

SOIL SUMMARY REPORT

General Information:

Date: April 23, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 1

Soil Information Summary:

Drain Field A LOCATED ON LOT 1

Slope: 4 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 1 Drain Field A

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-32	2.5 YR 4/8 Clay Loam with few mica	III
	C	32-72	5 YR 5/8 Loam with few mica	II
2	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-34	2.5 YR 4/8 Clay Loam with few mica	III
	C	34-72	2.5 YR 5/8 Loam with few mica	II
3	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-27	2.5 YR 4/8 Clay Loam with few mica	III
	C1	27-45	5 YR 5/8 Loam with few mica	II
	C2	45-72	10 YR 4/6 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 1 D/F A

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 2

Soil Information Summary:

Drain Field B LOCATED ON LOT 2

Slope: 8 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 2 Drain Field B

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-6	5 YR 4/6 light Clay Loam	III
	Bt	6-42	2.5 YR 4/8 Clay Loam with few mica	III
	C	42-72	2.5 YR 4/6 Loam with mica	II
2	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-40	2.5 YR 4/8 Clay Loam with few mica	III
	C	40-72	2.5 YR 4/8 Loam with few mica	II
3	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	5 YR 5/8 Loam with few mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 2 D/F B

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 3

Soil Information Summary:

Drain Field C LOCATED ON LOT 3

Slope: 9 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 3 Drain Field C

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-25	2.5 YR 4/8 Clay Loam with few mica	III
	C1	25-49	2.5 YR 4/8 Loam with common fine mica	II
	C2	49-72	7.5 YR 6/8 fine Sandy Loam	II
2	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-27	2.5 YR 4/8 Clay Loam with few mica	III
	C1	27-69	5 YR 5/8 Loam with common fine mica	II
	C2	69-72	7.5 YR 6/8 fine Sandy Loam	II
3	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-30	2.5 YR 4/8 Clay Loam with few mica	III
	C	30-72	2.5 YR 5/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 3 D/F C

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall _____

Section: _____

Lot: 4

Soil Information Summary:

Drain Field D LOCATED ON LOT 4

Slope: 12 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 4 Drain Field D

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-25	2.5 YR 4/8 Clay Loam with few mica	III
	B/C	25-37	2.5 YR 4/8 Loam with mica	II
	C	37-72	5 YR 4/4 micaceous Loam	II
2	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-23	5 YR 5/8 Clay Loam few mica	III
	B/C	23-34	5 YR 5/8 Loam with few fine mica	II
	C	34-72	10 YR 5/8 fine Sandy Loam	II
3	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-22	2.5 YR 4/8 Clay Loam with few mica	III
	C	22-72	10 YR 5/8 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

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For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 4 D/F D

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 65 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required [G(F-1)+E] 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 5

Soil Information Summary:

Drain Field E LOCATED ON LOT 5

Slope: 15 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 5 **Drain Field** E

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-10	7.5 YR 5/4 light Clay Loam	III
	Bt	10-36	5 YR 5/6 Clay Loam with fine mica	III
	C1	36-67	5 YR 5/8 Loam with fine mica	II
	C2	67-72	10 YR 5/6 fine Sandy Loam	II
2	A/E	0-11	7.5 YR 5/4 light Clay Loam	III
	Bt	11-41	5 YR 5/8 Clay Loam with fine mica	III
	C1	41-70	5 YR 5/8 Loam with common mica	II
	C2	70-72	10 YR 5/6 fine Sandy Loam	II
3	A/E	0-12	7.5 YR 5/4 light Clay Loam	III
	Bt	12-34	5 YR 5/6 Clay Loam with fine mica	III
	C	34-72	10 YR 5/6 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 5 D/F E

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 65 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 6

Soil Information Summary:

Drain Field F LOCATED ON LOT 6

Slope: 11 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 6 Drain Field F

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-8	5 YR 4/4 light Clay Loam	III
	Bt	8-17	2.5 YR 4/8 Clay Loam with few mica	III
	B/C	17-41	2.5 YR 4/8 Loam with common mica	II
	C	41-72	7.5 YR 5/6 fine Sandy Loam	II
2	A/E	0-7	5 YR 4/4 light Clay Loam	III
	Bt	7-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	2.5 YR 5/8 micaceous Loam	II
3	A/E	0-7	5 YR 4/4 light Clay Loam	III
	Bt	7-39	2.5 YR 4/8 Clay Loam with mica	III
	C	39-72	7.5 YR 5/8 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 6 D/F F

