# Soil and Environmental Consulting Services, Inc.



Thursday, November 09, 2023

Bruner Land Company brunerland@hotmail.com

Re: Soil investigation for on-site septic disposal for the parcel split east of 6421 Troy Road, Marlboro Township, Delaware County, Ohio

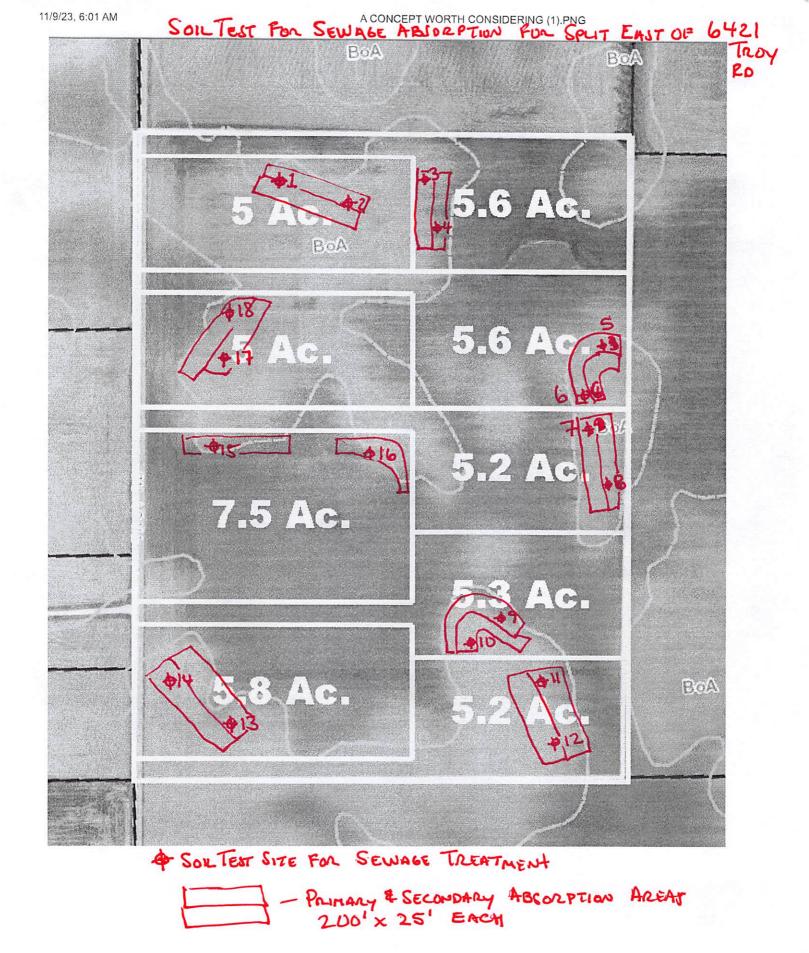
Enclosed you will find the requested detailed soil descriptions for the parcel split east of 6421 Troy Road, Marlboro Township, Delaware County, Ohio

The soils of the selected sites were mapped and described on the enclosed sheets for your records. The locations of the soil borings have been located using GPS and the locations have been delineated on the enclosed map. Copies of this letter, soil boring descriptions, sketch, and system drawing should be submitted to local health department. The health department will make the determination if the soil and site area is suitable for onsite sewage treatment.

Please protect all areas approved for septic disposal by having the contractor stake and rope off the proposed locations prior to driveway and basement excavation. No soil, building, or waste material should be stored on the proposed absorption areas. Disturbance to the areas may result in compaction and the subsequent failure of the system. Any disturbance to the 504 absorption area voids the results of this analysis.

If you have any questions or want to move forward with the septic design process feel free to contact us.

