



Legal Department

American Electric Power  
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Columbus, OH 43215-2373  
AEP.com

Chairman Asim Z. Haque  
Ohio Power Siting Board  
180 East Broad Street  
Columbus, Ohio 43215

November 10, 2016

Erin C. Miller  
Contract Counsel –  
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**Re: Supplemental Information  
PUCO Case No. 16-0437-EL-BTX  
In the Matter of the Application for a Certificate of Environmental  
Compatibility and Public Need for the Speidel-Barnesville 138kV  
Transmission Line Rebuild Project**

Dear Chairman Haque,

AEP Ohio Transmission Company, Inc. submits the attached supplemental information in connection with the Application filed June 24, 2016 in this docket.

Should you have any questions, please do not hesitate to contact me.

Respectfully Submitted,

/s/ Erin C. Miller  
Erin C. Miller  
Contract Counsel  
AEP Ohio Transmission Company, Inc.

cc: Jon Pawley, OPSB Staff

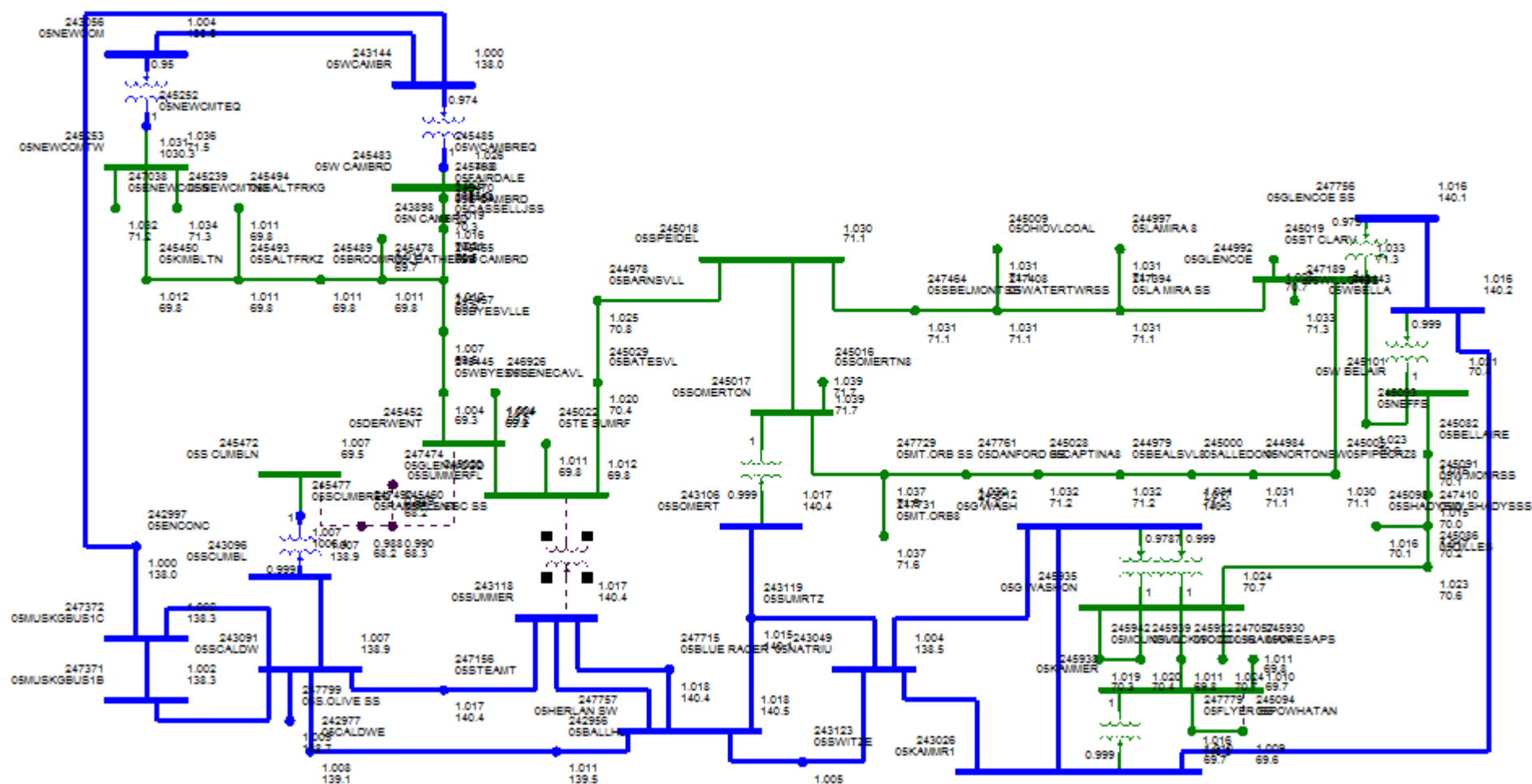
**TABLE 03-2****Proposed South Central Ohio Area Transmission System Performance****Summer Peak 2021 Conditions with 2021 Base Case before Improvements and 2021 Base Case with the Proposed Improvements in Place**

