

APPENDIX A
SOIL PROFILES

SOIL PROFILE

Auger Boring 1

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 4/3 brown		sandy loam	moderate medium granular	friable	clear	
E/25-38 cm (10-15 in)	10YR 5/3 brown		sandy loam	weak medium subangular blocky	friable	clear	
Bt/38-85 cm (15-34 in)	7.5YR 4/6 strong brown	common: 5YR 4/4 reddish brown	sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 7.5YR 4/6 strong brown clay films
C/85-100 cm+ (34-39 in+)	10YR 5/4 yellowish brown		coarse sand	single grained	loose		

Additional Notes: Broad interfluvial position; well developed profile forming in loamy fluvio-marine sediments.

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SOIL PROFILE

Auger Boring 2

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
C1/0-45 cm (0-18 in)	7.5YR 4/6 strong brown	common: 10YR 5/1 gray	lenses of sandy loam over loamy sand	single grained	loose	abrupt	modern alluvium
C2g/45-85 cm (18-34 in)	N 5/0 gray		loamy sand	massive	firm	gradual	saturated
C3g/85-100 cm+ (34-39 in+)	10BG 6/1 greenish gray		coarse loamy sand	massive	firm		saturated

Additional Notes: Drainageway/floodplain of tributary to Hudson Branch; modern deposition (C1) over gleyed and saturated sandy sediments (C2g, C3g).

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SOIL PROFILE

Auger Boring 3

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 4/3 brown		loam	moderate medium granular	friable	clear	
E/25-44 cm (10-17 in)	10YR 5/3 brown		sandy loam	weak medium subangular blocky	friable	clear	
Bt/44-87 cm (17-34 in)	7.5YR 4/6 strong brown	common: 5YR 4/4 Reddish brown	sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 7.5YR 4/6 strong brown clay films
Cg/87-100 cm+ (34-39 in+)	10YR 5/2 grayish brown	many, coarse: 5YR 4/4 reddish brown iron stains and concretions	coarse sand	single grained	loose		

Additional Notes: Broad interfluvial position; well developed profile forming in loamy fluviomarine sediments.

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SOIL PROFILE

Auger Boring 4

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
OA/0-12 cm (0-5 in)			dark organic litter				
Cg1/12-72 cm (5-28 in)	N 5/0 gray		loamy sand	massive	firm	gradual	saturated
Cg2/72-100 cm+ (28-39 in+)	10YR 6/1 gray	many, coarse: 7.5YR 4/6 strong brown	coarse sand	massive	firm		saturated

Additional Notes: Drainageway/floodplain of Double Run; organic accumulation (OA) over gleyed and saturated sandy sediments (Cg1, Cg2).

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SOIL PROFILE

Auger Boring 5

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 4/3 brown		sandy loam	moderate medium granular	friable	clear	
Bt/25-70 cm (10-28 in)	7.5YR 5/8 strong brown		sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 7.5YR 4/6 strong brown clay films
C/70-100 cm+ (28-39 in+)	10YR 5/4 yellowish brown		coarse sandy loam	single grained	loose		

Additional Notes: Broad interfluvial position; well developed profile forming in loamy fluvio-marine sediments.

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SOIL PROFILE

Auger Boring 6

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	2.5Y 4/1 dark gray		sandy loam	moderate medium granular	friable	clear	
Btg/25-62 cm (10-24 in)	10BG 6/1 greenish gray	common: 5YR 4/4 reddish brown	sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 5YR 5/1 gray clay films
Cg/62-65 cm+ (24-26 in+)	10YR 5/1 gray		coarse sand	massive	firm		auger refusal due to coarse sand

Additional Notes: Interfluvial depression position; well developed and gleyed profile forming in loamy fluvio-marine sediments.

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SOIL PROFILE

Auger Boring 7

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 3/4 dark yellowish brown		sandy loam	moderate medium granular	friable	clear	
Bt1/25-58 cm (10-23 in)	5YR 5/6 yellowish red		sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 5YR 4/6 yellowish red clay films
Bt2/58-70 cm+ (23-28 in+)	2.5YR 4/8 dark red		coarse sandy loam	weak medium subangular blocky	loose		

Additional Notes: Broad interfluvial position; well developed profile forming in loamy fluvio-marine sediments.

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SOIL PROFILE

Auger Boring 8

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 3/4 dark yellowish brown		sandy loam	moderate medium granular	friable	clear	
Bt1/25-42 cm (10-17 in)	5YR 4/6 yellowish red		sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 7.5YR 4/6 strong brown clay films
Bt2/42-55 cm+ (17-22 in+)	2.5YR 4/8 dark red		coarse sand	weak medium subangular blocky	loose		

Additional Notes: Broad interfluvial position; well developed profile forming in loamy fluvio-marine sediments.

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SOIL PROFILE

Auger Boring 9

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 4/3 brown		sandy loam	moderate medium granular	friable	clear	
E/25-53 cm (10-21 in)	10YR 5/3 brown		coarse sandy loam	weak medium subangular blocky	friable	clear	
Bt/53-75 cm+ (21-30 in+)	5YR 5/6 yellowish red		sandy clay loam, becoming more coarse with depth	moderate medium subangular blocky	firm	gradual	medium, continuous 7.5YR 4/6 strong brown clay films

Additional Notes: Broad interfluvial lower sideslope position; well developed profile forming in loamy fluvio-marine sediments. Auger refusal at 75 cm due to coarse sand content.

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SOIL PROFILE

Auger Boring 10

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
Ap/0-25 cm (0-10 in)	10YR 4/3 brown		sandy loam	moderate medium granular	friable	clear	
Bt1/25-60 cm (10-24 in)	5YR 5/6 yellowish red	common: 5YR 4/4 reddish brown	sandy clay loam	moderate medium subangular blocky	firm	gradual	medium, continuous 5YR 4/6 yellowish red clay films
Bt2/60-84 cm+ (24-33 in+)	2.5YR 4/8 dark red		coarse sandy clay loam sand, with fine gravels	weak medium subangular blocky	loose		

Additional Notes: Broad interfluvial crest position; well developed profile forming in loamy fluviomarine sediments.

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SOIL PROFILE

Auger Boring 11

Date: January 16, 2008

County: Kent County, Delaware

Soil Description By: M.G. Sams, CPSS

Project Location: Barratts Chapel Road Improvements

Horizon/Depth	SOIL COLOR		Texture	Structure	Consistence	Boundary	Comments
	Matrix	Mottling					
AC/0-100 cm+ (0-39 in+)	10YR 4/3 brown		sandy loam	very weak coarse granular	very friable		topsoil washed into basin from surrounding slopes

Additional Notes: Depression position; thick horizon of topsoil which has washed into the depression from surrounding sideslopes after plowing.

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