.82	3.00	5.82	X Country
43	8.34	1.70	1.10	0.00	2.80	3.03	5.83	SR32 & X Country
45	8.66	1.65	1.14	0.00	2.79	3.10	5.89	SR32 & X Country
28	8.81	1.49	1.04	0.00	2.53	3.43	5.95	X Country
26	8.31	1.56	0.54	0.00	2.10	3.87	5.97	X Country
18	8.44	1.57	1.17	0.00	2.74	3.27	6.01	SR32
73	8.68	1.97	1.22	0.00	3.19	2.85	6.04	SR32
24	8.58	1.68	1.09	0.00	2.77	3.27	6.04	X Country
17	8.23	1.61	1.27	0.00	2.88	3.22	6.10	SR32
25	8.10	1.62	0.58	0.00	2.20	3.90	6.10	X Country
19	8.55	1.57	1.29	0.00	2.86	3.27	6.13	SR32
27	8.43	1.56	0.71	0.00	2.27	3.87	6.14	X Country
46	8.38	1.66	1.08	0.00	2.73	3.41	6.14	SR32 & X Country
20	8.27	1.57	1.24	0.00	2.81	3.60	6.41	X Country
64	7.77	1.78	0.74	0.37	2.89	3.60	6.49	Rail & X Country
63	8.41	1.75	0.84	0.33	2.92	3.61	6.53	Rail & X Country
61	8.08	1.81	0.77	0.37	2.95	3.60	6.55	Rail & X Country
62	7.21	1.77	0.74	0.37	2.88	3.79	6.67	Rail & X Country
33	8.05	1.84	0.70	0.00	2.54	4.17	6.71	Rail & SR32
56	8.81	1.77	0.87	0.30	2.95	3.77	6.72	SR32 & X Country
54	8.48	1.83	0.81	0.33	2.97	3.78	6.75	SR32 & X Country
34	8.16	1.84	0.83	0.00	2.68	4.17	6.84	Rail & SR32
55	8.60	1.83	0.93	0.33	3.09	3.78	6.87	SR32 & X Country
32	7.83	1.93	0.75	0.00	2.68	4.23	6.90	Rail & SR32
53	8.27	1.90	0.87	0.37	3.14	3.79	6.93	SR32 & X Country
66	8.28	1.82	0.77	0.37	2.96	3.98	6.94	Rail & X Country
67	8.40	1.82	0.90	0.37	3.09	3.98	7.07	Rail & X Country
68	7.76	1.86	0.80	0.42	3.08	4.01	7.09	Rail & X Country
65	8.07	1.90	0.83	0.42	3.14	4.01	7.15	Rail & X Country
51	8.17	1.73	0.93	0.37	3.04	4.17	7.20	SR32 & X Country
30	7.74	1.74	0.83	0.00	2.56	4.65	7.21	Rail & SR32
52	8.29	1.73	1.07	0.37	3.17	4.17	7.34	SR32 & X Country
31	7.85	1.74	0.98	0.00	2.71	4.65	7.36	Rail & SR32
50	7.96	1.80	1.01	0.42	3.23	4.23	7.45	SR32 & X Country
29	7.52	1.81	0.90	0.00	2.71	4.79	7.50	X Country

* note: lower final score = more favorable route; max score = 10, minimum score = 1



LEGEND:

- Potential Route Segment
- Route Node
- Commercial Structure
- Residential Structure
- Known Archaeology Site
- Existing Transmission Lines
- Recreational
- Institutional
- Cemetery
- Preferred Hillcrest Substation
- Alternate Hillcrest Substation
- CG&E Eastwood Substation
- South Central Power Eastwood Substation
- Foreign Trade Zone
- Endangered/Threatened Species Location
- NWI Wetland
- Agricultural District Land



Base Map Source:
USGS 7.5' Topographic Quadrangles,
Williamsburg, Ohio 1988 (photorevised 1986),
Mount Orab, Ohio 1960 (photorevised 1982) and
Sardinia, Ohio 1961 (photorevised 1986).

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Hillcrest-Eastwood 138kV
Electric Transmission Line



LEGEND:

—	Potential Route Segment
●	Route Node
•	Commercial Structure
•	Residential Structure
▲	Known Archaeology Site
- - -	Existing Transmission Lines
[Stippled Box]	Recreational
[Dotted Box]	Institutional
[Cross-hatched Box]	Cemetery
[White Box]	Preferred Hillcrest Substation
[White Box]	Alternate Hillcrest Substation
[Diagonal Lines Box]	CG&E Eastwood Substation
▲	South Central Power Eastwood Substation
[Horizontal Lines Box]	Foreign Trade Zone
[Solid Black Box]	Endangered/Threatened Species Location
[Wavy Lines Box]	NWI Wetland
[Cross-hatched Box]	Agricultural District Land

0 1,500 3,000

Scale in Feet

Base Map Source:
 USGS 7.5' Topographic Quadrangles,
 Williamsburg, Ohio 1988 (photorevised 1986),
 Mount Orab, Ohio 1960 (photorevised 1982) and
 Sardinia, Ohio 1961 (photorevised 1986).



