

NOTICE OF APPLICATION TO THE BOARD OF ADJUSTMENT
ONE FORM PER VARIANCE REQUEST
\$185.00 Non-Refundable Application Fee

Submit forms to:

Board of Adjustment, Attn: Secretary, Board of Adjustment, 801 E Walnut St, Rm 315, Columbia, MO 65201

SUBJECT: Notice of application in regard to the following described property located in Boone County, Missouri:

24-700-32-01-007-00

LOT F2 OF AL-DON-AL ACRES AS SHOWN IN PLAT BOOK 11 PAGE 293

*Tax Parcel Number

*legal description (attach separate form if necessary)

and known, or to be known as E. CHRISTIAN SCHOOL ROAD, HARTSBURG, MO. 65039

* street or route

*City, Zip Code

*Notice is hereby given that I/we the property owner apply to the Board of Adjustment, Boone County, Missouri for a variance from ☐ Zoning ☒ Subdivision Regulations Section(s) APPENDIX B TABLE A 250' MINIMUM LOT DEPTH
(use separate form for each requested variance)

*Reason for request (attach a separate sheet if needed): WISH TO SUBDIVIDE LOT INTO TWO
LOTS, AN EXISTING CONDITION OF THE NORTHERN LOT IS LESS THAN 250' IN DEPTH

Type and location of building the variance is requested for, if applicable. (May be indicated on survey or aerial photograph – attach copy)

N/A

*Current zoning: A-2 *Current use of the property: VACANT

Proposed use if different from above: RESIDENTIAL, SINGLE FAMILY

Authority to grant said permission is given to the Board of Adjustment by Section 15C, Boone County Zoning Regulations. If the Board of Adjustment grants permission as requested, there will still be substantial compliance with the Zoning Regulations, the spirit of the Zoning Regulations will be observed, public safety and welfare will be secured and substantial justice will be done. I/We request that the Board of Adjustment grant the above described request and that a Certificate of Decision be issued by said Board to that effect.

I understand that only the variance requested above will be heard by the Board. I also understand that if an additional variance is required it will not be heard before the Board until the variance is advertised and notice has been given to interested parties as required.

Attached hereto and made part hereof is a list with the names and addresses of all parties in interest, including all property owners within 1,000 feet of the subject property, to the best of my/our belief, and a copy of the current owner's deed to the property.

Enclosed is an application fee of \$185.00. I understand I will be billed for additional fees including mailing, public notice, and recording costs. The above information is true and correct to the best of my knowledge.

Richard Thies 7-24-26
*Signature of owner(s) Date

573-268-6683

*Daytime Phone

Email Address

RICHARD THIES JAWICE THIES
*Print Name

*Address

HARTSBURG MO 65039

*City & Zip

Bill additional fees to (if applicable):

KEVIN SCHWEIKERT 573-442-3110

Name Phone

Address

Email Address

I hereby acknowledge receipt of application:

Secretary, Board of Adjustment

Date

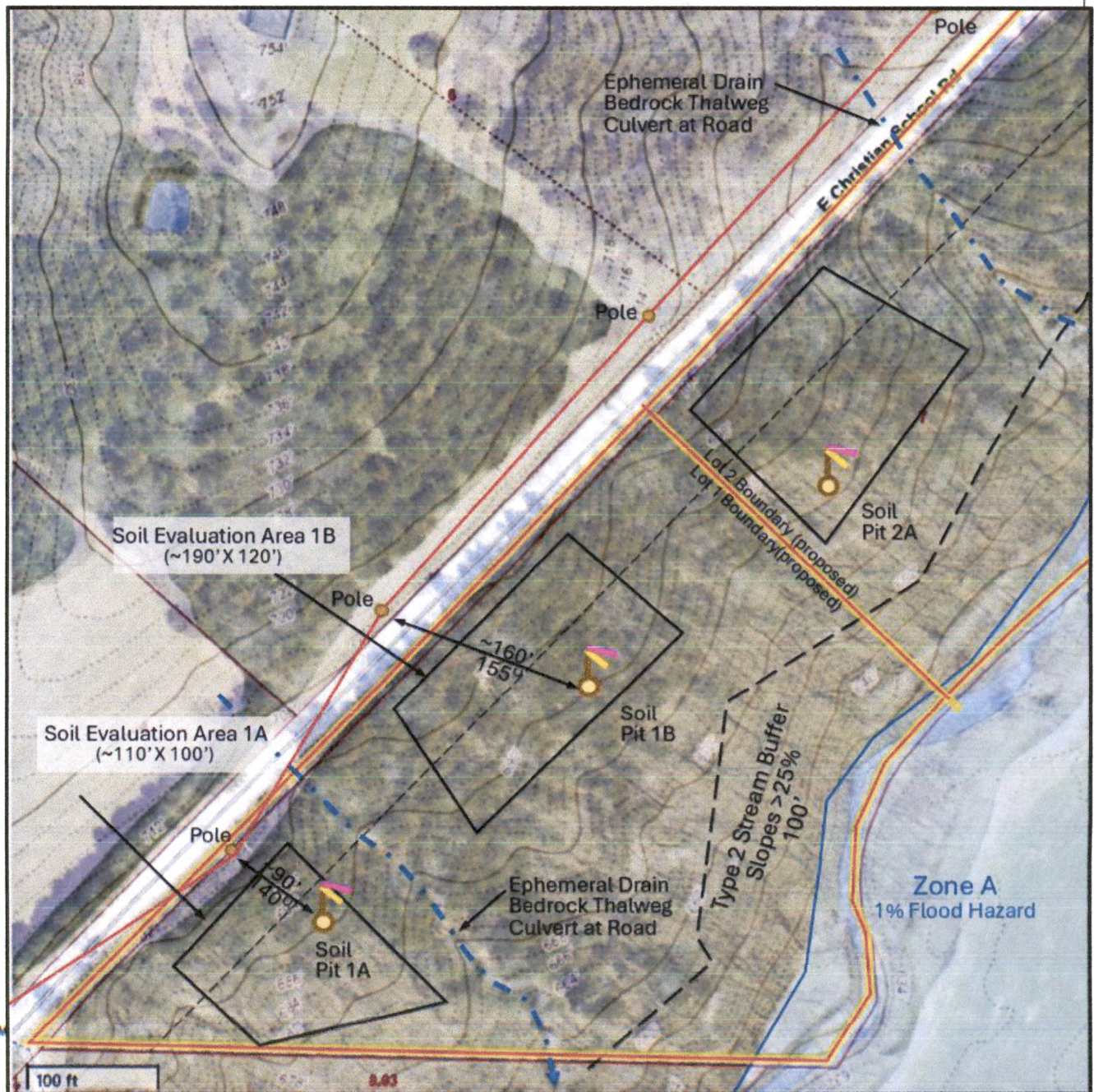


STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

APPLICATION # _____

Lot 1, Soil Eval Area B

Property Owner:	Thies, Richard and Janice		Date:	22 July 2026	
Site Address:	E Christian School Road		Mailing Address:	[REDACTED]	
	Hartsburg, MO 65039			Hartsburg, Missouri 65039	
Subdivision, Lot:	24-700-32-01-007.00 01 (pt)		Day()	Evening()	
County:	Boone 4.06 ac (planned)		Legal Location:	SW 1/4 SE 1/4 NE 1/4, S 32, T46N, R12W	
Residence - # Bedrooms:	TBD # People TBD		Latitude:	38.72477	
			Longitude:	-92.29525	
Business - Type:	N/A		Design flow:	TBD gpd; System is: New ☒ Replacement ☐ Repair ☐	





STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 1, Soil Eval Area B

SOIL PROFILE DESCRIPTION

Owner: Thies, Richard and Janice

Date: 22 July 2026

SOIL CHARACTERISTICS						Excavation Depth: 50"			Pit (required for new installation) or Core #: 1B						
Vegetation: Cedar-Hardwood Regrowth						Parent Material: Loess									
Suitability (S, PS, U)	Horizon		Munsell Color (moist)	Redoximorphic Features (2)	Texture		% Coarse Fragments by volume		Consis- tence (4)	Structure	Roots /Pores (6)	Shrink /Swell	Soil Group	Application Rate	
	Desig- nation	Depth / Boundary (1)			USDA (3)	% Clay	<3"	>3"						Conv. (Table 13)	LPP (Table 14)
PS	Ap	0" - 4" CS	10YR 3/3	---	SiCl	33	0	0	FR S	M F SBK	MF, CM MF-C	L	III	0.30	0.15
U	Bt ₁	4" - 15" CS	10YR 4/6	---	SiCl	36	0	0	FI S	M F&M SBK	CF-C MF-C	M	IVb	---	0.06
U	2Bt ₂	15" - 26" DS	10YR 4/6	10YR 5/3 RC 7.5YR 4/6 RC	SiCl	37	0	0	VFI S	M M SBK	CF, FM MF-C	M	IVb	---	0.05
U	2Bt ₃	26" - 39" GS	10YR 4/6	10YR 5/3 RC 7.5YR 4/6 RC	SiCl	37	0	0	VFI VS	M M SBK	FF MF-C	M	IVb	---	0.05
U	2Bt ₄	39" - 50" ---	10YR 4/6	10YR 2/1	SiCl	37	0	0	VFI VS	M M&C SBK	FF MF-C	M	IVb	---	0.05

Notes: Menfro Soil Series, severely eroded. Ap Horizon is exposed Bt.

15"-39" RC (Root Channels) 10YR5/3 in old tree root channels with 7.5YR 4/6 in halos around the channel (in matrix).

Notations used on Soil Profile Description

Boundary distinctness: A-abrupt, C-clear, G-gradual; topography: S-smooth, W-wavy, I-irregular.

Redox Features Report low chroma Munsell colors and iron and manganese concentrations indicative of soil drainage limitations;

Texture s-sand, ls-loamy sand, sl-sandy loam, l-loam, sil-silt loam, si-silt, sci-sandy clay loam, cl-clay loam, sici-silty clay loam, sc-sandy clay, sic-silty clay, c-clay; Designate estimated clay content for all horizons;

Consistence (report moist consistence) moist: fr-friable, fi-firm, vfi-very firm; wet: ss-slightly sticky, s-sticky, vs-very sticky and sp-slightly plastic, p-plastic, vp-very plastic; dry: sh-slightly hard, h-hard, vh-very hard;

Structure grade: 1-weak, 2-moderate, 3-strong; size: f-fine (thin if platy), m-medium, c-coarse (thick if platy); shape: ABK-angular blocky, SBK-subangular blocky, GR-granular, PL-platy, PR-prismatic, MA-massive;

Roots/Pores abundance: f-few, c-common, m-many; size: vf-very fine, f-fine, m-medium, c-coarse.



STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 1, Soil Eval Area B

SITE CLASSIFICATION for ONSITE SEWAGE SYSTEM – 19 CSR 20-3.060(2) & (7)

Owner: Thies, Richard and Janice

Pit/Core #: 1B

Date: 22 July 2026

Suitability See recommendations below S – Suitable; PS – Provisionally Suitable; U – Unsuitable; for conventional system.

<u>S</u>	LANDSCAPE POSITION: <u>Backslope</u>		Slope aspect: <u>140° (SE)</u>	
	Flooding frequency: None ☒ Rare ☐ Occasional ☐ Frequent ☐		Surface depression(s) in evaluated area? <u>No</u>	
<u>PS</u>	& TOPOGRAPHY		Percent Slope: <u>20%</u>	
	Slope Type: Uniform ☒ Complex ☐			
	Shape across (contour): <u>Convex</u>		Shape down (profile): <u>Linear</u>	
	SOIL CHARACTERISTICS (See Profile Description for details)			
<u>U</u>	<u>SiCl</u> TEXTURE to a depth of <u>17</u> inches		Depth of unsuitable texture <u>17 - 50</u> inches	
	<u>SBK</u> STRUCTURE to a depth of <u>50</u> inches		Depth of unsuitable structure <u>>50</u> inches	
<u>S</u>	SOIL DRAINAGE		Type of water table: <u>None</u>	
	Surface drainage limitations: <u>None</u>		Depth to water table <u>>50</u> inches	
	Runoff slope length <u>~120</u> feet			
<u>S</u>	SOIL THICKNESS		Depth of bedrock: <u>>50</u> inches	
	Rock outcrops? <u>None</u>			
<u>S</u>	RESTRICTIVE HORIZON		Type: <u>None</u>	
	Depth: <u>>50"</u>		Thickness: <u>N/A</u>	
<u>S</u>	AVAILABLE SPACE		Estimated space available: <u>~190' X 120' ~23,000ft²</u>	
	Adequate for a conventional system? <u>Yes</u>		An alternative system? <u>Yes</u>	
	Replacement area? <u>Yes</u>			
	OTHER FACTORS			
	Note any environmental hazards: <u>None</u>			
	High groundwater contamination potential? (If yes, indicate reason): <u>No</u>			
	Sinkhole ☐ Rapid permeability ☐ Depth to highly permeable bedrock ☐ Fill material/depth ☐			
<u>PS</u>	OVERALL Notes: <u>Group IVb Soils, Slopes > 15%</u>			

Overall site classification will be determined by the lowest of the uncorrectable characteristics.

- **S** An overall site classification of suitable indicates soil and site conditions favorable for the operation of a conventional absorption system.
- **PS** Sites classified as provisionally suitable require some modifications and careful planning, design, and installation for a conventional system or alternative system to function satisfactorily.
- **U** Sites originally classified as unsuitable may possibly be reclassified as provisionally suitable according to subsection (7)(K).
- An unsuitable site may be used for soil absorption systems, provided engineering, hydrogeologic and soil studies indicate to the administrative authority that a conventional or alternative system could be expected to function satisfactorily. These sites may be reclassified as provisionally suitable upon meeting the requirements of the administrative authority according to subsection (6)(K).

Recommendations* associated with Provisionally Suitable or Unsuitable classifications:

<u>Yes</u>	Trenches must not be dug when wet to prevent damaging soil/trench surfaces.
<u>Yes</u>	Surface water diversion is needed.
<u>Yes</u>	An interceptor drain should be installed upslope at a depth of <u>36</u> inches.
<u>Yes</u>	Shallow or modified shallow placed trenches should be installed at a depth of <u>10-12</u> inches.
<u>Yes</u>	An alternative/engineered system is needed to overcome site limitations.

This site is best suited for a drip irrigation system.

Slopes are too steep for lagoon construction.

Tract is former row crop, Menfro soils, with >36' of surface removed during farming time period.