<b>Issue</b>	<b>N-1-1 Outage Scenario</b>	<b>Affected Facility</b>	<b>2021 Base Case Before Improvement</b>	<b>2021 Base Case After Improvement</b>
<b>Thermal</b>	West Cambridge 138/69kV Transformer  +  Summerfield 138/69kV Transformer	Speidel-Barnesville 69kV Line	116%  (emergency)	43%  (emergency)
	Derwent-South Cumberland 69kV line  +  Summerfield 138/69kV Transformer	Speidel-Barnesville 69kV Line	117%  (emergency)	42%  (emergency)

### Proposed System – N-1-1 Conditions:

- Derwent-South Cumberland 69kV Out
- Summerfield 138/69kV transformer Out

No voltage violations

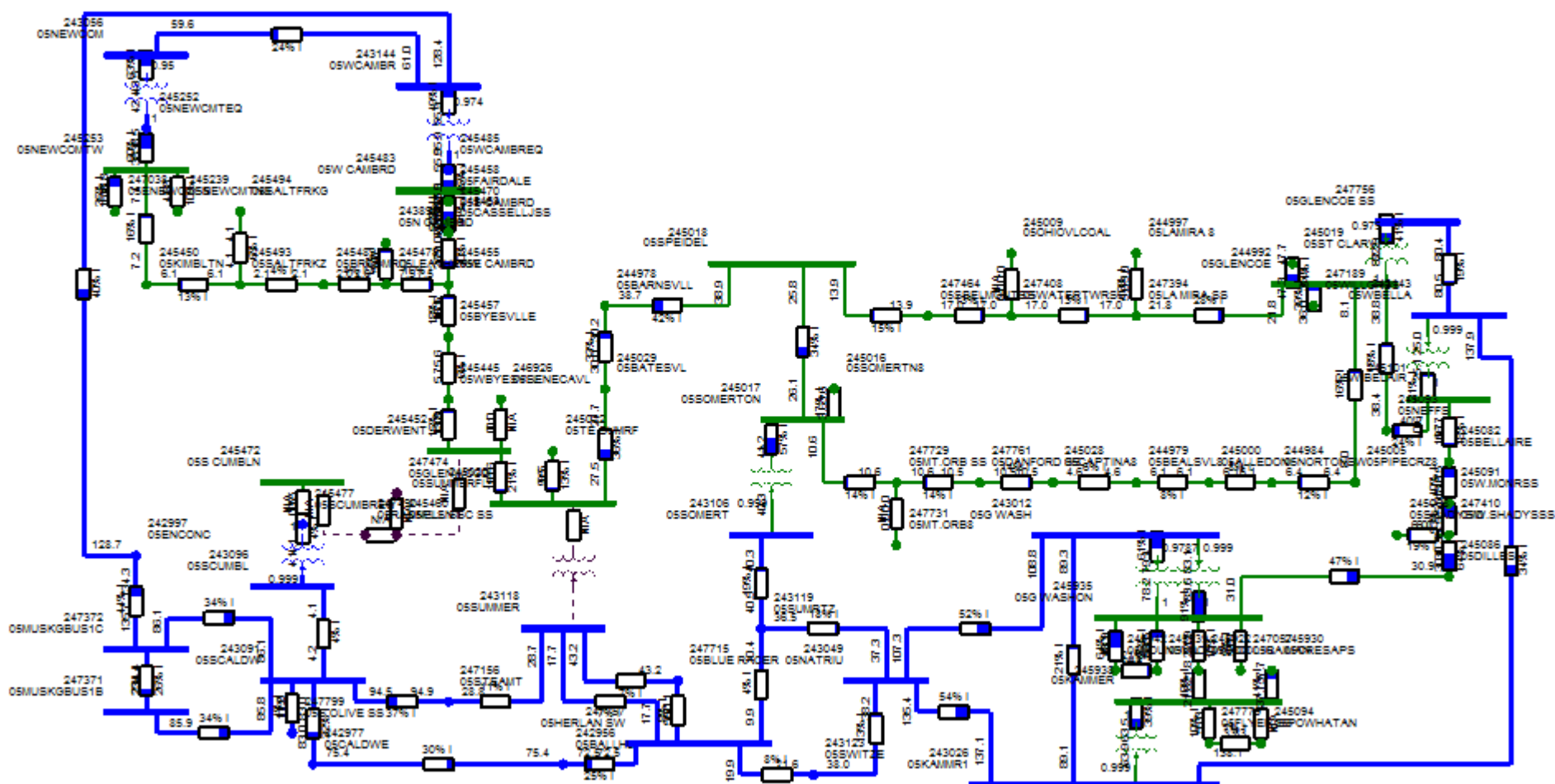


### **Proposed System – N-1-1 Conditions:**

- Derwent-South Cumberland 69kV Out
- Summerfield 138/69kV transformer Out

Speidel-Barnesville 69kV loaded to 42% of emergency rating  
Barnesville-Summerfield loaded up to 33% of emergency rating