Steven Miller, CPSS



Landforms
Upland*
Terrace
Flood Plain
Lake Pain
Beach Ridge
*Includes glacial till
plain and end moraine

Position on Landform
Depression
Flat
Knoll
Crest
Hillslope
Footslope

Shape of Slope
Convex
Concave
Linear
Complex

	Horizon Nomenclature								
	Master Horizons		Horizon Suffixes	Horizon Modifiers					
О	Predominantly organic matter (litter &	a	Highly decomposed organic matter						
	humus)	b	Buried genetic horizon	Numerical Prefixes: Used to denote					
A	Mineral, organic matter (humus)	d	Densic layer (physically root restrictive)	lithologic discontinuities.					
	accumulation, loss of Fe, Al, clay	e	Moderately decomposed organic matter						
Е	Mineral, loss of Si, Fe, Al, clay, organic	g	Strong gley	7					
	matter	i	Slightly decomposed organic matter	Numerical Suffixes: Used to denote					
В	Subsurface accumulation of clay, Fe, Al, Si,	p	Plow layer or artificial disturbance	subdivisions within a master					
	humus; sesquioxides; loss of CaCo <sub>3</sub> ;	r	Weathered or soft bedrock	horizon.					
	subsurface soil structure	t	Illuvial accumulation of silicate clay	7					
С		w	Weak color or structure within B						
	Little or no pedogenic alteration,	X	Fragipan characteristics						
	unconsoilidated earthy material, soft bedrock			<del>_</del>					
R	Hard bedrock								

	Soil	Texture	
Texture Class Abbreviati	ons	Textural Class Modifiers	
Course Sand	cos	Gravelly	GR
Sand	S	Fine Gravelly	FGR
Fine Sand	fs	Medium Gravelly	MGR
Very Fine Sand	vfs	Coarse Gravelly	CGR
Loamy Coarse Sand	lcos	Very Gravelly	VGR
Loamy Sand	ls	Extremely Gravelly	XGR
Loamy Fine Sand	lfs	Cobbly	СВ
Loamy Very Fine Sand	lvfs	Very Cobbly	VCB
Coarse Sandy Loam	cosl	Extremely Cobbly	XCB
Sandy Loam	sl	Stony	ST
Fine Sandy Loam	fsl	Very Stony	VST
Very Fine Sandy Loam	vfsl	Extremely Stony	XST
Loam	1	Bouldery	BY
Silt Loam	sil	Very Bouldery	VBY
Silt	si	Extremely Bouldery	XBY
Sandy Clay Loam	scl	Channery	CN
Clay Loam	cl	Very Channery	VCN
Silty Clay Loam	sicl	Extremely Channery	XCN
Sandy Clay	sc	Flaggy	FL
Silty Clay	sic	Very Flaggy	VFL
Clay	c	Extremely Flaggy	XFL
*Estimate approximate c	lay perc		

Soil Structure									
Grade		Size		Type (Shape)					
Structureless	0	Very Fine	vf	Granular	gr				
Weak	1	Fine	f	Angular Blocky	abk				
Moderate	2	Medium	m	Subangular Blocky	sbk				
Strong	3	Coarse	co	Platy	pl				
		Very Coarse	vc	Prismatic	pr				
		Extr. Coarse	ec	Columnar	cpr				
		Very Thin*	vn	Single Grain	sg				
		Thin*	tn	Massive	m				
		Thick*	tk	Cloddy	CDY				
		Very Thick*	vk		-				

<sup>\*</sup> The sizes Very Thin, Thin, Thick, and Very Thick, are used when describing platy structure only. Substitute thin for fine, and thick for coarse when describing platy structure.

Moist Consistence							
Loose	1						
Very Friable	vfr						
Friable	fr						
Firm	fi						
Very Firm	vfi						
Extremely Firm	efi						

For a more detailed explanation on describing and sampling soils, please refer to the "Field Book for Describing and Sampling Soils" Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors) 2002. Field book for describing and sampling soils, version 2.0. Natural Resources Conservation Service, USDA, National Soil Survey Center, Lincoln, NE.

Property Ac	County:	Delaw Marlb Parcel Split East o Delaav Bruner Land	oro f 6421 Troy Rd vare	Posi	Landform: tion on Landform: Percent Slope: Shape of Slope: Bedrooms or GPD: Date: Evaluator:	Iform:         Till Plan           Backslope         1.0%           Slope:         1.0%           Slope:         Linear / Lnear           GPD:         4           Date:         Wednesday, November 08, 2023			Signature:	Sla	STEVENA MILLER CERTIFIED PROFESSIONAL SOIL SCIENTIST 28427	
Latitu	de/Longitude:			- -		Delaware OH 43015		015	Phone#: p	-614.579.		
	Method:	PitAuger	X Tube		Job Number: Soil Series:		23K119			Solicon	isultant@ya	anoo.com
Soil I	Profile		imating Soil Satur l Color (hue, value,				Estimati	ng Soil Permea	bility			
			Redoximorp	hic Features		Texture			Structure			
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 22	10YR 5/4		20%10YR 5/2	sicl	32	2	2	m	sbk	fi	
	1	1								+		