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BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 1, Soil Eval Area B

Owner: Thies, Richard and Janice

Date: 22 July 2026

*Recommendations are to assist the property owner and their agents in complying with the standards, and are subject to approval by the administrative authority.

I, the undersigned, hereby certify that the site evaluation was made in accordance with the requirements of Sections 701.025-701.059 RSMo and 19 CSR 20-3.060 and 19 CSR 20-3.080, and that the data recorded is correct to the best of my knowledge.

Bryan Mayhan

10-100

Bryan D Mayhan

23 July 2026

Print name

OSE ID #

Date

Important Recommendations for Installers and Homeowners:

Protect the absorption area before and after construction. Do not drive over or store excavated materials on field area etc.

Shallow placed absorption systems utilize more permeable and better-aerated soil horizons.

Do not install soil absorption system when soil is wet. Redirect surface water, house guttering, and foundation drains away from absorption field.

Establish & maintain adequate vegetative cover over the field. Regularly inspect, maintain, and pump your sewage system.

Install water saving devices & practice water conservation. Check for and repair any water leaks as soon as discovered.

Spread out water use, such as laundry, throughout the week.

Restrict garbage disposal use.

Do not put fats or grease into the sewage system. Keep chemicals and hazardous wastes out of your system.

Use disinfectants and high strength cleaners sparingly.

Do not plan any building improvements, patios, etc. near the sewage system or repair area.

Minimum Set-Back Distances			
Based on 19 CSR 20-3.060(1)(D) Table 1			
[See also (6)(D) for lagoons]			
Minimum Distance from	Sewage Tank	Disposal Area	Lagoons
	(feet)	(feet)	(feet)
Private water supply well	50	100	100
Public water supply well	300	300	300
Cistern	25	25	25
Spring	50	100	100
Classified stream or lake	50	50	50
Stream or open ditch	25	25	25
Property lines	10	10**	75
Building foundation	5	15	[100]
Basement	15	25	[100]
Swimming pool	15	15	
Pressure water line	10	10	10
Suction water line	50	100	100
Upslope interceptor drain	-	10	
Downslope interceptor drain	-	25	
Embankment or cuts	-	20	
Edge of sink holes	50	100	500
Other absorption system	-	20	20

**Recommend 25 feet from downslope property line.



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APPLICATION # _____

Lot 1, Soil Eval Area A

Property Owner:	Thies, Richard and Janice		Date:	22 July 2026	
Site Address:	E Christian School Road		Mailing Address:	[REDACTED]	
	Hartsburg, MO 65039			Hartsburg, Missouri 65039	
Subdivision, Lot:	24-700-32-01-007.00 01 (pt)		Day()	Evening()	
County:	Boone 4.06 ac (planned)		Legal Location:	SW 1/4 SE 1/4 NE 1/4, S 32, T46N, R12W	
Residence - # Bedrooms:	TBD # People TBD		Latitude:	38.72439	
			Longitude:	-92.29583	
Business - Type:	N/A		Design flow:	TBD gpd; System is: New ☒ Replacement ☐ Repair ☐	





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SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 1, Soil Eval Area A

SOIL PROFILE DESCRIPTION

Owner: Thies, Richard and Janice

Date: 22 July 2026

SOIL CHARACTERISTICS				Excavation Depth: 50"				Pit (required for new installation) or Core #: 1A							
Vegetation: Cedar-Hardwood Regrowth				Parent Material: Loess											
Suitability (S, PS, U)	Horizon		Munsell Color (moist)	Redoximorphic Features ⁽²⁾	Texture		% Coarse Fragments by volume		Consis- tence ⁽⁴⁾	Structure	Roots /Pores ⁽⁶⁾	Shrink /Swell	Soil Group	Application Rate	
	Desig- nation	Depth / Boundary ⁽¹⁾			USDA ⁽³⁾	% Clay	<3"	>3"						Conv. (Table 13)	LPP (Table 14)
PS	Ap	0" - 5" CS	10YR 3/3	---	SiCl	31	0	0	FR SS	M F SBK	MF-M MF-C	L	III	0.32	0.16
PS	Bt ₁	5" - 17" CS	10YR 4/4	---	SiCl	34	0	0	FI S	M F&M SBK	CF-C MF-C	L	III	0.30	0.15
U	2Bt ₂	17" - 26" GS	10YR 4/4	10YR 5/3 RC 7.5YR 4/6 RC	SiCl	35	0	0	VFI S	M M SBK	CF-EM MF-C	M	IVb	---	0.05
U	2Bt ₃	26" - 38" DS	10YR 4/6	10YR 5/3	SiCl	38	0	0	VFI S	M M SBK	FF MF-C	M	IVb	---	0.05
U	2Bt ₄	38" - 50" ---	10YR 4/6	10YR 2/2 VPF	SiCl	38	0	0	VFI S	M M&C SBK	FF MF-C	M	IVb	---	0.05

Notes: Menfro Soil Series, severely eroded. Ap Horizon is exposed Bt.

17"-26" RC (Root Channels) 10YR5/3 in old tree root channels with 7.5YR 4/6 in halos around the channel (in matrix).

38"-50" VPF (Vertical Ped Faces) MnO stains on vertical ped faces.

Notations used on Soil Profile Description

Boundary distinctness: A-abrupt, C-clear, G-gradual; topography: S-smooth, W-wavy, I-irregular;

Redox Features Report low chroma Munsell colors and iron and manganese concentrations indicative of soil drainage limitations;

Texture s-sand, ls-loamy sand, sl-sandy loam, l-loam, sil-silt loam, si-silt, sci-sandy clay loam, cl-clay loam, scli-silty clay loam, sc-sandy clay, sic-silty clay, c-clay; Designate estimated clay content for all horizons;

Consistence (report moist consistence) moist: fr-friable, fl-firm, vfl-very firm; wet: ss-slightly sticky, s-sticky, vs-very sticky and sp-slightly plastic, p-plastic, vp-very plastic; dry: sh-slightly hard, h-hard, vh-very hard;

Structure grade: 1-weak, 2-moderate, 3-strong; size: f-fine (thin if platy), m-medium, c-coarse (thick if platy); shape: ABK-angular blocky, SBK-subangular blocky, GR-granular, PL-platy, PR-prismatic, MA-massive;

Roots/Pores abundance: f-few, c-common, m-many; size: vf-very fine, f-fine, m-medium, c-coarse.



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SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 1, Soil Eval Area A

SITE CLASSIFICATION for ONSITE SEWAGE SYSTEM – 19 CSR 20-3.060(2) & (7)

Owner: Thies, Richard and Janice

Pit/Core #: 1A

Date: 22 July 2026

Suitability See recommendations below S – Suitable; PS – Provisionally Suitable; U – Unsuitable; for conventional system.