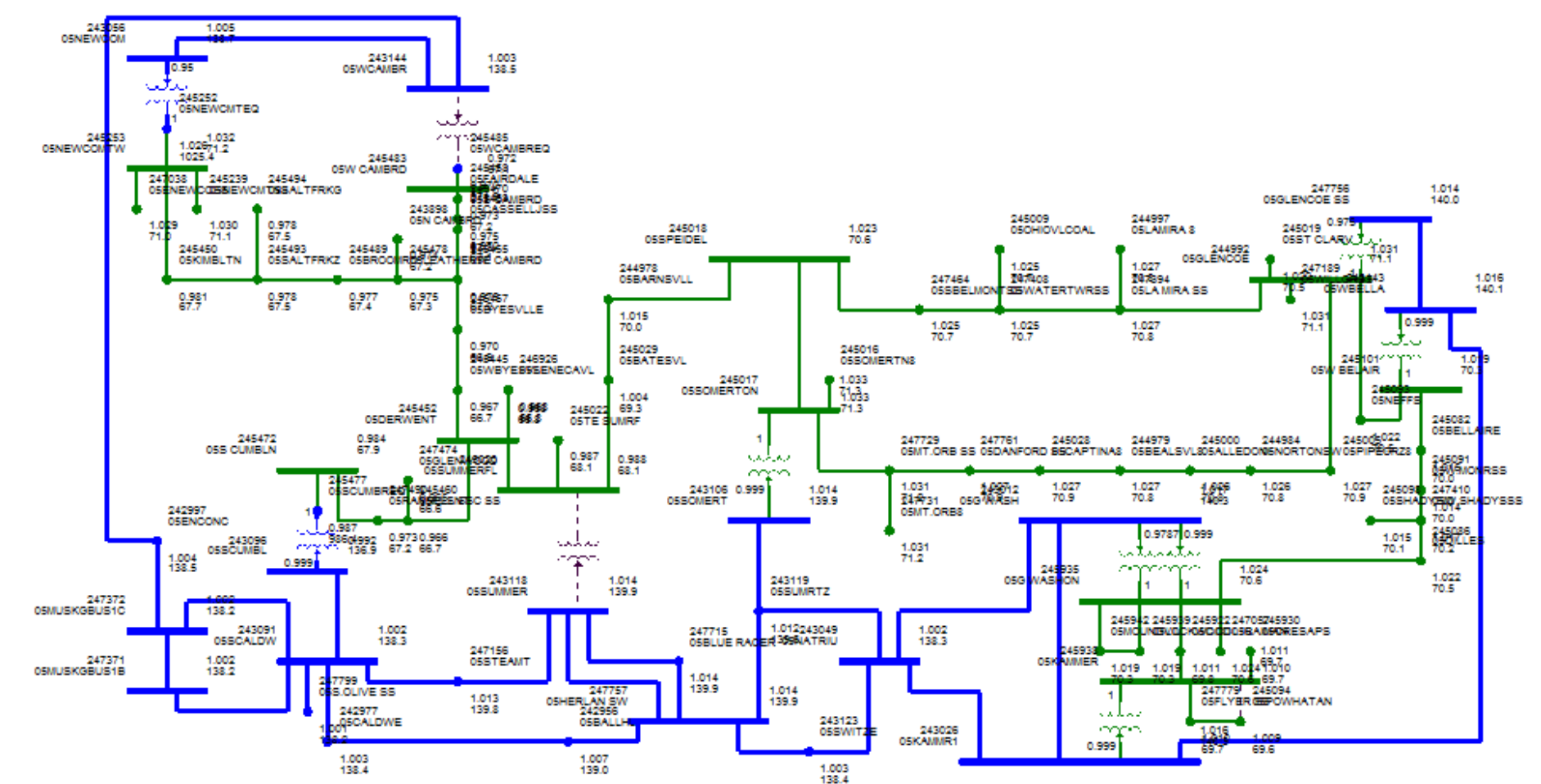
The Barnesville-Speidel 138kV rebuild resolves the overload by building a line bypass around the town of Barnesville. The small conductor section is converted to a radial tap serving Barnesville station, so is no longer overloaded.