— Preferred Route
 — Alternate Route
 — Preferred and Alternate Routes

■ Route Node
 • Commercial Structure
 • Residential Structure
 ▲ Known Archaeology Site

--- Existing Transmission Lines

[Pattern] Recreational
 [Pattern] Institutional
 [Pattern] Cemetery

[Pattern] Preferred Hillcrest Substation
 [Pattern] Alternate Hillcrest Substation
 [Pattern] CG&E's Eastwood Substation

▲ South Central Power Eastwood Substation

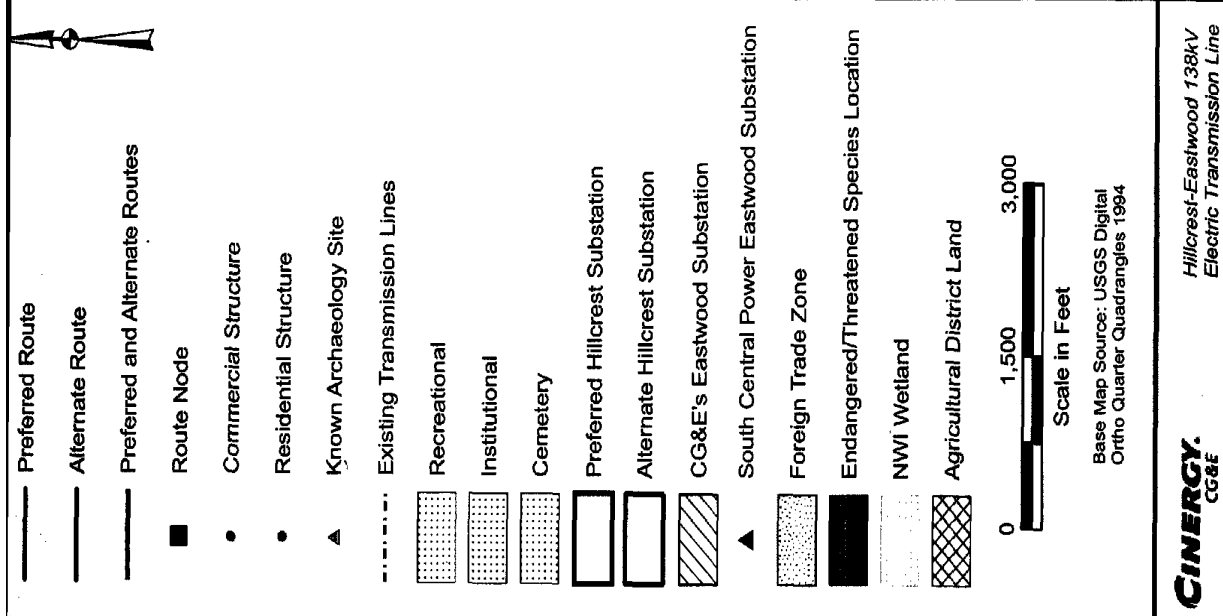
[Pattern] Foreign Trade Zone
 [Pattern] Endangered/Threatened Species Location
 [Pattern] NWI Wetland
 [Pattern] Agricultural District Land

0 1,500 3,000
 Scale in Feet

Base Map Source: USGS Digital
 Ortho Quarter Quadrangles 1994

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Hillcrest-Eastwood 138kV
 Electric Transmission Line



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 CG&E

Hillcrest-Eastwood 138kV
 Electric Transmission Line

APPENDIX A

PUBLIC INFORMATION

Hillcrest/Eastwood Transmission Line - Substation and Power Line Construction Project



OPEN HOUSE

5:00 p.m. – 8:00 p.m.,

Tuesday, December 7, 2004

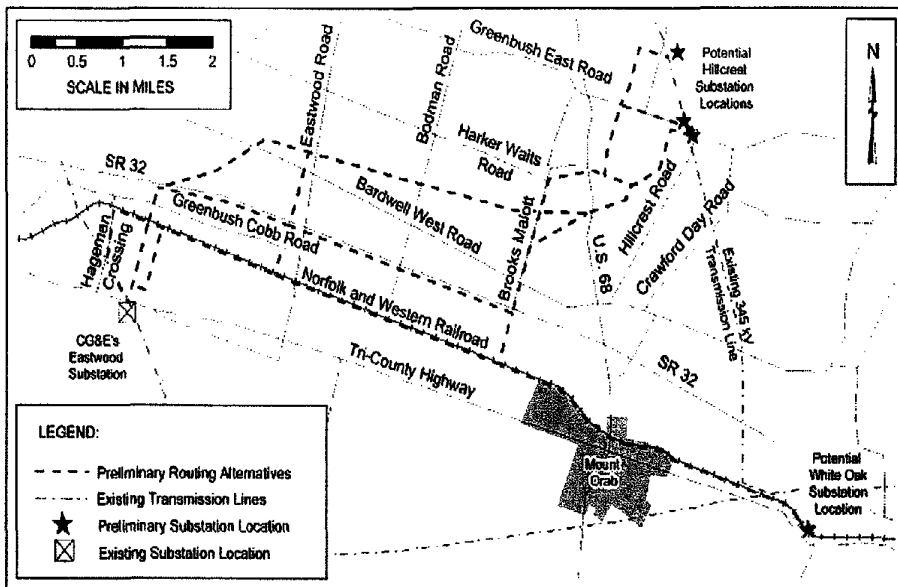
Western Brown High School

476 West Main Street in Mt. Orab

Cincinnati Gas & Electric would like to invite you to an open house to discuss the proposed new substation and electric transmission line in western Brown County and eastern Clermont County. The exact route will not be determined until after this open house because CG&E wants to listen to citizen concerns and questions.