<u>S</u>	LANDSCAPE POSITION: <u>Backslope</u>		Slope aspect: <u>135° (SE)</u>
	Flooding frequency: None ☒ Rare ☐ Occasional ☐ Frequent ☐		Surface depression(s) in evaluated area? <u>No</u>
<u>PS</u>	& TOPOGRAPHY Percent Slope: <u>16%</u>		Slope Type: Uniform ☒ Complex ☐
	Shape across (contour): <u>Convex</u>	Shape down (profile): <u>Linear</u>	
SOIL CHARACTERISTICS (See Profile Description for details)			
<u>U</u>	<u>SiCl</u> TEXTURE to a depth of <u>17</u> inches	Depth of unsuitable texture <u>17 - 50</u> inches	
	<u>SBK</u> STRUCTURE to a depth of <u>50</u> inches	Depth of unsuitable structure <u>>50</u> inches	
<u>S</u>	SOIL DRAINAGE Type of water table: <u>None</u>	Depth to water table <u>>50</u> inches	
	Surface drainage limitations: <u>None</u>	Runoff slope length <u>~90</u> feet	
<u>S</u>	SOIL THICKNESS Depth of bedrock: <u>>50</u> inches	Rock outcrops? <u>None</u>	
<u>S</u>	RESTRICTIVE HORIZON Type: <u>None</u>	Depth: <u>>50"</u>	Thickness: <u>N/A</u>
<u>S</u>	AVAILABLE SPACE Estimated space available: <u>~110' X 100' ~11,000ft²</u>		
	Adequate for a conventional system? <u>Yes</u> An alternative system? <u>Yes</u> Replacement area? <u>Yes</u>		
	OTHER FACTORS Note any environmental hazards: <u>None</u>		
	High groundwater contamination potential? (If yes, indicate reason): <u>No</u>		
	Sinkhole ☐ Rapid permeability ☐ Depth to highly permeable bedrock ☐ Fill material/depth ☐		
<u>PS</u>	OVERALL Notes: <u>Group IVb Soils, Slopes > 15%</u>		

Overall site classification will be determined by the lowest of the uncorrectable characteristics.

- **S** An overall site classification of suitable indicates soil and site conditions favorable for the operation of a conventional absorption system.
- **PS** Sites classified as provisionally suitable require some modifications and careful planning, design, and installation for a conventional system or alternative system to function satisfactorily.
- **U** Sites originally classified as unsuitable may possibly be reclassified as provisionally suitable according to subsection (7)(K).
- An unsuitable site may be used for soil absorption systems, provided engineering, hydrogeologic and soil studies indicate to the administrative authority that a conventional or alternative system could be expected to function satisfactorily. These sites may be reclassified as provisionally suitable upon meeting the requirements of the administrative authority according to subsection (6)(K).

Recommendations* associated with Provisionally Suitable or Unsuitable classifications:

<u>Yes</u>	Trenches must not be dug when wet to prevent damaging soil/trench surfaces.
<u>Yes</u>	Surface water diversion is needed.
<u>Yes</u>	An interceptor drain should be installed upslope at a depth of <u>36</u> inches.
<u>Yes</u>	Shallow or modified shallow placed trenches should be installed at a depth of <u>10-12</u> inches.
<u>Yes</u>	An alternative/engineered system is needed to overcome site limitations.

This site is best suited for a drip irrigation system.

Slopes are too steep for lagoon construction.

Tract is former row crop, Menfro soils, with approximately 30' of surface removed during farming time period.



STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
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Lot 1, Soil Eval Area A

Owner: Thies, Richard and Janice

Date: 22 July 2026

*Recommendations are to assist the property owner and their agents in complying with the standards, and are subject to approval by the administrative authority.

I, the undersigned, hereby certify that the site evaluation was made in accordance with the requirements of Sections 701.025-701.059 RSMo and 19 CSR 20-3.060 and 19 CSR 20-3.080, and that the data recorded is correct to the best of my knowledge.

Bryan Mayhan

10-100

Bryan Mayhan

23 July 2026

Print name

OSE ID #

Date

Important Recommendations for Installers and Homeowners:

Protect the absorption area before and after construction. Do not drive over or store excavated materials on field area etc.

Shallow placed absorption systems utilize more permeable and better-aerated soil horizons.

Do not install soil absorption system when soil is wet. Redirect surface water, house guttering, and foundation drains away from absorption field.

Establish & maintain adequate vegetative cover over the field. Regularly inspect, maintain, and pump your sewage system.

Install water saving devices & practice water conservation. Check for and repair any water leaks as soon as discovered.

Spread out water use, such as laundry, throughout the week.

Restrict garbage disposal use.

Do not put fats or grease into the sewage system. Keep chemicals and hazardous wastes out of your system.

Use disinfectants and high strength cleaners sparingly.

Do not plan any building improvements, patios, etc. near the sewage system or repair area.

Minimum Set-Back Distances			
Based on 19 CSR 20-3.060(1)(D) Table 1			
[See also (6)(D) for lagoons]			
Minimum Distance from	Sewage Tank (feet)	Disposal Area (feet)	Lagoons (feet)
Private water supply well	50	100	100
Public water supply well	300	300	300
Cistern	25	25	25
Spring	50	100	100
Classified stream or lake	50	50	50
Stream or open ditch	25	25	25
Property lines	10	10**	75
Building foundation	5	15	[100]
Basement	15	25	[100]
Swimming pool	15	15	
Pressure water line	10	10	10
Suction water line	50	100	100
Upslope interceptor drain	-	10	
Downslope interceptor drain	-	25	
Embankment or cuts	-	20	
Edge of sink holes	50	100	500
Other absorption system	-	20	20

**Recommend 25 feet from downslope property line.



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APPLICATION # _____

Lot 2, Soil Eval Area 2B

Property Owner: Thies, Richard and Janice

Date: 22 July 2026

Site Address: E Christian School Road

Mailing Address:

Hartsburg, MO 65039

Hartsburg, Missouri 65039

Subdivision, Lot: 24-700-32-01-007.00 01 (pt)

Day() - Evening() -

County: Boone 5.07 ac (planned)

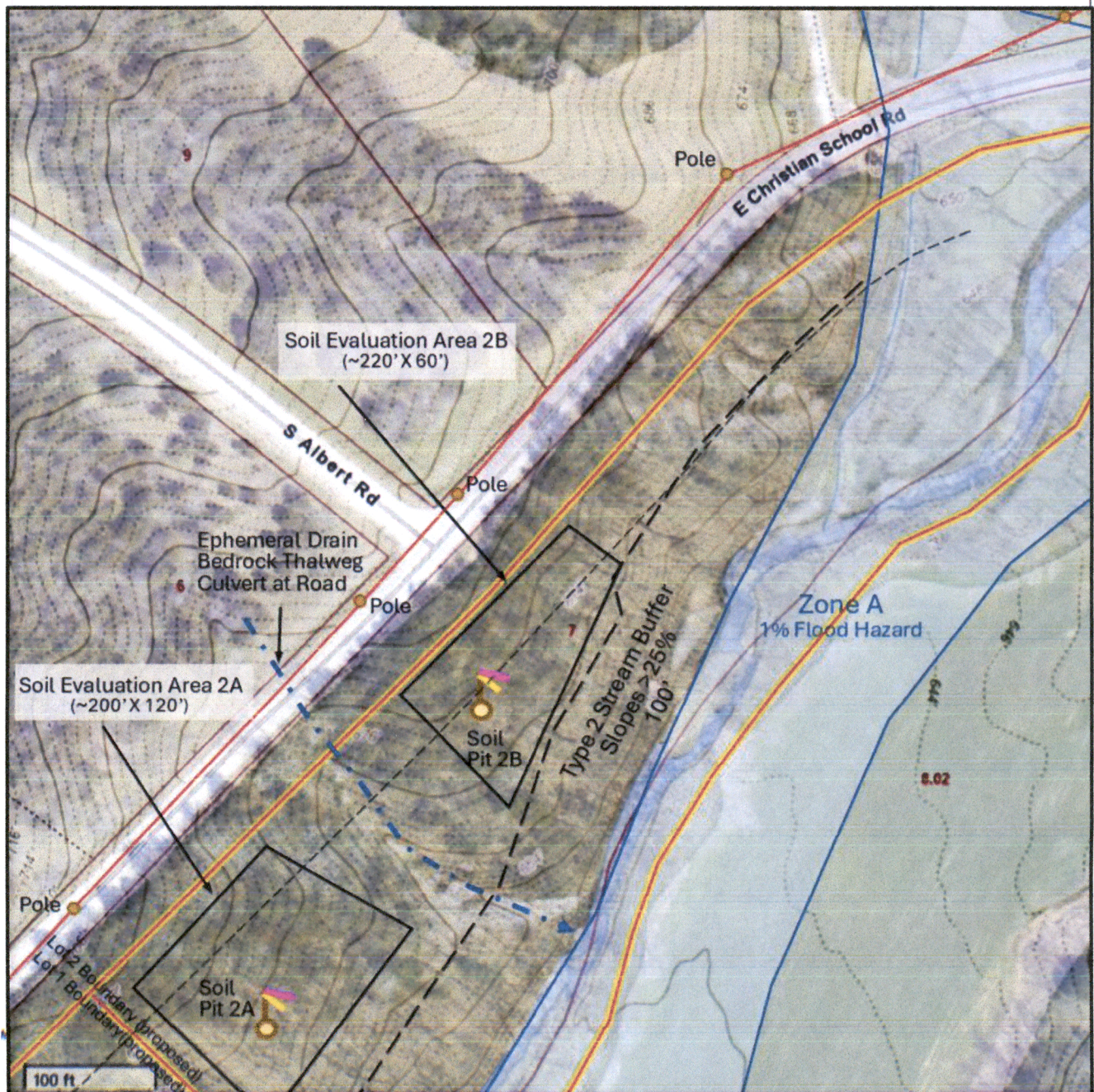
Legal Location: NE 1/4 SE 1/4 NE 1/4, S 32, T46N, R12W