40

36

34

sic

sicl

cl

2

5

2

1

0

Limiting Conditions	inches	I	Description				Rema	rks / Risk Fact	tors:		
Perched Seasonal Water Table	8	perche	ed on glacial till	Surface water	r should be div	verted around	system. Subsurf	ace ag drainage	may be pre	sent.	
Apparent Water Table	>60		_					•	·		•
Highly Permeable Material	>60										
Bedrock	>60								· ·		
Restrictive Layer	32		glacial till								

Note: The evaluation shall include a complete site plan or site drawing including all requirements in paragraphs (B)(1) through (B)(4) of OAC 3701-29-08.

25%10YR 5/2

30%10YR 5/2

25%10YR 5/2

Bt2

BC

Cd

22 to 30

30 to 32

32+

10YR 5/4

10YR 5/4

10YR 5/4

sbk

sbk

fi

fi

vfi

County:	Delaware	Land Use / Vegetation:	Corn	Mary and an arrangement
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL PROFESSI
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0 300 300 300
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	2		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

Soil Profile		Estimating Soil Saturation  Munsell Color (hue, value, chroma)				Estimating Soil Permeability						
				ohic Features		Texture			Structure			
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 25	10YR 5/4		15%10YR 5/2	sicl	32	2	2	m	sbk	fi	
Bt2	25 to 34	10YR 5/4		20%10YR 5/1	sicl	37	2	2	m	sbk	fi	
BC	34 to 39	10YR 5/4		25%!0YR 5/1	sicl	35	2	1	m	sbk	fi	
Cd	39+	10YR 5/4		20%10YR 6/1	cl	34	5	0		m	vfi	
Limiting (	Conditions	inches	_	Description	_			Rema	arks / Risk Fac	ctors:		
erched Seasonal		8	perc	hed on glacial till	Surface wa	ter should be di	verted around s	ystem. Subsur	face ag drainag	ge may be pro	esent.	
pparent Water T		>60										
ghly Permeable	Material	>60										
edrock estrictive Layer		>60		glacial till								

County: _ Township / Sec.:	Delaware Marlboro	Land Use / Vegetation: Landform:	Corn Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	118
	Delaaware	Percent Slope:	0.5%	( cacpaes
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:	_	Bedrooms or GPD:	4	STEVEN A MILLER
_	_	Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOI
Phone #:	_	Evaluator:	Steven Miller, CPSSc	NO SUESCIENTIS
Lot #:	_	S	oil & Environmental Consulting, Inc.	Signature: 28423
Test Hole #:	3	_	P.O. Box 1121	wan voor
Latitude/Longitude:		_	Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_	<del>_</del> _	Soil Series:		

Soil I	Profile		imating Soil Sat			_	Estimati	ng Soil Permeal	bility			
		Munse	ll Color (hue, valu									
			Redoximo	rphic Features		Texture			Structure			
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr	
Ap2	6 to 11	10YR 3/3		5%10yR 4/2	sicl	30	2	2	m	sbk	fi	
Btg	11 to 54	10YR 5/2	25%10YR 5/4		sicl	35	2	2	m	sbk	fi	
BCg	54 to 60	10YR 6/2	30%10yR 5/4		sicl	32	2	1	m	sbk	fi	
Cdg	60+	10YR 5/1	25%10YR 5/4		cl	30	5	0		m	vfi	
	Conditions	inches		Description					rks / Risk Fac			
Perched Seasonal		6	pe	rched on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.							
Apparent Water T		>60										
Highly Permeable	Material	>60										
Bedrock		>60										
Restrictive Layer		60		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	Mary and an arrangement
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL PROFESSI
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0 300 300 300
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	4		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:	<u> </u>	