Company representatives will be present throughout the evening to answer questions about transmission line route options, the environmental assessment process, construction schedule, engineering considerations, property easements, and other topics. You can arrive at any time during the open house; there will be no formal presentation.

Proposed Routes Hillcrest - Eastwood Electric Transmission Line



History

The proposed substation and transmission line are necessary to maintain reliable service to customers within the eastern part of the CG&E system. Rapid growth of residential developments and businesses is expected to continue, and the demand for electricity will result in reduced reliability if steps are not taken to provide a new source of power. CG&E has made improvements to substations, distribution lines, and other system components over the years, but such efforts can no longer meet the expected demand for electric service in this area.

Computer modeling of the CG&E system shows that the proposed substation and transmission line are the best options for meeting the projected demand.

CG&E and its consultants have assembled information that documents the environmental conditions, cost, engineering feasibility, and other features for the substation and power line routes. This information will be compiled into an application for a construction certificate that will be submitted to the Ohio Power Siting Board in 2005. Construction could begin in late 2006.

Acquiring Easements

Easements are legal agreements that grant CG&E access to property to construct and maintain power lines within the area called a right-of-way. CG&E will contact property owners where easements are needed and will negotiate with each property owner to reach agreement on the compensation to be paid for granting each easement. Easement fees are negotiated at fair market rates, depending on the acreage and location of the easement.

Property owners maintain ownership of the property subject to the rights granted to CG&E. CG&E will remove trees and tall shrubs from various widths of the right-of-way, which is a part of the easement signed with the property owner and filed in the appropriate county court house.

Property Restoration

Where construction crews need to cross property, it is likely that a certain amount of grass, agricultural field, and/or landscaping will be damaged to some extent. CG&E will repair such damage at the company's expense before the project is complete. Any property disturbed by construction of the power line will be restored to its original condition or better. A videotape of the power line route will be taken before construction begins and will be used to guide restoration.

After the power line has been constructed, owners can use their property as before, with a few exceptions. Large permanent structures such as homes, garages, and swimming pools are not allowed in the easement area because CG&E needs to maintain clear access to this area for vegetation maintenance and any future power line work. Species of property restoration will be discussed during easement negotiations.

Project Schedule

- ▲ **Summer 2004** Substation land purchased
- ▲ **Fall 2004** Public Information Open House (Advertised in newspapers)
- ▲ **Winter 2004-05** Certificate application filed with the Ohio Power Siting Board
- ▲ **Spring 2005** Local Public Hearing and Adjudicatory Hearing as part of the Ohio Power Siting Board process (Advertised in newspapers.)
- ▲ **Summer 2005** Certificate received, detailed surveys and engineering, easements obtained
- ▲ **Winter 2006** Construction begins, with land restoration following
- ▲ **Summer 2008** Line in service, final land restoration

Summary

CG&E is committed to providing its customers with a reliable supply of electricity for home, business, and industrial uses. The Hillcrest-Eastwood Line will preserve the existing system's reliability and meet the needs of additional customers far into the future. This power line is just one of many steps CG&E is taking to make sure the electric transmission system remains safe and dependable. For more information about the Hillcrest-Eastwood electric transmission line project, please contact:

For easement and land rights questions:
Mark Kline at 513-287-4004 or
mkline@cinergy.com

For engineering or construction questions:
Michael Clodfelder at 513-287-1721 or
mclodfelder@cinergy.com

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Hillcrest - Eastwood Transmission Line

Substation and Power Line Construction Project



CG&E's Eastwood Substation.

DRAFT 9/21/04

Project Summary

Population growth and commercial development in CG&E's eastern service territory have led to increased use of electricity. Detailed studies show the company must construct a new electric transmission line and associated substation in Brown County to maintain reliable service in this part of its system. The new transmission line will be named the Hillcrest-Eastwood Line.

The Hillcrest-Eastwood Line will begin at a substation to be built near the intersection of Greenbush East and Hillcrest Roads, near where the existing transmission line crosses the roads, and end at CG&E's existing Eastwood Substation on Tri-County Highway in Clermont County.

CG&E and its consultants are assembling information that documents the environmental conditions, cost, engineering feasibility, and other features for the substation and power line routes. This information will be compiled into an application for a construction certificate that will be issued by the Ohio Power Siting Board (OPSB). Assuming timely approval, construction will begin at the end of 2006. The target date for the line to begin service is summer 2008.