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 65 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required [G(F-1)+E] 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 28, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 7

Soil Information Summary:

Drain Field G LOCATED ON LOT 7

Slope: 7 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 7 Drain Field G

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	7.5 YR 3/4 light Clay Loam	III
	Bt	4-37	2.5 YR 4/8 Clay Loam with few mica	III
	C	37-72	5 YR 5/8 Loam with mica	II
2	A/E	0-5	7.5 YR 3/4 light Clay Loam	III
	Bt	5-38	2.5 YR 4/8 Clay Loam with mica	III
	C	38-72	5 YR 5/8 Loam with mica	II
3	A/E	0-5	7.5 YR 3/4 light Clay Loam	III
	Bt	5-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	5 YR 5/8 Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 7 D/F G

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 28, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 8

Soil Information Summary:

Drain Field H LOCATED ON LOT 8

Slope: 8 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **III**

No Estimated rate 75 min/inch

Proposed Drainfield 6-100'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 8 Drain Field H

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	5 YR 4/6 light Clay Loam	III
	Bt	3-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	2.5 YR 4/6 Loam with common mica	II
2	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-30	2.5 YR 4/8 Clay Loam with mica	III
	B/C	30-67	5 YR 5/8 Clay Loam with few mafic stains	III
	C	67-72	5 YR 5/8 heavy Loam with few mafic stains	II
3	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-33	2.5 YR 4/8 Clay Loam with mica	III
	B/C	33-72	7.5 YR 5/8 light Clay Loam	III

Remarks: Braddock Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 8 D/F H

- A. Estimated Percolation Rate 75
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 596 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 100 ft. Length of available area 100 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 6
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 48 ft. Width of available area 75 ft.
- I. Total square footage required (BxC) 1788 ft²
- J. Square footage in design (DxExF) 1800 ft²
- K. Is a reserve required? No Yes 3-100'x 3' Lines at 48 Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 9

Soil Information Summary:

Drain Field I LOCATED ON LOT 9

Slope: 10 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 9 Drain Field I

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-29	2.5 YR 4/8 Clay Loam with few mica	III
	C1	29-47	5 YR 5/8 micaceous Loam	II
	C2	47-72	10 YR 5/8 fine Sandy Loam	II
2	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-34	2.5 YR 4/8 Clay Loam with mica	III
	C	34-72	2.5 YR 4/8 Loam with common mica	II
3	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-30	2.5 YR 4/8 Clay Loam with mica	III
	C1	30-48	5 YR 6/8 micaceous Loam	II
	C2	48-72	10 YR 6/8 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 9 D/F I

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 65 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required [G(F-1)+E] 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 10

Soil Information Summary:

Drain Field J LOCATED ON LOT 10

Slope: 10 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 10 **Drain Field** J

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-31	2.5 YR 4/8 Clay Loam with few mica	III
	B/C	31-42	5 YR 5/8 Loam with mica	II
	C	42-72	10 YR 5/6 micaceous Loam	II
2	A/E	0-4	7.5 YR 4/3 light Clay Loam	III
	Bt	4-29	2.5 YR 4/8 Clay Loam with mica	III
	B/C	29-58	5 YR 6/8 Loam with mica	II
	C	58-72	10 YR 5/8 fine Sandy Loam	II
3	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-27	2.5 YR 4/8 Clay Loam with mica	III
	B/C	27-40	5 YR 6/8 micaceous Loam	II
	C	40-72	10 YR 5/8 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 10 D/F J

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 65 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 11

Soil Information Summary:

Drain Field K LOCATED ON LOT 11

Slope: 12 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 11 **Drain Field** K