Soil 1	Profile		imating Soil Satur				Estimatin	ng Soil Permea	bility			
		Munse	ll Color (hue, value,									
			Redoximorp	hic Features		Texture Structure						
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr	
Ap2	6 to 14	10YR 3/3		5%10yR 4/2	sicl	32	2	2	m	sbk	fi	
Btg	14 to 58	10YR 5/1	25%10YR 5/4		sicl	35	2	2	m	sbk	fi	
BCg	58+	10YR 6/1	30%10YR 5/4		sicl	34	2	1	m	sbk	fi	
Limiting	Conditions	inches		Description					rks / Risk Fac			
Perched Seasonal		6	perc	hed on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.							
Apparent Water T		>60										
Highly Permeable	Material	>60										
Bedrock		>60										
Restrictive Layer		>60		glacial till	- 1							

County:	Delaware	Land Use / Vegetation:	Corn	and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	( cacpaes
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL I
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O South State of the state of
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	5		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

Soil I	Profile		imating Soil Satur ll Color (hue, value,			Estimating Soil Permeability						
		11101150		Redoximorphic Features		Texture Structure						
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Apl	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr	
Ap2	6 to 10	10YR3.2		5%10yR 4/2	sicl	30	2	2	m	sbk	fi	
Btg	10 to 48	10YR 5/2	15%10yR 5/4		sicl	38	2	2	m	sbk	fi	
BCg	48 to 52	10YR 5/2	35%10YR 5/4		sicl	36	2	1	m	sbk	fi	
Cdg	52+	10YR 4/2	25%10YR 5/3		sicl	34	2	0		m	vfi	
Limiting (	Conditions	inches	$\overline{}$	Description	$\overline{}$			Rema	arks / Risk Fac	ctors:		
erched Seasonal		6	perc	hed on glacial till	Surface wa	ter should be di	verted around s	ystem. Subsur	face ag drainag	ge may be pro	esent.	
pparent Water T		>60		·								
ghly Permeable	Material	>60										
edrock estrictive Layer		>60		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
_	Delaaware	Percent Slope:	0.5 to 1.0%	( cacpaes
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
_		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL /
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O SOLESIANIS
Lot #:			Soil & Environmental Consulting, Inc.	Signature: Signature: 3842
Test Hole #:	6		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_	<u> </u>	Soil Series:	_	•

Soil F	Profile		imating Soil Sat				Estimatiı	ng Soil Permeal	bility			
		Munse	l Color (hue, valu									
			Redoximo	rphic Features	Texture Structu			Structure	tructure			
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr	
Ap2	6 to 9	10YR 3/3		10%10YR4/2	sicl	32	2	2	m	sbk	fi	
Btg	9 to 40	10YR 5/2	20%!0YR 5/4		sicl	36	2	2	m	sbk	fi	
BCg	40 to 46	10YR 5/2	30%10YR 5/4		sicl	35	2	1	m	sbk	fi	
Cdg	46+	10YR 4/2	25%!0YR 5/3		sicl	32	2	0		m	vfi	
Limiting (	Conditions	inches		Description					rks / Risk Fac			
Perched Seasonal		6	pe	rched on glacial till	Surface wa	ter should be di	verted around s	system. Subsurf	ace ag drainag	e may be pro	esent.	
Apparent Water T		>60										
Highly Permeable	Material	>60										
Bedrock		>60										
Restrictive Layer		46		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cecpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	land the second second
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
_	_	Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL
Phone #:	_	Evaluator:	Steven Miller, CPSSc	A O SUESIBILIS
Lot #:	_		Soil & Environmental Consulting, Inc.	Signature: 28423
Test Hole #:	7		P.O. Box 1121	with volume
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_		Soil Series:		

Soil	Profile		imating Soil Satur				Estimatir	ng Soil Permeal	bility			
		Munsel	ll Color (hue, value	· · · · · · · · · · · · · · · · · · ·								
			Redoximor	hic Features				Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 26	10YR 5/4		20%10YR4/2	sicl	35	2	2	m	sbk	fi	
Bt2	26 to 37	10YR 5/4		35%10yR 5/2	sic	40	2	2	m	sbk	fi	
BCg	37 to 42	10YR 5/1	25%10YR 5/4		sicl	36	2	1	m	sbk	fi	
Cdg	42+	10YR 4/2	30%!0YR 5/4		sicl	34	2	0		m	vfi	
Limiting	Conditions	inches		Description	_			Rema	rks / Risk Fac	ctors:		
Perched Seasonal		8	pero	hed on glacial till	Surface wa	ter should be di	verted around s	system. Subsurf	ace ag drainag	ge may be pro	esent.	
Apparent Water	Гable	>60		-	, , , ,							
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer		42		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	and the sail and any other sails
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
_	Delaaware	Percent Slope:	0.5 to 1.0%	(cecpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVENA MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL CONTROL OF THE CONTROL OF TH
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O SOLESIANIS
Lot #:			Soil & Environmental Consulting, Inc.	Signature: Sp. A Sa42*
Test Hole #:	8	_	P.O. Box 1121	with volume
Latitude/Longitude:	_	_	Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_		Soil Series:		