Transmission Line Facts

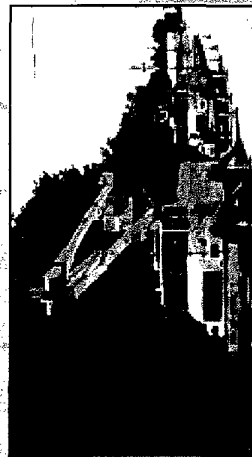
Line Voltage:	138,000 volts
Substation:	7-10 acres
Line Length:	Approx. 7 miles
Support Structures:	Steel and wood poles
Height of Structures:	50-100 feet
Distance between Structures:	100-500 feet

Power Line Safety

Over the past few decades there has been discussion that exposure to power lines can cause adverse health effects. Power lines create electric and magnetic fields (EMF), which are invisible lines of force that surround electrical devices. Every electrical device, whether household appliance or wiring, industrial motor, or electric line, produces EMF.

Scientists from government agencies and universities in almost every industrialized country have conducted extensive research on this topic and found there is no cause and effect relationship between EMF and diseases. There is a small amount of evidence that exposures may present a leukemia hazard, but this evidence is not strong enough to warrant concern from regulatory agencies. Scientists generally agree that if there is any health risk, it is apparently a very small risk and affects a very small portion of the population. There are no government standards for exposures to EMF because there is so little evidence of any harm.

For more information about EMF, you can visit Cinergy's website at: www.cinergy.com/environment.



Typical CG&E powerline service trucks

Construction Sequence

Before any work begins, the new portion of the line must be surveyed. In addition to a land survey, a survey from a helicopter or plane may be performed. Vegetation will be cleared in the easement as necessary to facilitate the land survey.

When construction begins, area residents can expect to see typical power line service trucks in addition to some heavy equipment. Existing access roads and private roads will be used whenever possible. Property owners will be contacted prior to using private roads. Construction will generally follow this sequence:

- ▲ **Clear for Construction:** Once the line route has been marked, the easement will be cleared where needed to facilitate construction and maintain required clearances.
 - ▲ **Construction:** Pole structures and equipment will be delivered to the job site. Holes will be augured into the earth where poles will be set. Then, the hole will be backfilled and compacted. If steel poles/structures are used, foundations may need to be installed. Insulators will be installed on the poles and the conductors (wires) will be pulled onto and clamped to the insulators.
 - ▲ **Energizing Conductors:** CG&E will conduct testing on the line prior to it being placed in service.
 - ▲ **Property Restoration:** CG&E will restore all property disturbed by the construction.
- Once the line is in service, CG&E will regularly inspect the line and provide maintenance as needed. A tree trimming schedule will be established to keep trees from growing up under the line.

Hillcrest/Eastwood Transmission Line - Substation and Power Line Construction Project



OPEN HOUSE

5:00 p.m. – 8:00 p.m.,
Tuesday, December 7, 2004
Western Brown High School
476 West Main Street in Mt. Orab

Cincinnati Gas & Electric would like to invite you to an open house to discuss the proposed new substation and electric transmission line in western Brown County and extreme eastern Clermont County. The exact route will not be determined until after this open house because we want to listen to citizen concerns and questions.

CG&E staff members will be present throughout the evening to answer questions about transmission line route options, the environmental assessment process, construction schedule, engineering considerations, property easements, and other topics. You can arrive at any time during the open house; there will be no formal presentation.

Proposed Routes Hillcrest - Eastwood Electric Transmission Line



History

Population growth and commercial development in CG&E's eastern service territory have led to increased use of electricity. Detailed studies show the company must construct a new electric transmission line and associated substation in Brown County to maintain reliable service in this part of its system. The new transmission line will be named the Hillcrest-Eastwood Line.

The Hillcrest-Eastwood Line will begin at a substation to be built near the intersection of Greenbush East and Hillcrest Roads, near where the existing transmission line crosses the

roads, and end at CG&E's existing Eastwood Substation on Tri-County Highway in Clermont County.

CG&E and its consultants have assembled information that documents the environmental conditions, cost, engineering feasibility, and other features for the substation and power line routes. This information will be compiled into an application for a construction certificate that will be submitted to the Ohio Power Siting Board. Assuming timely approval, construction will begin at the end of 2006. The target date for the line to begin service is summer 2008.