Residence - # Bedrooms: TBD # People: TBD

Latitude: 38.72606

Longitude: -92.29372

Business - Type: N/A Design flow: TBD gpd; System is: New ☒ Replacement ☐ Repair ☐





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Lot 2, Soil Eval Area 2B

SOIL PROFILE DESCRIPTION

Owner: Thies, Richard and Janice

Date: 22 July 2026

SOIL CHARACTERISTICS				Excavation Depth: 50"				Pit (required for new installation) or Core #: 2B							
Vegetation: Cedar-Hardwood Regrowth				Parent Material: Loess											
Suitability (S, PS, U)	Horizon		Munsell Color (moist)	Redoximorphic Features ⁽²⁾	Texture		% Coarse Fragments by volume		Consis- tence ⁽⁴⁾	Structure	Roots /Pores ⁽⁶⁾	Shrink /Swell	Soil Group	Application Rate	
	Desig- nation	Depth / Boundary ⁽¹⁾			USDA ⁽³⁾	% Clay	<3"	>3"						Conv. (Table 13)	LPP (Table 14)
PS	Ap	0" - 5" CS	10YR 4/4	---	SiCl	34	0	0	FR S	M F SBK	MF-M MF-C	L	III	0.30	0.15
U	Bt ₁	5" - 16" CS	10YR 4/6	7.5YR 4/6 RC 10YR 5/3 RC	SiCl	37	0	0	FI VS	M M SBK	CF-C MF-C	M	IVb	---	0.05
U	2Bt ₂	18" - 32" CS	10YR 4/6	7.5YR 4/6 RC 10YR 5/3 RC	SiCl	37	0	0	VFI VS	M C SBK	CF-EM MF-C	M	IVb	---	0.05
U	2Bt ₃	32" - 40" DS	10YR 4/6	---	SiCl	38	0	0	VFI VS	M C SBK	FF MF-C	M	IVb	---	0.05
U	2Bt ₄	40" - 50" ---	10YR 4/6	10YR 12/1	SiCl	37	0	0	VFI VS	M C SBK	FF MF-C	M	IVb	---	0.05

Notes: Menfro Soil Series, severely eroded. Ap Horizon is exposed Bt.

5"-32" RC (Root Channels) 10YR5/3 in old tree root channels with 7.5YR 4/6 in halos around the channel (in matrix).

Notations used on Soil Profile Description

Boundary distinctness: A-abrupt, C-clear, G-gradual; topography: S-smooth, W-wavy, I-irregular;

Redox Features Report low chroma Munsell colors and iron and manganese concentrations indicative of soil drainage limitations;

Texture s-sand, ls-loamy sand, sl-sandy loam, l-loam, sil-silt loam, si-silt, scl-sandy clay loam, cl-clay loam, scli-silty clay loam, sc-sandy clay, sic-silty clay, c-clay; Designate estimated clay content for all horizons;

Consistence (report moist consistence) moist: fr-friable, fl-firm, vfl-very firm; wet: ss-slightly sticky, s-sticky, vs-very sticky and sp-slightly plastic, p-plastic, vp-very plastic; dry: sh-slightly hard, h-hard, vh-very hard;

Structure grade: 1-weak, 2-moderate, 3-strong; size: f-fine (thin if platy), m-medium, c-coarse (thick if platy); shape: ABK-angular blocky, SBK-subangular blocky, GR-granular, PL-platy, PR-prismatic, MA-massive;

Roots/Pores abundance: f-few, c-common, m-many; size: vf-very fine, f-fine, m-medium, c-coarse.



STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 2, Soil Eval Area 2B

SITE CLASSIFICATION for ONSITE SEWAGE SYSTEM – 19 CSR 20-3.060(2) & (7)

Owner: Thies, Richard and Janice

Pit/Core #: 2B

Date: 22 July 2026

Suitability See recommendations below S – Suitable; PS – Provisionally Suitable; U – Unsuitable; for conventional system.

<u>S</u>	LANDSCAPE POSITION: <u>Backslope</u>		Slope aspect: <u>150° (SE)</u>
	Flooding frequency: None ☒ Rare ☐ Occasional ☐ Frequent ☐		Surface depression(s) in evaluated area? <u>No</u>
<u>PS</u>	& TOPOGRAPHY		Percent Slope: <u>23%</u>
	Slope Type: Uniform ☒ Complex ☐		
	Shape across (contour): <u>Convex</u>	Shape down (profile): <u>Linear</u>	
SOIL CHARACTERISTICS (See Profile Description for details)			
<u>U</u>	<u>SiCl</u> TEXTURE to a depth of <u>16</u> inches	Depth of unsuitable texture <u>16 - 50</u> inches	
	<u>SBK</u> STRUCTURE to a depth of <u>50</u> inches	Depth of unsuitable structure <u>>50</u> inches	
<u>S</u>	SOIL DRAINAGE	Type of water table: <u>None</u>	Depth to water table <u>>50</u> inches
	Surface drainage limitations: <u>None</u>	Runoff slope length <u>~140</u> feet	
<u>S</u>	SOIL THICKNESS	Depth of bedrock: <u>>50</u> inches	Rock outcrops? <u>None</u>
<u>S</u>	RESTRICTIVE HORIZON	Type: <u>None</u>	Depth: <u>>50"</u> Thickness: <u>N/A</u>
<u>S</u>	AVAILABLE SPACE	Estimated space available: <u>~220' X 80' ~16,000ft²</u>	
	Adequate for a conventional system? <u>Yes</u>	An alternative system? <u>Yes</u>	Replacement area? <u>Yes</u>
	OTHER FACTORS Note any environmental hazards: <u>None</u>		
	High groundwater contamination potential? (If yes, indicate reason): <u>No</u>		
	Sinkhole ☐ Rapid permeability ☐ Depth to highly permeable bedrock ☐ Fill material/depth ☐		
<u>PS</u>	OVERALL	Notes: <u>Group IVb Soils, Slopes > 15%</u>	

Overall site classification will be determined by the lowest of the uncorrectable characteristics.