Soil 1	Profile		imating Soil Satu				Estimatir	ng Soil Permeal	oility			
		Munse	ll Color (hue, value									
			Redoximor	ohic Features	Texture		Structure			]		
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 23	10YR 5/4		30%10yR 5/2	sicl	36	2	2	m	sbk	fi	
Bt2	23 to 40	10YR 5/4		40%10YR 5/2	sic	40	2	2	m	sbk	fi	
BCg	40 to 47	10YR 5/2	30%10yR 5/4		sicl	36	2	1	m	sbk	fi	
Cdg	47+	10YR 6/2	25%10YR 5/4		sicl	33	2	0		m	vfi	
	Conditions	inches		Description					rks / Risk Fac			
Perched Seasonal		8	per	ched on glacial till	Surface was	ter should be di	verted around s	system. Subsurf	ace ag drainag	e may be pro	esent.	
Apparent Water T		>60										
Highly Permeable	Material	>60										
Bedrock		>60		-1:-14:11								
Restrictive Layer		47		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn		and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	-	1
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	_	
_	Delaaware	Percent Slope:	0.5 to 1.0%	_	( cecpaes
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	_	
Address:		Bedrooms or GPD:	4	_	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	_	CERTIFIED PROFESSIONAL
Phone #:		Evaluator:	Steven Miller, CPSSc	_	1 O SOLESCHEITS
Lot #:			Soil & Environmental Consulting, Inc.	Signature:	XP. A Sh 38423
Test Hole #:	9		P.O. Box 1121	_	With V Joseph
Latitude/Longitude:			Delaware OH 43015	Phone#:	p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	_	soilconsultant@yahoo.com
		Soil Series:			
Soil Profile	Estimating Soil Saturation		Estimating Soil Perme	eability	

Soil	Profile		imating Soil Satu				Estimatir	ng Soil Permeal	bility			
		Munsel	ll Color (hue, value									
			Redoximor	phic Features	Texture Structure			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	6 to 32	10YR 5/4		25%10yR 5/2	sicl	35	2	2	m	sbk	fi	
Bt2	32 to 52	10YR 5/4		30%10YR 5/2	sicl	38	2	2	m	sbk	fi	
BCg	52 to 58	10YR 5/2	25%10RY 5/4		sicl	36	2	1	m	sbk	fi	
Cdg	58+	10YR 4/2	30%10yR 5/4		sicl	34	2	0		m	vfi	
Limiting	Conditions	inches		Description	Remarks / Risk Factors:							
Perched Seasonal		6	pero	ched on glacial till	Surface wa	ter should be di	verted around s	system. Subsurf	ace ag drainag	ge may be pro	esent.	
Apparent Water		>60										
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer	·	58		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn		and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	-	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	_	
_	Delaaware	Percent Slope:	0.5 to 1.0%	_	( cecpaes
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	-	The second of th
Address:		Bedrooms or GPD:	4	-	STEVENA MILLER
_		Date:	Wednesday, November 08, 2023	-	CERTIFIED PROFESSIONAL
Phone #:	_	Evaluator:	Steven Miller, CPSSc	-	1 O SOLE SCHERING
Lot #:			Soil & Environmental Consulting, Inc.	Signature:	XP. A Sh 28423
Test Hole #:	10		P.O. Box 1121	_	With V Joseph
Latitude/Longitude:			Delaware OH 43015	Phone#:	p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	_	soilconsultant@yahoo.com
		Soil Series:			
Soil Profile	Estimating Soil Saturation		Estimating Soil Perme	eability	