**Cinergy Stakeholder List
Hillcrest - Eastwood
138 kV Transmission Line**

Contact	Community/ Organization	Title	Phone Number	Address	City	ST	Zip
Brown County							
James Beasley	Brown County	Engineer	937-378-6456	325 W. State St.	Georgetown	OH	45121
Dale Reynolds	Brown County	Commissioner	937-378-3956	800 Mt. Orab Pike	Georgetown	OH	45121
Kirby Cornett	Brown County	Commissioner	937-378-3956	800 Mt. Orab Pike	Georgetown	OH	45121
Perry Ogden	Brown County	Commissioner	937-378-3956	800 Mt. Orab Pike	Georgetown	OH	45121
Kelly Cole	Brown County	Economic Development	937-378-3536	P.O. Box 329	Georgetown	OH	45121
Green Township (Hillcrest/Greenbush area)							
Gary Frye	Green Township	Trustee	937-444-3400	6303 Harrison Ave. (Township office)	Cincinnati	OH	45247
Emery Holden	Green Township	Trustee	937-444-2849	17380 Dietrick Rd (Home)	Mt. Orab	OH	45154
Doug Williams	Green Township	Trustee	937-444-3215	4073 Bard Well Buford Rd (Home)	Mt. Orab	OH	45154
Pike Township (Mt. Orab area)							
Jay Anderson	Pike Township	Trustee	937-444-7195	14102 New Harmony Salem Rd (Home)	Mt. Orab	OH	45154
Roger Griffith	Pike Township	Trustee	937-444-6228	13015 Lake Grant Rd (Home)	Bethel	OH	45106
David Henderson	Pike Township	Trustee	937-444-2775	Oakland Locust Ridge (Home)	Mt. Orab	OH	45154
Mt. Orab							
Brian Mount	City of Mt. Orab	Police Chief	937-444-2281	100 N. High St.	Mt. Orab	OH	45154
Lisa Reeves	City of Mt. Orab	Fire Chief	937-444-3945		Mt. Orab	OH	45154
Bruce Lunsford	City of Mt. Orab	Mayor	937-444-2692	100 N. High St.	Mt. Orab	OH	45154
Mike Spitznagel	City of Mt. Orab	Utilities	937-444-4141	100 N. High St.	Mt. Orab	OH	45154
			937-444-4031 (Home)				
Mike Boyd	Mt. Orab City Council	Clerk	937-444-2692 (City)	100 N. High St. (City)	Mt. Orab	OH	45154

**Cinergy Stakeholder List
Hillcrest - Eastwood
138 kV Transmission Line**

Contact	Community/ Organization	Title	Phone Number	Address	City	ST	Zip
Joe Howser	Mt. Orab City Council	President	937-444-2476 (Home) 937-444-2692 (City)	477 W. Main St (Home)	Mt. Orab	OH	45154
Kenny Sheffield	Mt. Orab City Council	Council Member	937-444-2692 (City)	100 N. High St. (City)	Mt. Orab	OH	45154
Joyce Wilson	Mt. Orab City Council	Council Member	937-444-2613 (Home) 937-444-2692 (City)	107 Red Bud Ln (Home)	Mt. Orab	OH	45154
Hermie Scott	Mt. Orab City Council	Council Member	937-444-3571 (Home) 937-444-2692 (Cell)	107 W. Point Pl (Home)	Mt. Orab	OH	45154
Dave Brenner	Mt. Orab City Council	Council Member	937-444-3334 (Home) 937-444-2692 (Cell)	408 Castle Ave (Home)	Mt. Orab	OH	45154
Fred Hanson	Mt. Orab City Council	Council Member	937-444-3909 (Home) 937-444-2692 (Cell)	126 Windfield Ter (Home)	Mt. Orab	OH	45154
Williamsburg Township (Clermont County)							
James W. Taylor	Williamsburg Township	Trustee President	513-724-3368	PO Box 499	Williamsburg	OH	45176
James F. Danbury	Williamsburg Township	Trustee VP	513-724-7852	PO Box 499	Williamsburg	OH	45176
Barl Henning	Williamsburg Township	Trustee	513-724-2994	PO Box 499	Williamsburg	OH	45176
Gregory W. Carson	Williamsburg Township	Clerk	513-724-8333	PO Box 499	Williamsburg	OH	45176
Richard Mallott	Williamsburg Township	Fire Chief	513-724-7744	915 West Main St.	Williamsburg	OH	45176
Large Landowners/Organizations							
Alma Monk	Sterling Township	owns Daydrem Manor & Senico Products	513-724-2246	1567 Tri-County Highway	Williamsburg	OH	45176
Mrs. Ward McDonald	Williamsburg Township	NW of Eastwood Station	513-724-2816	4042 Hagemans Crossing Rd.	Williamsburg	OH	45176
Bible Baptist Church Pastor Charles Smith	Sterling Township	800 parsoners, new church camp SE of Eastwood Station	937-444-2493	PO Box 336	Mt. Orab	OH	45154
Richard (Dick) Howser	Green Township	3,500 acres W of Hillcrest Station		xxxx Driver Collins Rd.	Mt. Orab	OH	45154
Floyd Newberry Survey completed.	Mt. Orab Lion's Club	President	937-446-3349	24 Wagon Wheel Cir (Home)	Sardinia	OH	45171

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

1 How familiar are you with Cinergy?

Answer categories # of responses	Very Familiar 8	Familiar 7	Somewhat Familiar 2	Somewhat Unfamiliar 2	Not familiar at all

2 On a scale of 1 to 5, how would you rate Cinergy's reputation as a provider of electricity, where 5 is very good and 1 is very poor?

Answer categories # of responses	5 (Very good) 7	4 4	3 4	2 2	1 (Very poor)

3 How would you rate Cinergy on the delivery of electricity, where 5 is very safe/ environmentally friendly and 1 is very unsafe/ environmentally unfriendly?

Answer categories # of responses	5 (Very safe/friendly) 6	4 9	3 3	2 2	1 (Very poor)

*Two people were unsure.