- **S** An overall site classification of suitable indicates soil and site conditions favorable for the operation of a conventional absorption system.
- **PS** Sites classified as provisionally suitable require some modifications and careful planning, design, and installation for a conventional system or alternative system to function satisfactorily.
- **U** Sites originally classified as unsuitable may possibly be reclassified as provisionally suitable according to subsection (7)(K).
- An unsuitable site may be used for soil absorption systems, provided engineering, hydrogeologic and soil studies indicate to the administrative authority that a conventional or alternative system could be expected to function satisfactorily. These sites may be reclassified as provisionally suitable upon meeting the requirements of the administrative authority according to subsection (6)(K).

Recommendations* associated with Provisionally Suitable or Unsuitable classifications:

Yes Trenches must not be dug when wet to prevent damaging soil/trench surfaces.

Yes Surface water diversion is needed.

Yes An interceptor drain should be installed upslope at a depth of 36 inches.

Yes Shallow or modified shallow placed trenches should be installed at a depth of 10-12 inches.

Yes An alternative/engineered system is needed to overcome site limitations.

This site is best suited for a drip irrigation system.

Slopes are too steep for lagoon construction.

Tract is former row crop, Menfro soils, with >30' of surface removed during farming time period.



STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
BUREAU OF ENVIRONMENTAL HEALTH SERVICES
ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 2, Soil Eval Area 2B

Owner: Thies, Richard and Janice

Date: 22 July 2026

*Recommendations are to assist the property owner and their agents in complying with the standards, and are subject to approval by the administrative authority.

I, the undersigned, hereby certify that the site evaluation was made in accordance with the requirements of Sections 701.025-701.059 RSMo and 19 CSR 20-3.060 and 19 CSR 20-3.080, and that the data recorded is correct to the best of my knowledge.

Bryan Mayhan

10-100

Bryan D Mayhan

23 July 2026

Print name

OSE ID #

Date

Important Recommendations for Installers and Homeowners:

Protect the absorption area before and after construction. Do not drive over or store excavated materials on field area etc.

Shallow placed absorption systems utilize more permeable and better-aerated soil horizons.

Do not install soil absorption system when soil is wet. Redirect surface water, house guttering, and foundation drains away from absorption field.

Establish & maintain adequate vegetative cover over the field. Regularly inspect, maintain, and pump your sewage system.

Install water saving devices & practice water conservation. Check for and repair any water leaks as soon as discovered.

Spread out water use, such as laundry, throughout the week.

Restrict garbage disposal use.

Do not put fats or grease into the sewage system. Keep chemicals and hazardous wastes out of your system.

Use disinfectants and high strength cleaners sparingly.

Do not plan any building improvements, patios, etc. near the sewage system or repair area.

Minimum Set-Back Distances			
Based on 19 CSR 20-3.060(1)(D) Table 1			
[See also (6)(D) for lagoons]			
Minimum Distance from	Sewage Tank	Disposal Area	Lagoons
	(feet)	(feet)	(feet)
Private water supply well	50	100	100
Public water supply well	300	300	300
Cistern	25	25	25
Spring	50	100	100
Classified stream or lake	50	50	50
Stream or open ditch	25	25	25
Property lines	10	10**	75
Building foundation	5	15	[100]
Basement	15	25	[100]
Swimming pool	15	15	
Pressure water line	10	10	10
Suction water line	50	100	100
Upslope interceptor drain	-	10	
Downslope interceptor drain	-	25	
Embankment or cuts	-	20	
Edge of sink holes	50	100	500
Other absorption system	-	20	20

**Recommend 25 feet from downslope property line.



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ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

APPLICATION # _____

Lot 2, Soil Eval Area 2A

Property Owner: Thies, Richard and Janice

Date: 22 July 2026

Site Address: E Christian School Road
Hartsburg, MO 65039

Mailing Address :
Hartsburg, Missouri 65039

Subdivision, Lot: 24-700-32-01-007.00 01 (pt)

Day() - Evening() -

County: Boone 5.07 ac (planned)

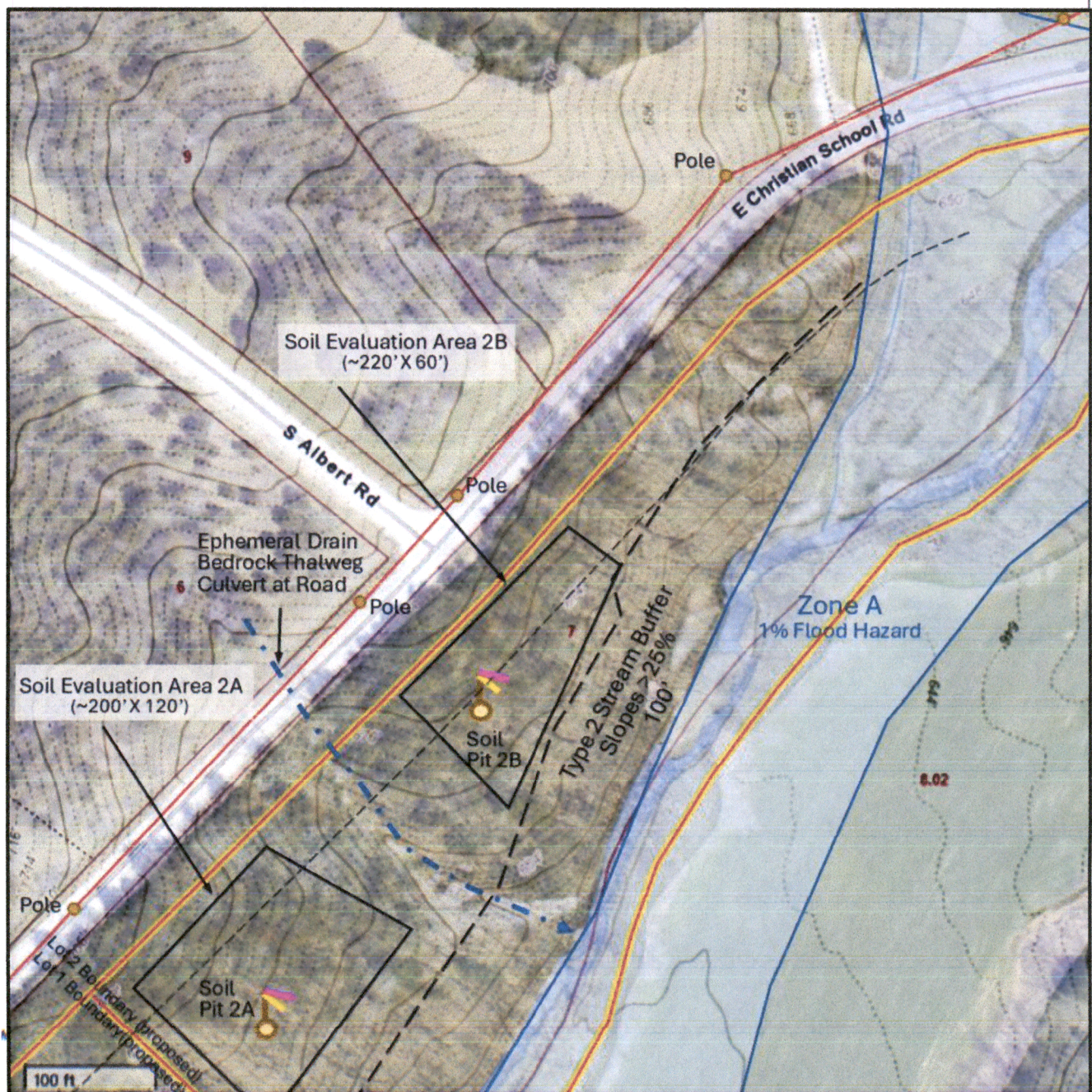
Legal Location: SW 1/4 SE 1/4 NE 1/4, S 32, T 46N, R 12W