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/4 light Clay Loam	III
	Bt	4-39	2.5 YR 4/8 Clay Loam with few mica	III
	C	39-72	2.5 YR 5/8 Loam with common mica	II
2	A/E	0-5	5 YR 4/4 light Clay Loam	III
	Bt	5-38	2.5 YR 4/8 Clay Loam with mica	III
	C	38-72	2.5 YR 5/8 Loam with common mica	II
3	A/E	0-4	5 YR 4/4 light Clay Loam	III
	Bt	4-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	2.5 YR 5/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 11 D/F K

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at _____ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 12

Soil Information Summary:

Drain Field L LOCATED ON LOT 12

Slope: 7 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **III**

No Estimated rate 50 min/inch

Proposed Drainfield 5-80'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 12 Drain Field L

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-2	7.5 YR 4/3 light Clay Loam	III
	Bt	2-25	2.5 YR 4/8 Clay Loam with few mica	III
	C	25-72	2.5 YR 5/8 Loam with common mica	II
2	A/E	0-4	7.5 YR 4/3 light Clay Loam	III
	Bt	4-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	5 YR 5/8 light Clay Loam	III
3	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	5 YR 5/8 light Clay Loam	III

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 12 D/F L

- A. Estimated Percolation Rate 50
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 376 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 80 ft. Length of available area 80 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 66 ft.
- I. Total square footage required (BxC) 1128 ft²
- J. Square footage in design (DxExF) 1200 ft²
- K. Is a reserve required? No Yes 3-80'x 3' Lines at 54 Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 13

Soil Information Summary:

Drain Field M LOCATED ON LOT 13

Slope: 11 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 13 **Drain Field** M

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	5 YR 4/3 light Clay Loam	III
	Bt	3-27	2.5 YR 4/8 Clay Loam with few mica	III
	C	27-72	7.5 YR 5/6 Loam with common mica	II
2	A/E	0-4	5 YR 4/3 light Clay Loam	III
	Bt	4-37	2.5 YR 4/8 Clay Loam with mica	III
	C	37-72	5 YR 5/8 Loam with common mica	II
3	A/E	0-3	5 YR 4/3 light Clay Loam	III
	Bt	3-25	2.5 YR 4/8 Clay Loam with mica	III
	C	25-72	7.5 YR 5/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 13 D/F M

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 14

Soil Information Summary:

Drain Field N LOCATED ON LOT 14

Slope: 12 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group II

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 14 Drain Field N

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	5 YR 4/3 light Clay Loam	III
	Bt	3-35	2.5 YR 4/8 Clay Loam with few mica	III
	C	35-72	2.5 YR 4/6 Loam with common mica	II
2	A/E	0-3	5 YR 4/3 light Clay Loam	III
	Bt	3-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	10 YR 5/6 Loam with common mica	II
3	A/E	0-3	5 YR 4/3 light Clay Loam	III
	Bt	3-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	7.5 YR 5/8 Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 14 D/F N

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 15

Soil Information Summary:

Drain Field O LOCATED ON LOT 15

Slope: 13 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group II

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 15 **Drain Field** O

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/3 light Clay Loam	III
	Bt	3-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	2.5 YR 4/8 Loam with common mica	II
2	A/E	0-4	7.5 YR 4/3 light Clay Loam	III
	Bt	4-32	2.5 YR 4/8 Clay Loam with mica	III
	C	32-72	5 YR 5/8 Loam with few mica	II
3	A/E	0-4	7.5 YR 4/3 light Clay Loam	III
	Bt	4-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	2.5 YR 4/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 15 D/F O

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 16

Soil Information Summary:

Drain Field P LOCATED ON LOT 16

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group II

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 16 **Drain Field** P

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/6 Loam light Clay Loam	II
	Bt	3-37	2.5 YR 4/8 Clay Loam with few mica	III
	C	37-72	2.5 YR 4/8 micaceous Loam	II
2	A/E	0-4	7.5 YR 4/6 Loam	II
	Bt	4-36	2.5 YR 4/8 Clay Loam with mica	III
	C1	36-63	2.5 YR 4/8 Loam with common mica	II
	C2	63-72	7.5 YR 5/8 fine Sandy Loam	II
3	A/E	0-4	7.5 YR 4/6 Loam	II
	Bt	4-37	2.5 YR 4/8 Clay Loam with mica	III
	C1	37-59	2.5 YR 4/8 Loam with common mica	II
	C2	59-72	5 YR 5/6 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 16 D/F P