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

Comments:	Are there any areas for improvement?
	<p>Cinergy's cooperation with Pike Township has been absolutely horrible when we ask them to move a line back so we can widen a road. We have to go through hoops to get approval to widen a road and sometimes we get state grants to do so and Cinergy is so difficult to work with. This has happened numerous times. On Meeker Road, we tried for 6 years to get them to move their poles. South Central moves its poles immediately when we make a request. On Maple Grove Road, half the poles were Cinergy's and half were South Central's. South Central was cooperative and Cinergy took forever to move its poles. When they finally did, they left the old poles just laying in a ditch. Eventually people took them and used them for firewood. Cinergy said they were the telephone company's poles, they always have an excuse!</p> <p>Cinergy's utility poles located in the center of ROWs cause trouble and Cinergy is not very cooperative when we've requested that the poles be moved to the back side of the ROW.</p> <p>Cinergy is not always real responsive when it comes to moving lines for roadway expansion. South Central is much more cooperative.</p> <p>I ranked them low as a provider of electricity because lately we've been losing power during storms. We need the new substation to keep the power running. Anytime we lose power, Cinergy gets it back on quickly but it's still devastating when you're trying to operate a water plant.</p> <p>Cost. I sold farmland for a subdivision at 5 Mile Creek Estates and had to get PUCO approval for Cinergy to bury the line. It was very expensive to have the line buried. I thought I was helping Cinergy by requesting that the line be buried.</p> <p>Keep the rates reasonable./ The rates are too high. (3 responses)</p> <p>Cinergy can improve service and upkeep of lines. We have lines from several utility companies around here. When we call Cinergy to come out and trim trees near power lines, they only trim the slightest bit instead of cutting them back more so they don't grow against the power line again the next year.</p> <p>Improve response time in relation to power outages. (2 responses)</p> <p>Cinergy needs to trim trees more often on overhead lines.</p> <p>Decrease the number of outages. Georgetown's recent power surges caused problems and some people lost small appliances.</p> <p>Cinergy has always been careful about keeping animals away from power lines, but I know squirrels get fried from time to time.</p>

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

4 How aware are you of current electric line capacity and the impact of future load growth on those lines?

Very Aware	Somewhat Aware	Somewhat Unaware	Not At All Aware
3	7	1	6

5 How safe do you think power lines are?

Very Safe	Somewhat Safe	Somewhat Unsafe	Not At All Safe	Don't Know
9	7			1

Why or why not?

They are safer in the air than in the ground.

Not sure about EMF risks.

Sometimes the lines fail.

Very safe if you're living around them, not at all safe if you're touching them.

Don't really hear of accidents when poles are set back from the road where they ought to be.

I have high-tension lines going across my property and everything has been fine.

19,500 volt lines are unsafe on McEwen Pike. This new pole was set in the middle of a ditch, 3 feet away from the road when it should have been 16 feet.

Comments:

6 Will the people in your community be for, against, or indifferent about a new substation and added power lines in your area?

For	Against	Indifferent	Mixed Opinion
10		5	2

Comments:

A new line would take care of the system instability and reduce the number of outages. (4 responses)

My only concern would be if this line were to run too close to homes. (3 responses)

Mt. Orab sees the growth coming. Growth requires added infrastructure and power. (3 responses)

Some people will be concerned that if you bring in the new lines and more power, you will invite more sprawl. That goes hand in hand, but it is inevitable that growth will happen. There is nothing we can do about it. Even the farmers need a lot of electricity during grain drying season.

You'll probably have 50% of the population for and 50% against the line. People don't like change. If Cinergy plans to put up a whole new set of poles, then it would be a big deal.

It probably won't affect our township too much.

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

7

Concerns:

What concerns would you have, if any, if this new electric transmission line were to run along the road, through farmland, along the railroad, or near houses in your area?

A hospital (w/medical buildings) is looking to locate in Mt. Orab behind the new Kroger's. It would be visible from Route 32. A new road may be built from behind Kroger's to Brooks Malott Rd. The Mt. Orab Port Authority has the option to buy the road frontage on the west side of Brooks Malott, near the intersection of Route 32, all the way south to the railroad and maybe as far west as half way to Bodman Road. Mayor Lunsford should be able to give you more information about this, especially the business and public's point of view regarding whether a new line would enhance or slow the growth.

If they are placed on roads, they need to be set 16 feet off the road. Cinergy keeps building them too close and people can run into them.

People will be against it if it goes through their yard. Obtaining ROW could be difficult.

Only problems with power lines is being directly underneath them, but I expect that. That is the price of getting the power.

EMF/health related concerns. (2 responses)

There will be citizens in Pike Township concerned about EMF. Some houses have been built there near high-voltage lines and residents have raised concerns in the past.

People won't want lines running through farmland.

We have to have the electricity. As long as it's added safely, then do whatever we need to do to bring the power in.

Make sure lines are safe (for people and children) and locate them where they will not create a hazard. (2 responses)

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

8

Have you ever heard about Electric and Magnetic Fields (EMF) in relation to power lines?