Residence - # Bedrooms: TBD # People: TBD

Latitude: 38.72528

Longitude: -92.29476

Business - Type: N/A Design flow: TBD gpd; System is: New ☒ Replacement ☐ Repair ☐





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ONSITE WASTEWATER TREATMENT PROGRAM
SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 2, Soil Eval Area 2A

SOIL PROFILE DESCRIPTION

Owner: Thies, Richard and Janice

Date: 22 July 2026

SOIL CHARACTERISTICS

Excavation Depth: 50"

Pit (required for new installation) or Core #: 2A

Vegetation: Cedar-Hardwood Regrowth

Parent Material: Loess

Suitability (S, PS, U)	Horizon		Munsell Color (moist)	Redoximorphic Features (2)	Texture		% Coarse Fragments by volume		Consis- tence (4)	Structure	Roots /Pores (6)	Shrink /Swell	Soil Group	Application Rate	
	Design- ation	Depth / Boundary (1)			USDA (3)	% Clay	<3"	>3"						Conv. (Table 13)	LPP (Table 14)
PS	Ap	0" - 4" CS	10YR 4/4	---	SiCl	29	0	0	FR S	M F SBK	MF-M MF-C	L	III	0.32	0.16
U	Bt ₁	4" - 16" CS	10YR 4/6	---	SiCl	34	0	0	FI VS	M M SBK	CF-C MF-C	L	III	0.30	0.15
U	2Bt ₂	16" - 30" CS	10YR 4/6	---	SiCl	36	0	0	VFI VS	M M&C SBK	CF-FM MF-C	M	IVb	---	0.05
U	2Bt ₃	30" - 40" DS	10YR 4/6	7.5YR 4/6 RC 10YR 5/3 RC	SiCl	38	0	0	VFI VS	M C SBK	FF MF-C	M	IVb	---	0.05
U	2Bt ₄	40" - 50" ---	10YR 4/6	7.5YR 4/6 RC 10YR 5/3 RC	SiCl	37	0	0	VFI VS	M C SBK	FF MF-C	M	IVb	---	0.05

Notes: Menfro Soil Series, severely eroded. Ap Horizon is exposed Bt.

30"-50" RC (Root Channels) 10YR5/3 in old tree root channels with 7.5YR 4/6 in halos around the channel (in matrix).

Notations used on Soil Profile Description

Boundary distinctness: A-abrupt, C-clear, G-gradual; topography: S-smooth, W-wavy, I-irregular;

Redox Features Report low chroma Munsell colors and iron and manganese concentrations indicative of soil drainage limitations;

Texture s-sand, ls-loamy sand, sl-sandy loam, l-loam, sil-silt loam, si-silt, sc-sandy clay loam, cl-clay loam, scli-silty clay loam, sc-sandy clay, sic-silty clay, c-clay; Designate estimated clay content for all horizons;

Consistence (report moist consistence) moist: fr-friable, fl-firm, vfi-very firm; wet: ss-slightly sticky, s-sticky, vs-very sticky and sp-slightly plastic, p-plastic, vp-very plastic; dry: sh-slightly hard, h-hard, vh-very hard;

Structure grade: 1-weak, 2-moderate, 3-strong; size: f-fine (thin if platy), m-medium, c-coarse (thick if platy); shape: ABK-angular blocky, SBK-subangular blocky, GR-granular, PL-platy, PR-prismatic, MA-massive;

Roots/Pores abundance: f-few, c-common, m-many; size: vf-very fine, f-fine, m-medium, c-coarse.



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SITE EVALUATION for ONSITE WASTEWATER TREATMENT SYSTEM

Lot 2, Soil Eval Area 2A

SITE CLASSIFICATION for ONSITE SEWAGE SYSTEM – 19 CSR 20-3.060(2) & (7)

Owner: Thies, Richard and Janice

Pit/Core #: 2A

Date: 22 July 2026

Suitability See recommendations below S – Suitable; PS – Provisionally Suitable; U – Unsuitable; for conventional system.

<u>S</u>	LANDSCAPE POSITION: <u>Backslope</u>		Slope aspect: <u>125° (SE)</u>
	Flooding frequency: None ☒ Rare ☐ Occasional ☐ Frequent ☐		Surface depression(s) in evaluated area? <u>No</u>
<u>PS</u>	& TOPOGRAPHY		Percent Slope: <u>20%</u>
	Slope Type: Uniform ☒ Complex ☐		
	Shape across (contour): <u>Convex</u>	Shape down (profile): <u>Linear</u>	
	SOIL CHARACTERISTICS (See Profile Description for details)		
<u>U</u>	<u>SiCl</u> TEXTURE to a depth of <u>16</u> inches	Depth of unsuitable texture <u>16 - 50</u> inches	
	<u>SBK</u> STRUCTURE to a depth of <u>50</u> inches	Depth of unsuitable structure <u>>50</u> inches	
<u>S</u>	SOIL DRAINAGE	Type of water table: <u>None</u>	Depth to water table <u>>50</u> inches
	Surface drainage limitations: <u>None</u>	Runoff slope length <u>~140</u> feet	
<u>S</u>	SOIL THICKNESS	Depth of bedrock: <u>>50</u> inches	Rock outcrops? <u>None</u>
<u>S</u>	RESTRICTIVE HORIZON	Type: <u>None</u>	Depth: <u>>50"</u> Thickness: <u>N/A</u>
<u>S</u>	AVAILABLE SPACE	Estimated space available: <u>~200' X 120' ~24,000ft²</u>	
	Adequate for a conventional system? <u>Yes</u>	An alternative system? <u>Yes</u>	Replacement area? <u>Yes</u>
	OTHER FACTORS Note any environmental hazards: <u>None</u>		
	High groundwater contamination potential? (If yes, indicate reason): <u>No</u>		
	Sinkhole ☐ Rapid permeability ☐ Depth to highly permeable bedrock ☐ Fill material/depth ☐		
<u>PS</u>	OVERALL	Notes: <u>Group IVb Soils, Slopes > 15%</u>	

Overall site classification will be determined by the lowest of the uncorrectable characteristics.