**Proposed System – N-1-1 Conditions:**

- West Cambridge 138kV/69kV transformer Out
- Summerfield 138/69kV transformer Out

No voltage violations

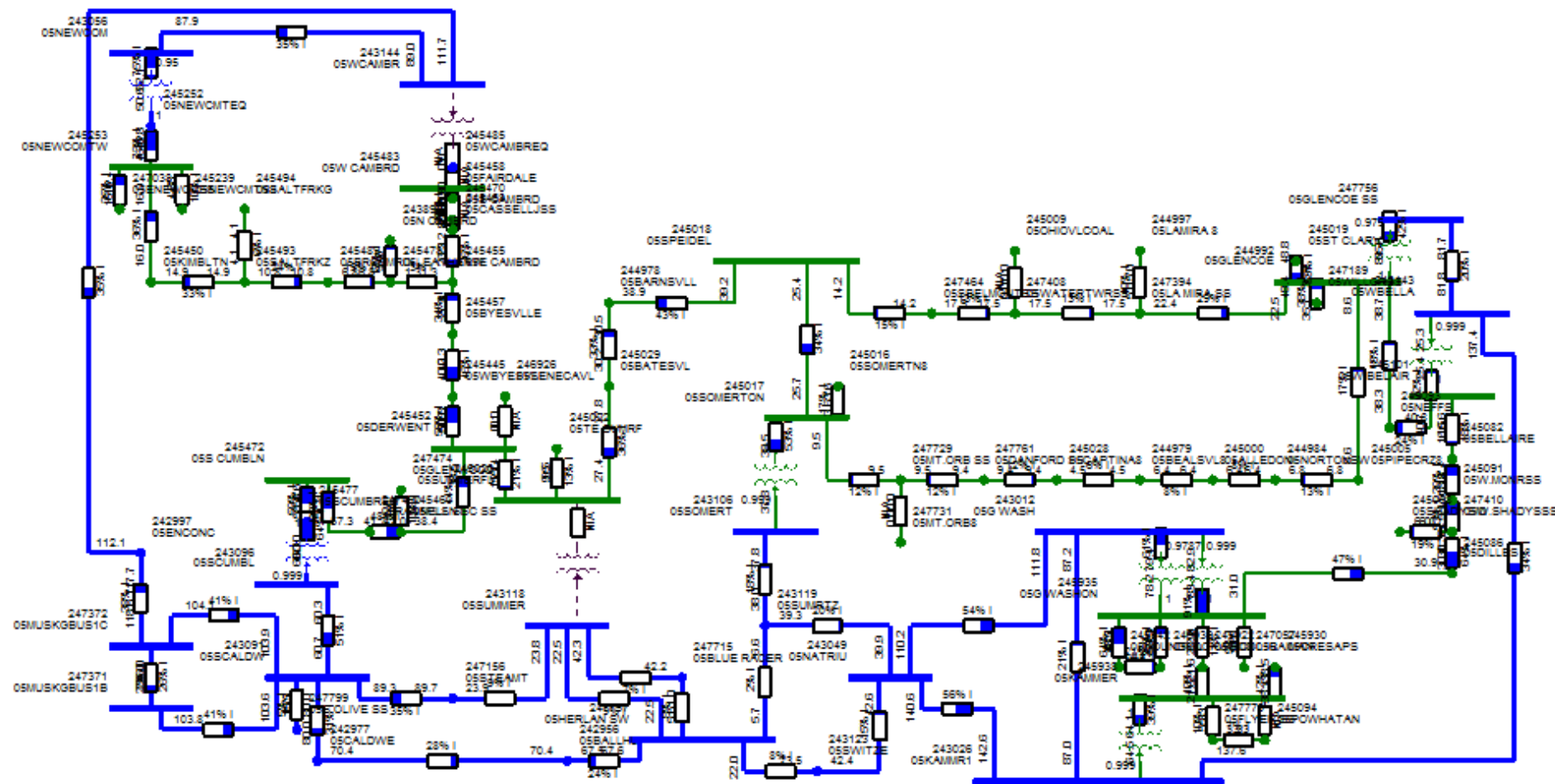


### **Proposed System– N-1-1 Conditions:**

- West Cambridge 138kV/69kV transformer Out
- Summerfield 138/69kV transformer Out

Speidel-Barnesville 69kV loaded to 43% of emergency rating  
Barnesville-Summerfield loaded up to 33% of emergency rating

The Barnesville-Speidel 138kV rebuild resolves the overload by building a line bypass around the town of Barnesville. The small conductor section is converted to a radial tap serving Barnesville station, so is no longer overloaded.



**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**11/10/2016 3:53:11 PM**

**in**

**Case No(s). 16-0437-EL-BTX**

Summary: Correspondence - Supplemental Information to Application electronically filed by Mrs. Erin C Miller on behalf of AEP Ohio Transmission Company