Yes	No	Don't Know
11	5	1

If yes: In years past, there have been concerns about possible health effects linked to power lines and EMF exposure. Do you feel your constituents would have any concerns today about EMF exposure?

Concerns:

Only the people living directly under it. One of the Mt. Orab officers bought a house under a high-tension power line. He had a young child and did a lot of research on EMF but couldn't find any real dangers. No, but I have heard talk about EMF being linked to leukemia.

I have heard power lines are unsafe and cause cancer. I have talked to Cinergy about this before and they told me that living near them is not dangerous. I knew a property owner who sold his land because it had a power line on it and he was afraid of getting cancer.

Yes, I've heard living near power lines can cause cancer.

Yes. Give them basic information about it though and that will help. It's a lack of information that is dangerous.

Holiday Homes builds right under power lines. I think there is a state law that requires poles to be placed a certain distance from homes.

When high-tension power lines were first put in the area, my neighbor said he felt and heard them when he was out working in the field.

People will have concerns if BIG towers/transmission lines are built.

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

9

Comments:

open ended responses

What type of information would you or the people in your area like to get from Cinergy about the new power line and a substation?

Exact location. (9 responses)
Results of EMF research/health issues. (5 responses)
Capacity of new line. (3 responses)
Safety of high-voltage power lines. (3 responses)
The number of new lines. (2 responses)
Justification of need. (2 responses)
Basic information about the line. (3 responses)
How lines would be constructed and run.
Service area of new lines. Effect on surrounding area.
Who pays for the new line.
Timing.
Community benefits of a new line.

10

How would people in your area prefer to get information and updates about the power line and substation? Check all that are preferred

Newsletters/brochure	12
Ads or columns in newspaper	6
Community meetings	6
Council/Township meetings	
Door hangers	
Information hotline	
Email	
Internet site	
Personal visits, personal letters	
Bill Stuffers	1
Letters to Homes	1

*Local radio station, WAXE 97.7 FM

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

- 11 Who in your area might have concerns about a new substation and electric transmission line?
 Sterling Township Trustees
 Mt. Orab Mayor
 Kelly Cole, Brown County Econ. Development Manager
 Williamsburg Township Fire Chief Mallott
 Farmland Preservation Group (although they haven't been active in some time)
 Mt. Orab Fire Chief Lisa Reeves

- 12 Would you be interested in attending a community workshop to learn more about electricity and the need for new power lines in the area?

Yes	No	Maybe
10	3	4

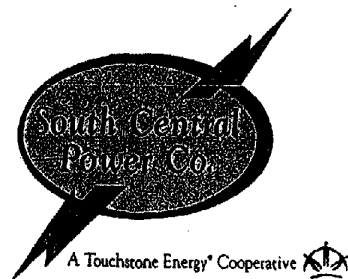
- 13 Do you know of anyone else who might be interested in participating in a community workshop on the topic?

Yes	No
10	6

Who?
 Other trustees/council members. (6 responses)
 Mt. Orab mayor. (5 responses)
 Village of Williamsburg Schools
 WJAA ball fields director b/c of the close proximity to Eastwood Substation
 County engineer and commissioners

Cinergy
Hillcrest-Eastwood 138 kV Transmission Line
Results of 17 Stakeholder Interviews

- 14 Do you have any other comments or concerns you want Cinergy to know about?
- Does this project mean that I should go buy the property in the project area?
There is a big need for this line in the Mt. Orab area. (2 responses)
There is a power plant/power line coming from Ripley using the same poles. There may have been some public meetings about this recently.
I appreciate Cinergy informing us about this project. (2 responses)
We need to support the expansion of infrastructure to meet our growing need of power.
Mt. Orab has annexed 374 more acres south of town to add condos and more retail development.
Cinergy's economic development staff has been very cooperative.



Corporate Office
P. O. Box 250 • 2780 Coonpath Road
Lancaster, Ohio 43130-0250
(740) 653-4422 • Fax (740) 681-4488 • 1-800-282-5064

The Power of Human Connections

July 23, 2004

John McNabb
Staff Engineer – T&D Planning
Cinergy
P.O. Box 960
EM661
Cincinnati, Ohio 45202

Dear Mr. McNabb,

Thank you for contacting South Central Power (SCP) about your new route proposal for building a 138kV-transmission line to your future Hillcrest substation. SCP has been evaluating the need for a new 69 or 138kV tap for our existing 34.5kV Eastwood substation. This would provide SCP with more reliability to tie its existing distribution to our Duckwall substation. We have reviewed this information and have determined that due to the load center of the distribution facilities that our existing Eastwood substation location is adequate. SCP would prefer that the proposed route be between points B and K (along the Norfolk and Western Railroad) on your proposed maps with the alternative being between points C and I (St. Rt. 32). This would allow the 138kV tap to be at a close proximity to the existing SCP Eastwood substation. If there are any other questions or concerns that I may help you with please feel free to contact me at (740) 689-6123.