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 40 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 17

Soil Information Summary:

Drain Field Q LOCATED ON LOT 17

Slope: 8 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 4-80'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 17 Drain Field Q

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-27	2.5 YR 4/8 Clay Loam with few mica	III
	C1	27-63	2.5 YR 4/8 Loam with common mica	II
	C2	63-72	7.5 YR 5/8 Loam with common mica	II
2	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-35	2.5 YR 4/8 Clay Loam with mica	III
	C1	35-55	2.5 YR 4/8 Loam with common mica	II
	C2	55-72	5 YR 5/8 Loam with common mica	II
3	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	2.5 YR 4/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 17 D/F Q

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 80 ft. Length of available area 80 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 4
- G. Center-to-center spacing 9 ft.
- H. Width required [G(F-1)+E] 30 ft. Width of available area 33 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 960 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 18

Soil Information Summary:

Drain Field R LOCATED ON LOT 18

Slope: 8 %

Depth to rock/impervious strata: Max. 72" Min. 50" None _____

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **III**

No Estimated rate 75 min/inch

Proposed Drainfield 6-100'x 3' Lines installed at 30 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 18**Drain Field** R

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-50	2.5 YR 4/8 Clay Loam with few mica	III
	R	50	Auger Refusal on mafic rock	
2	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-45	2.5 YR 4/8 Clay Loam with mica	III
	C	45-72	2.5 YR 4/8 Loam with common mica	II
3	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	5YR 5/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 18 D/F R

- A. Estimated Percolation Rate 75
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 596 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 100 ft. Length of available area 100 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 6
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 75 ft. Width of available area 75 ft.
- I. Total square footage required (BxC) 1788 ft²
- J. Square footage in design (DxExF) 1800 ft²
- K. Is a reserve required? No Yes 3-100'x 3' Lines at 30 Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 19

Soil Information Summary:

Drain Field S LOCATED ON LOT 19

Slope: 5 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 19 Drain Field S

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	5 YR 4/6 light Clay Loam	III
	Bt	3-34	2.5 YR 4/8 Clay Loam with few mica	III
	C	34-72	2.5 YR 5/8 Loam with common mica	II
2	A/E	0-3	5 YR 4/6 light Clay Loam	III
	Bt	3-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	2.5 YR 5/8 Loam with common mica	II
3	A/E	0-3	5 YR 4/6 light Clay Loam	III
	Bt	3-37	2.5 YR 4/8 Clay Loam with mica	III
	C1	37-47	2.5 YR 4/8 Loam with common mica	II
	C2	47-72	7.5 YR 5/8 micaceous Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 19 D/F S

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 20

Soil Information Summary:

Drain Field T LOCATED ON LOT 20

Slope: 7 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 20 **Drain Field** T

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-41	2.5 YR 4/8 Clay Loam with few mica	III
	C	41-72	5 YR 5/8 Loam	II
2	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-40	2.5 YR 4/8 Clay Loam	III
	C	40-72	5 YR 5/8 Loam	II
3	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-38	2.5 YR 4/8 Clay Loam	III
	C	38-72	5 YR 5/8 Loam with few fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 20 D/F T

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall _____

Section: _____

Lot: 21

Soil Information Summary:

Drain Field U LOCATED ON LOT 21

Slope: 11 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 21 **Drain Field** U

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-27	2.5 YR 4/8 Clay Loam with few mica	III
	C	27-72	5 YR 5/8 Loam with common fine mica	II
2	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-32	2.5 YR 4/8 Clay Loam with mica	III
	C	32-72	5 YR 4/6 Loam with common fine mica	II
3	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-32	2.5 YR 4/8 Clay Loam with mica	III
	C	32-72	5 YR 5/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 21 D/F U

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 22

Soil Information Summary:

Drain Field V LOCATED ON LOT 22

Slope: 7 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 40 min/inch

Proposed Drainfield 5-65'x 3' Lines installed at 72 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 22 Drain Field V