Soil	Profile		imating Soil Satu				Estimatir	ng Soil Permea	bility			
		Munsel	ll Color (hue, value									
			Redoximor	ohic Features		Texture Structur			Structure	ıcture		
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 25	10YR 5/4		30%10yR 5/2	sicl	34	2	2	m	sbk	fi	
Bt2	25 to 38	10YR 5/4		35%10YR 5/2	sic	40	2	2	m	sbk	fi	
BCg	38 to 42	10YR 5/2	30%10YR 5/4		sicl	35	2	1	m	sbk	fi	
Cdg	42+	10YR 4/2	25%10YR 5/4		sicl	34	2	0		m	vfi	
Limiting	Conditions	inches		Description	Remarks / Risk Factors:							
Perched Seasonal		8	pero	ched on glacial till	Surface wa	ter should be di	verted around s	system. Subsurf	ace ag drainag	ge may be pro	esent.	
Apparent Water		>60			, , , , ,							
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer		42		glacial till	ill							

County:	Delaware	Land Use / Vegetation:	Corn	and an end of the same
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVENA MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL PROFESSI
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0 300 300 300
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	11		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	PitAuger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

Soil	Profile		imating Soil Satur				Estimatir	ng Soil Permeal	bility			
		Munsel	l Color (hue, value,	· · · · · · · · · · · · · · · · · · ·								
			Redoximorphic Features			Texture			Structure		_	
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 19	10YR 5/4		25%!0YR 5/2	sicl	35	2	2	m	sbk	fi	
Bt2	19 to 31	10YR 5/4		30%10yR 5/2	sic	40	2	2	m	sbk	fi	
ВС	31 to 36	10YR 5/4		25%10yR 5/2	sicl	36	2	1	m	sbk	fi	
Cd	36+	10Yr 4/4		20%10YR 5/2	sicl	34	2	0		m	vfi	
Limiting	Conditions	inches		Description	Remarks / Risk Factors:							
Perched Seasonal		8	perc	hed on glacial till								
Apparent Water		>60										
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer		36		glacial till	11							

County:	Delaware	Land Use / Vegetation:	Corn	and the second second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	( cecpaes )
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	In the state of th
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O Santa Sa
Lot #:		S	oil & Environmental Consulting, Inc.	Signature: Signature: 38423
Test Hole #:	12	_	P.O. Box 1121	With V Joseph
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

Soil	Profile		imating Soil Satur				Estimatir	ng Soil Permea	bility			
		Munse	ll Color (hue, value									
			Redoximorphic Features		Texture		Structure					
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 17	10YR 5/4		35%10YR 5/2	sicl	36	2	2	m	sbk	fi	
Bt2	17 to 30	10YR 5/4		30%10yR 5/2	sic	40	2	2	m	sbk	fi	
BC	30 to 34	10YR 5/3		25%10YR 5/2	sicl	35	2	1	m	sbk	fi	
Cd	34+	10YR 4/3		30%10YR 5/2	sicl	33	2	0		m	vfi	
Limiting	Conditions	inches		Description	_			Rema	rks / Risk Fac	ctors:		
Perched Seasonal		8		hed on glacial till	Surface wa	ter should be di	verted around s				esent.	
Apparent Water		>60	Para	<b>8 vii</b>	al till Surface water should be diverted around system. Subsurface ag drainage may be present.							
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer		34		glacial till					<u>.                                      </u>			

County:	Delaware	Land Use / Vegetation:	Corn	and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0 300 300 300
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	13		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_	<del>_</del>	Soil Series:		•

Soil	Profile		imating Soil Satur				Estimatir	ng Soil Permeal	bility			
		Munsel	l Color (hue, value,									
			Redoximorp	oximorphic Features		Texture			Structure	_	_	
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 23	10YR 5/4		25%10YR 5/2	sicl	36	2	2	m	sbk	fi	
Bt2	23 to 38	10YR 5/4		30%10YR 5/2	sicl	38	2	2	m	sbk	fi	
ВС	38 to 42	10YR 5/4		35%10YR 5/2	sicl	35	2	1	m	sbk	fi	
Cd	42+	10YR 4/4		25%10yR 5/1	sicl	33	2	0		m	vfi	
Limiting	Conditions	inches		Description	Remarks / Risk Factors:							
Perched Seasonal		8	perc	hed on glacial till	Surface wa	ter should be di	verted around s	system. Subsurf	ace ag drainag	ge may be pro	esent.	
Apparent Water		>60			, , , , ,							
Highly Permeable	e Material	>60										
Bedrock		>60										
Restrictive Layer		42		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	Mary and and an arrangement
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL /
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O SOLESIANIS
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	14		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_	<u> </u>	Soil Series:		•