Regards,

Kevin Seesholtz
Staff Engineer
South Central Power Company

Cc: A. Kadakia
file

BRANCH OFFICES

Circleville, OH 43113-9199 2100 Chickasaw Drive (740) 474-6045 Fax (740) 477-2219 1-800-206-0745 (Ohio only)	Canal Winchester, OH 43110-9629 10229 Busey Road (614) 837-4351 Fax (614) 837-2351 1-800-524-0802 (Ohio only)	Hillsboro, OH 45133-0220 110 Danville Pike • P.O. Box 220 (937) 393-3421 Fax (937) 393-1128 1-800-207-0020 (Ohio only)	Barnesville, OH 43713-0270 37801 Barnesville-Bethesda Road • P.O. Box 270 (740) 425-4018 Fax (740) 425-4552 1-800-468-4717
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Member Owned

APPENDIX B

AGENCY CORRESPONDENCE



Ohio Department of Natural Resources

BOB TAFT, GOVERNOR

SAMUEL W. SPECK, DIRECTOR

Division of Wildlife
Steven A. Gray, Chief
1840 Belcher Drive
Columbus, OH 43224-1300
Phone: (614) 265-6300

July 8, 2004

Allan M. Hale, Ph.D.
Senior Ecologist
URS Corporation
36 East 7th Street, Suite 2300
Cincinnati, OH 45202-4434

RE: CG&E Substation
Hillcrest Road and Greenbush East Road
Brown County, OH

Dear Dr. Hale:

Your letter to Mike Budzik has been forwarded to me for response. In that letter you request information regarding potential impacts to natural areas, preserves, and other ecological resources in the area of the project referenced above. Please note that Mr. Budzik has retired, and Mr. Steve Gray is now Chief of the Division of Wildlife.

The Ohio Department of Natural Resources, Division of Wildlife, is not aware of any natural areas, preserves, or ecological resources in the vicinity of this project. However, the Ohio Department of Natural Resources, Division of Natural Areas and Preserves maintains the Natural Heritage Database, the state's most comprehensive record of Ohio threatened and endangered species. If you have not already done so, it is recommended you contact the Division of Natural Areas and Preserves at (614) 265-6453. To process future projects more efficiently, I recommend you contact the Division of Natural Areas and Preserves prior to contacting the Division of Wildlife. To help expedite the process, please include the results of the Division of Natural Areas and Preserves' Natural Heritage Database request when contacting us regarding future projects.

The ODNR, Division of Wildlife is available to provide guidance on avoiding or minimizing impacts to any listed fauna and/or their habitat. If you should need further assistance, feel free to contact Becky Jenkins at (614) 265-6631.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Mion".

Joe Mion
Program Administrator



"Sanders, Randy"
<Randy.Sanders@dnr.
state.oh.us>

08/06/2004 02:03 PM

To: "aaron_geckle@urscorp.com" <aaron_geckle@URSCorp.com>
cc: "jim.odell@puc.state.oh.us" <jim.odell@puc.state.oh.us>
Subject: 04-0167; URS Corporation; Cincinnati Gas and Electric Co. Substation

Aaron, As requested, here are some preliminary comments for this project.
Randy

ODNR COMMENTS TO URS Corporation; New Substation and Transmission Line for Cincinnati Gas and Electric Company
Location: The intersection of Hillcrest Road and Greenbush East Road in Brown County, Ohio and a new electric transmission line from Cinergy's W.C. Beckjord Station in southwestern Clermont County to Silver Grove Substation in Campbell County, Kentucky. The Brown Co. site is located in Green and Sterling Twp., Brown Co., Mount Orab Quadrangle. The Clermont Co. site is located 0.9 mi. W. of the junction of Beckjord Rd. and Neil Rd., Pierce Twp., Clermont Co., New Richmond and Withamsville Quadrangles.
Project: Construction of a new Substation and a 138kV electric transmission line from Cinergy's W.C. Beckjord Station in southwestern Clermont County to Silver Grove Substation in Campbell County, Kentucky.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Rare and Endangered Species: The Brown Co. site is located in Green and Sterling Twp., Brown Co., Mount Orab Quadrangle. Our Natural Heritage Database contains no records of rare species or unique natural features within the proposed project, and there are no state nature preserves or scenic rivers in the vicinity of the site.

The Clermont Co. site is located 0.9 mi. W. of the junction of Beckjord Rd. and Neil Rd., Pierce Twp., Clermont Co., New Richmond and Withamsville Quadrangles. Our Natural Heritage Database contains no records of rare species or unique natural features within the proposed project, and there are no state nature preserves or scenic rivers in the vicinity of the site.

Geological Survey:
Proposed Substation

The Division of Geological Survey is not aware of any geologic constraints which would warrant special consideration at the site proposed for construction of a new substation. Survey maps suggest the site is directly underlain by Illinoian-age silty-loam till that in turn is underlain by a variety of unconsolidated materials deposited in a buried, pre-glacial/interglacial valley. The uppermost bedrock unit (Grant Lake Limestone formation) is anticipated to underlie the site at a depth of 50 to 70 feet (see attached portion of a map showing bedrock surface elevations for the Mount Orab quadrangle). Maps depicting glacial geology, bedrock geology, and bedrock topography can be obtained from the ODNR, Division of