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-57	2.5 YR 4/8 Clay Loam with few mica	III
	C	57-97	7.5 YR 5/8 fine Sandy Loam	II
2	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-48	2.5 YR 4/8 Clay Loam with mica	III
	C	48-95	2.5 YR 5/8 fine Sandy Loam	II
3	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-55	2.5 YR 4/8 Clay Loam with mica	III
	C	55-95	2.5 YR 5/8 fine Sandy Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 22 D/F V

- A. Estimated Percolation Rate 40
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 314 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 65 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 942 ft²
- J. Square footage in design (DxExF) 975 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 23

Soil Information Summary:

Drain Field W LOCATED ON LOT 23

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **III**

No Estimated rate 60 min/inch

Proposed Drainfield 6-80'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 23 Drain Field W

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-41	2.5 YR 4/8 Clay Loam with few mica	III
	C	41-72	2.5 YR 4/8 light Clay Loam with few mafic inclusions	III
2	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	2.5 YR 4/8 micaceous Loam	II
3	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	5 YR 5/8 micaceous Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 23 D/F W

- A. Estimated Percolation Rate 60
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 452 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 80 ft. Length of available area 80 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 6
- G. Center-to-center spacing 9 ft.
- H. Width required [G(F-1)+E] 48 ft. Width of available area 75 ft.
- I. Total square footage required (BxC) 1356 ft²
- J. Square footage in design (DxExF) 1440 ft²
- K. Is a reserve required? No Yes 3-80'x 3'Lines at 54 Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 24

Soil Information Summary:

Drain Field X LOCATED ON LOT 24

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 24 Drain Field X

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-4	5 YR 4/6 light Clay Loam	III
	Bt	4-41	2.5 YR 4/8 Clay Loam with few mica	III
	C	41-72	5 YR 5/8 Loam with few fine mica	II
2	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	2.5 YR 5/8 Loam with mica	II
3	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-41	2.5 YR 4/8 Clay Loam with mica	III
	C	41-72	5 YR 5/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 24 D/F X

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke, Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 25

Soil Information Summary:

Drain Field Y LOCATED ON LOT 25

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 25 Drain Field Y

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-6	5 YR 4/6 light Clay Loam	III
	Bt	6-28	2.5 YR 4/8 Clay Loam with few mica	III
	C1	28-59	2.5 YR 4/8 Loam with common fine mica	II
	C2	59-72	5 YR 5/8 Loam with common fine mica	II
2	A/E	0-6	5 YR 4/6 light Clay Loam	III
	Bt	6-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	5 YR 5/8 Loam with common fine mica	II
3	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	5 YR 5/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 25 D/F Y

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 26

Soil Information Summary:

Drain Field Z LOCATED ON LOT 26

Slope: 10 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 26 Drain Field Z

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-37	2.5 YR 4/8 Clay Loam with few mica	III
	C	37-72	7.5 YR 5/8 Loam with common fine mica	II
2	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-35	2.5 YR 4/8 Clay Loam with mica	III
	C	35-72	2.5 YR 4/6 Loam with common fine mica	II
3	A/E	0-5	5 YR 4/6 light Clay Loam	III
	Bt	5-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	5 YR 5/8 Loam with few mafic stains	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 26 D/F Z

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 27

Soil Information Summary:

Drain Field AA LOCATED ON LOT 27

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 27 **Drain Field** AA

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/3 Loam	II
	Bt	3-36	2.5 YR 4/8 Clay Loam with few mica	III
	C1	36-59	2.5 YR 4/8 Loam with mica	II
	C2	59-72	10 YR 5/6 fine Sandy Loam	II
2	A/E	0-2	7.5 YR 4/3 Loam	II
	Bt	2-39	2.5 YR 4/8 Clay Loam with mica	III
	C	39-72	7.5 YR 5/8 Loam with mica	II
3	A/E	0-3	7.5 YR 4/3 Loam	II
	Bt	3-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	2.5 YR 5/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 27 D/F AA

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 28

Soil Information Summary:

Drain Field BB LOCATED ON LOT 28

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORMSubdivision The Shores of Penn Hall Lot 28 Drain Field BB