Soil	Profile		imating Soil Satur ll Color (hue, value			Estimating Soil Permeability						
		Munse		phic Features		Texture Structure						
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features
Ap	0 to 8	10YR 4/3			sil	25	2	1	m	sbk	fr	
Bt1	8 to 22	10YR 5/4		15%10YR 5/2	sicl	36	2	2	m	sbk	fi	
Bt2	22 to 34	10YR 5/4		20%10YR 5/2	sic	40	2	2	m	sbk	fi	
ВС	34 to 39	10YR 5/4		25%10YR 5/2	sicl	35	2	1	m	sbk	fi	
Cd	39+	10YR 4/4		20%10YR 5/2	sicl	33	2	0		m	vfi	
Limiting	Conditions	inches		Description	Remarks / Risk Factors:							
Perched Seasonal		8	perc	hed on glacial till	Surface water should be diverted around system. Subsurface ag drainage may be present.							
Apparent Water		>60										
Highly Permeable	e Material	>60										
Bedrock		>60		1 1 1 1 1 1 1								
Restrictive Layer		39		glacial till								

County:	Delaware	Land Use / Vegetation:	Corn	and the second second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cecpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	land the second second
Address:	_	Bedrooms or GPD:	4	STEVEN A MILLER
_	_	Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL SOIL SOIL SOIL SOIL SOIL SOIL SOIL TIST
Phone #:	_	Evaluator:	Steven Miller, CPSSc	A O SUESIBILISE
Lot #:			Soil & Environmental Consulting, Inc.	Signature: Signature: 3842
Test Hole #:	15	_	P.O. Box 1121	with volume
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		
C - 21 D C21 -	Estimating Sail Saturation		Estimating Sail Danne	a hilita

Soil Profile		Estimating Soil Saturation  Munsell Color (hue, value, chroma)				Estimating Soil Permeability							
			Redoximor	ohic Features		Texture			Structure		]		
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features	
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr		
Ap2	6 to 12	10YR 3/3	10%10yR 5/6	5%10YR 4/2	sicl	35	2	2	m	sbk	fi		
Btg	12 to 52	10YR 5/2	25%10YR 5/4		sicl	36	2	2	m	sbk	fi		
BCg	52 to 57	10YR 5/1	30%10YR 5/4		sicl	35	2	1	m	sbk	fi		
Cdg	57+	10YR 5/2	35%10YR 5/4		sicl	32	2	0		m	vfi		
Limiting	Limiting Conditions inches Description				Remarks / Risk Factors:								
Perched Seasonal		6	pero	thed on glacial till	Surface wa	Surface water should be diverted around system. Subsurface ag drainage may be present.							
	pparent Water Table >60						-		· · · · · · · · · · · · · · · · · · ·				
Highly Permeable	e Material	>60											
Bedrock		>60											
Lestrictive Layer 57 glacial till					•		•		•				

County:	Delaware	Land Use / Vegetation:	Corn	and the second
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cecpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	The state of the s
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL /
Phone #:		Evaluator:	Steven Miller, CPSSc	1 O SOLESIANIS
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	16		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
_		Soil Series:		

Soil	Profile	I Fet	imating Soil Satur	eation			Estimatin	a Sail Parmas	hility				
5011	rioine	Munsell Color (hue, value, chroma)				Estimating Soil Permeability							
				phic Features		Texture			Structure				
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features	
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr		
Ap2	6 to 13	10YR 3/3	5%10YR 5/6	5%10YR 4/2	sicl	36	2	2	m	sbk	fi		
Btg	13 to 48	10YR 5/2	30%10YR 5/4		sicl	38	2	2	m	sbk	fi		
BCg	48 to 55	10YR 5/1	35%10YR 5/4		sicl	35	2	1	m	sbk	fi		
Cdg	55+	10YR 5/2	30%10YR 5/4		sicl	30	2	0		m	vfi		
Limiting	Limiting Conditions inches Description		Description	Remarks / Risk Factors:									
Perched Seasonal		6	perc	hed on glacial till	Surface wa	Surface water should be diverted around system. Subsurface ag drainage may be present.							
	oparent Water Table >60						-		- 1				
	ighly Permeable Material >60												
Bedrock		>60											
estrictive Layer	estrictive Layer 55 glaci		glacial till										