- **S** An overall site classification of suitable indicates soil and site conditions favorable for the operation of a conventional absorption system.
- **PS** Sites classified as provisionally suitable require some modifications and careful planning, design, and installation for a conventional system or alternative system to function satisfactorily.
- **U** Sites originally classified as unsuitable may possibly be reclassified as provisionally suitable according to subsection (7)(K).
- An unsuitable site may be used for soil absorption systems, provided engineering, hydrogeologic and soil studies indicate to the administrative authority that a conventional or alternative system could be expected to function satisfactorily. These sites may be reclassified as provisionally suitable upon meeting the requirements of the administrative authority according to subsection (6)(K).

Recommendations* associated with Provisionally Suitable or Unsuitable classifications:

<u>Yes</u>	Trenches must not be dug when wet to prevent damaging soil/trench surfaces.
<u>Yes</u>	Surface water diversion is needed.
<u>Yes</u>	An interceptor drain should be installed upslope at a depth of <u>36</u> inches.
<u>Yes</u>	Shallow or modified shallow placed trenches should be installed at a depth of <u>10-12</u> inches.
<u>Yes</u>	An alternative/engineered system is needed to overcome site limitations.

This site is best suited for a drip irrigation system.

Slopes are too steep for lagoon construction.

Tract is former row crop, Menfro soils, with >24' of surface removed during farming time period.



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Lot 2, Soil Eval Area 2A

Owner: Thies, Richard and Janice

Date: 22 July 2026

*Recommendations are to assist the property owner and their agents in complying with the standards, and are subject to approval by the administrative authority.

I, the undersigned, hereby certify that the site evaluation was made in accordance with the requirements of Sections 701.025-701.059 RSMo and 19 CSR 20-3.060 and 19 CSR 20-3.080, and that the data recorded is correct to the best of my knowledge.

Bryan Mayhan

10-100

Bryan D Mayhan

23 July 2026

Print name

OSE ID #

Date

Important Recommendations for Installers and Homeowners:

Protect the absorption area before and after construction. Do not drive over or store excavated materials on field area etc.

Shallow placed absorption systems utilize more permeable and better-aerated soil horizons.

Do not install soil absorption system when soil is wet. Redirect surface water, house guttering, and foundation drains away from absorption field.

Establish & maintain adequate vegetative cover over the field. Regularly inspect, maintain, and pump your sewage system.

Install water saving devices & practice water conservation. Check for and repair any water leaks as soon as discovered.

Spread out water use, such as laundry, throughout the week.

Restrict garbage disposal use.

Do not put fats or grease into the sewage system. Keep chemicals and hazardous wastes out of your system.

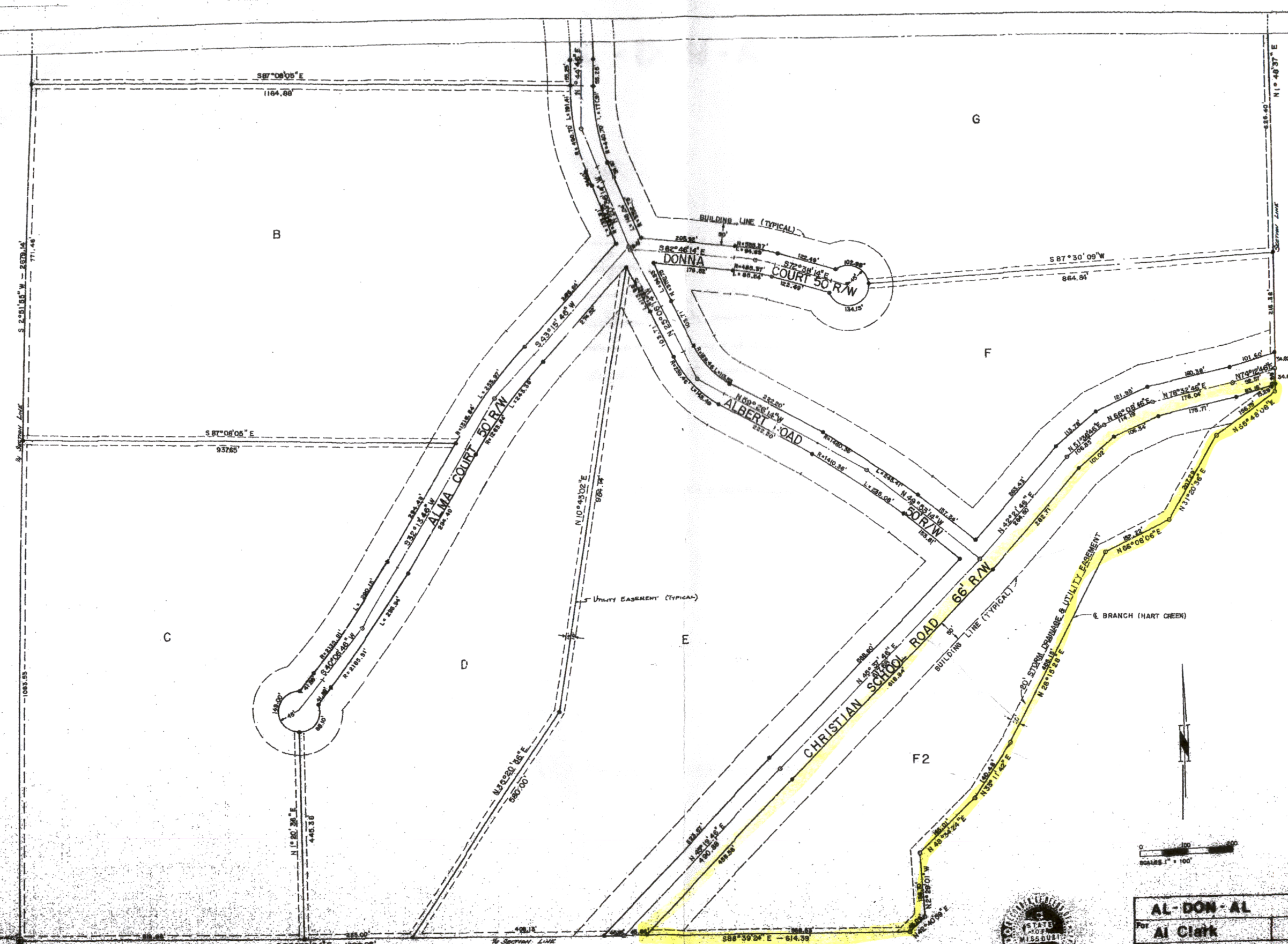
Use disinfectants and high strength cleaners sparingly.

Do not plan any building improvements, patios, etc. near the sewage system or repair area.

Minimum Set-Back Distances			
Based on 19 CSR 20-3.060(1)(D) Table 1			
[See also (6)(D) for lagoons]			
Minimum Distance from	Sewage Tank	Disposal Area	Lagoons
	(feet)	(feet)	(feet)
Private water supply well	50	100	100
Public water supply well	300	300	300
Cistern	25	25	25
Spring	50	100	100
Classified stream or lake	50	50	50
Stream or open ditch	25	25	25
Property lines	10	10**	75
Building foundation	5	15	[100]
Basement	15	25	[100]
Swimming pool	15	15	
Pressure water line	10	10	10
Suction water line	50	100	100
Upslope interceptor drain	-	10	
Downslope interceptor drain	-	25	
Embankment or cuts	-	20	
Edge of sink holes	50	100	500
Other absorption system	-	20	20

**Recommend 25 feet from downslope property line.

US



AL-DON-AL ACRES	
For	Al Clark
TRAVERSE CONSULTANTS INC	
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