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-2	7.5 YR 4/3 Loam	II
	Bt	2-34	2.5 YR 4/8 Clay Loam with few mica	III
	C	37-72	2.5 YR 5/8 Loam with common mica	II
2	A/E	0-2	7.5 YR 4/3 Loam	II
	Bt	2-29	2.5 YR 4/8 Clay Loam with mica	III
	C	29-72	2.5 YR 5/8 Loam with common mica	II
3	A/E	0-3	7.5 YR 4/3 Loam	II
	Bt	3-31	2.5 YR 4/8 Clay Loam with mica	III
	C1	31-60	2.5 YR 5/8 Loam with common mica	II
	C2	60-72	7.5 YR 4/6 micaceous Loam	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 28 D/F BB

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 29

Soil Information Summary:

Drain Field CC LOCATED ON LOT 29

Slope: 8 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 29 **Drain Field** CC

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-6	7.5 YR 5/6 Loam	II
	Bt	6-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	2.5 YR 4/8 Loam with common mica	II
2	A/E	0-8	7.5 YR 5/6 Loam	II
	Bt	8-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	5 YR 5/8 Loam with common mica	II
3	A/E	0-7	7.5 YR 5/6 Loam	II
	Bt	7-37	2.5 YR 4/8 Clay Loam with mica	III
	C	37-72	5 YR 5/8 Loam with mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 29 D/F CC

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 30

Soil Information Summary:

Drain Field DD LOCATED ON LOT 30

Slope: 6 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 30 **Drain Field** DD

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-5	7.5 YR 5/6 Loam	II
	Bt	5-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	2.5 YR 4/8 Loam with common fine mica	II
2	A/E	0-5	7.5 YR 5/6 Loam	II
	Bt	5-39	2.5 YR 4/8 Clay Loam with mica	III
	C	39-72	2.5 YR 4/8 Loam with common fine mica	II
3	A/E	0-6	7.5 YR 5/6 Loam	II
	Bt	6-39	2.5 YR 4/8 Clay Loam with mica	III
	C	39-72	2.5 YR 4/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 30 D/F DD

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 31

Soil Information Summary:

Drain Field EE LOCATED ON LOT 31

Slope: 7 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 31 **Drain Field** EE

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-5	5 YR 5/6 light Clay Loam	III
	Bt	5-36	2.5 YR 4/8 Clay Loam with few mica	III
	C	36-72	2.5 YR 4/6 Loam with common mica	II
2	A/E	0-5	5 YR 5/6 light Clay Loam	III
	Bt	5-39	2.5 YR 4/8 Clay Loam with mica	III
	C	39-72	2.5 YR 4/8 Loam with common mica	II
3	A/E	0-8	5 YR 5/6 light Clay Loam	III
	Bt	8-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	2.5 YR 4/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 31 D/F EE

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 32

Soil Information Summary:

Drain Field FF LOCATED ON LOT 32

Slope: 4 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 32 **Drain Field** FF

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-5	5 YR 5/6 light Clay Loam	III
	Bt	5-35	2.5 YR 4/8 Clay Loam with few mica	III
	C	35-72	2.5 YR 4/8 Loam with common fine mica	II
2	A/E	0-4	5 YR 5/6 light Clay Loam	III
	Bt	4-28	2.5 YR 4/8 Clay Loam with mica	III
	C	28-72	5 YR 5/8 Loam with common fine mica	II
3	A/E	0-4	5 YR 5/6 light Clay Loam	III
	Bt	4-32	2.5 YR 4/8 Clay Loam with mica	III
	C	32-72	2.5 YR 5/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 32 D/F FF

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 9 ft.
- H. Width required $[G(F-1)+E]$ 39 ft. Width of available area 39 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 33

Soil Information Summary:

Drain Field GG LOCATED ON LOT 33

Slope: 10 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 33 **Drain Field** GG