County:	Delaware	Land Use / Vegetation:	Corn	
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware		0.5 to 1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL PROFESSI
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0 300 300 300
Lot #:			Soil & Environmental Consulting, Inc.	Signature: 38423
Test Hole #:	17		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

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Soil	Soil Profile		Estimating Soil Saturation  Munsell Color (hue, value, chroma)			Estimating Soil Permeability							
		Withise		phic Features		Texture							
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features	
Apl	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr		
Ap2	6 to 11	10YR 3/3	5%10YR 5/6	10%10YR 4/2	sicl	32	2	2	m	sbk	fi		
Btg	11 to 45	10YR 5/2	25%10YR 5/4		sicl	36	2	2	m	sbk	fi		
BCg	45 to 52	10YR 5/2	30%10YR 5/4		sicl	34	2	1	m	sbk	fi		
Cdg	52+	10YR 5/2	25%10YR 5/4		sicl	32	2	0		m	vfi		
Limiting	Conditions	inches		Description	Remarks / Risk Factors:								
Perched Seasonal		6	perc	hed on glacial till	Surface wa	Surface water should be diverted around system. Subsurface ag drainage may be present.							
	pparent Water Table >60						-						
	ighly Permeable Material >60												
Bedrock			1 1 1 1 1										
Restrictive Layer	estrictive Layer 52 glaci		glacial till										

County:	Delaware	Land Use / Vegetation:	Corn	
Township / Sec.:	Marlboro	Landform:	Till Plan	
Property Address/Location:	Parcel Split East of 6421 Troy Rd	Position on Landform:	Backslope	
	Delaaware	Percent Slope:	0.5 to 1.0%	(cacpaes)
Applicant Name:	Bruner Land Company	Shape of Slope:	Linear / Lnear	
Address:		Bedrooms or GPD:	4	STEVEN A MILLER
		Date:	Wednesday, November 08, 2023	CERTIFIED PROFESSIONAL SOME SOME SOME SOME SOME SOME SOME SOME
Phone #:		Evaluator:	Steven Miller, CPSSc	1 0 0
Lot #:			Soil & Environmental Consulting, Inc.	Signature: Sp. A Sp. 38423
Test Hole #:	18		P.O. Box 1121	
Latitude/Longitude:			Delaware OH 43015	Phone#: p-614.579.1164
Method:	Pit Auger X Tube	Job Number:	23K119	soilconsultant@yahoo.com
		Soil Series:		

Soil	Soil Profile		Estimating Soil Saturation			Estimating Soil Permeability							
	_	Munsell Color (hue, value, chroma)											
			Redoximorp	ohic Features		Texture			Structure	_	_		
Horizon	Depth (inches)	Matrix Color	Concentrations	Depletions	Class	Approx. % Clay	Approx. % Fragments	Grade	Size	Type (shape)	Consistence	Other Soil Features	
Ap1	0 to 6	10YR 4/3			sil	25	2	1	m	sbk	fr		
Ap2	6 to 12	10YR 3/3	5%10YR 5/6	10%10YR 4/2	sicl	32	2	2	m	sbk	fi		
Btg	12 to 50	10YR 5/2	30%10YR 5/6		sicl	38	2	2	m	sbk	fi		
BCg	50 to 54	10YR 5/1	25%10YR 5/6		sicl	32	2	1	m	sbk	fi		
Cdg	54+	10YR 5/1	30%10yR 5/6		sicl	30	2	0		m	vfi		
Limiting	Limiting Conditions inches Description		Description	Remarks / Risk Factors:									
Perched Seasona		6	perc	hed on glacial till	Surface wa	Surface water should be diverted around system. Subsurface ag drainage may be present.							
	Apparent Water Table >60						-		- 1				
Highly Permeabl	e Material	>60											
Bedrock		>60											
Restrictive Layer	Restrictive Layer 54 glacial till												