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-7	5 YR 5/6 light Clay Loam	III
	Bt	7-39	2.5 YR 4/8 Clay Loam with few mica	III
	C	39-72	2.5 YR 4/8 Loam with common fine mica	II
2	A/E	0-8	5 YR 5/6 light Clay Loam	III
	Bt	8-38	2.5 YR 4/8 Clay Loam with mica	III
	C	38-72	2.5 YR 4/8 Loam with common fine mica	II
3	A/E	0-8	5 YR 5/6 light Clay Loam	III
	Bt	8-36	2.5 YR 4/8 Clay Loam with mica	III
	C	36-72	2.5 YR 4/8 Loam with common fine mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 33 D/F GG

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 34

Soil Information Summary:

Drain Field HH LOCATED ON LOT 34

Slope: 11 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group **II**

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 48 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM**Subdivision** The Shores of Penn Hall **Lot** 34 **Drain Field** HH

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-6	5 YR 5/6 light Clay Loam	III
	Bt	6-29	2.5 YR 4/8 Clay Loam with few mica	III
	C	29-72	2.5 YR 4/8 Loam with common mica	II
2	A/E	0-5	5 YR 5/6 light Clay Loam	III
	Bt	5-33	2.5 YR 4/8 Clay Loam with mica	III
	C	33-72	2.5 YR 4/8 Loam with common mica	II
3	A/E	0-5	5 YR 5/6 light Clay Loam	III
	Bt	5-26	2.5 YR 4/8 Clay Loam with mica	III
	C	26-72	2.5 YR 4/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 34 D/F HH

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope

SOIL SUMMARY REPORT

General Information:

Date: April 27, 2020 Franklin County Health Department

Applicant: American Electric Power Company

Telephone No. _____

Address: c/o Woltz & Associates 23 Franklin Road Roanoke , Va. 24011

Location: Rt. 663

Subdivision: The Shores of Penn Hall

Section: _____

Lot: 35

Soil Information Summary:

Drain Field II LOCATED ON LOT 35

Slope: 11 %

Depth to rock/impervious strata: Max. _____ Min. _____ None X

Depth to seasonal water table: (gray mottling or gray color) No Yes _____ Inches

Free water present: No Yes _____ Range in Inches

Soil percolation rate estimated: Yes Texture group II

No Estimated rate 45 min/inch

Proposed Drainfield 5-70'x 3' Lines installed at 54 Inches Deep

Name and title of evaluator: Tim Parker AOSE# 1098

SOIL EVALUATION FORM

Subdivision The Shores of Penn Hall **Lot** 35 **Drain Field** II

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A/E	0-3	7.5 YR 4/6 light Clay Loam	III
	Bt	3-40	2.5 YR 4/8 Clay Loam with few mica	III
	C1	40-55	5 YR 5/8 Loam with common fine mica	II
	C2	55-72	7.5 YR 6/8 fine Sandy Loam	II
2	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-40	2.5 YR 4/8 Clay Loam with mica	III
	C	40-72	2.5 YR 4/8 micaceous Loam	II
3	A/E	0-4	7.5 YR 4/6 light Clay Loam	III
	Bt	4-38	2.5 YR 4/8 Clay Loam with mica	III
	C	38-72	2.5 YR 4/8 Loam with common mica	II

Remarks: Clifford Soil Series

Name and title of evaluator: Tim Parker AOSE# 1098

Abbreviated Design Form

“Appendix 6”

For use with gravity and pump drainfields, enhanced flow systems and low pressure distributions systems when applying for a certification letter of subdivision approval.

Design Basis Subdivision The Shores of Penn Hall Lot 35 D/F II

- A. Estimated Percolation Rate 45
- B. Trench bottom square feet
Required per bedroom
(from Table 4.6 based on Gravity LPD) 344 ft²
- C. Number of Bedrooms 3

Area Calculations

- D. Length of trench 70 ft. Length of available area 70 ft.
- E. Width of trench 3 ft.
- F. Number of trenches 5
- G. Center-to-center spacing 10 ft.
- H. Width required $[G(F-1)+E]$ 43 ft. Width of available area 43 ft.
- I. Total square footage required (BxC) 1032 ft²
- J. Square footage in design (DxExF) 1050 ft²
- K. Is a reserve required? No Yes _____ Lines at ___ Inches Deep
- L. Slope Type: Side Slope