

# Alberta Private Sewage Treatment System Soil Profile Log Form

Owner Name or Job ID.											
Legal Land Location								Test Pit GPS Coordinates			
LSD-1/4	Sec	Twp	Rg	Mer	Lot	Block	Plan	Easting	Northing		
Vegetation notes:								Overall site slope %			
								Slope position of test pit:			

Test hole No.	Soil Subgroup	Parent Material	Drainage	Depth of Lab sample #1	Depth of Lab sample #2

Horizon	Depth (cm) (in)	Texture	Lab or HT	Colour	Gleying	Mottling	Structure	Grade	Consistence	Moisture	% Coarse Fragments

Depth to Groundwater		Restricting Soil Layer Characteristic	
Depth to Seasonally Saturated Soil		Depth to restrictive Soil Layer	
Site Topography		Depth to Highly Permeable Layer Limiting Design	

<b>Key Soil Characteristics applied to system design effluent loading</b>	
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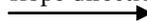
Weather Condition notes:	
Comments: such as root depth and abundance or other pertinent observations:	

# Onsite Sewage System Site Evaluation Lot Diagram Field Sketch and Notes

Project Name:

Lot or Legal Description:

Date:

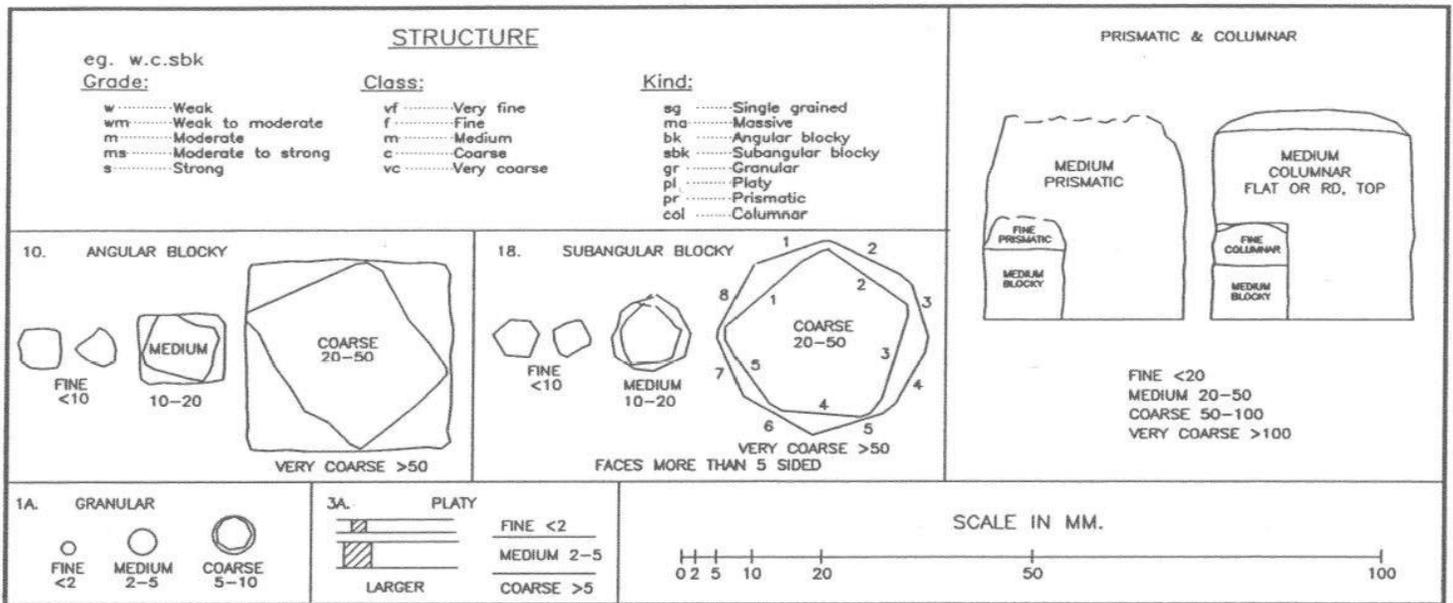
												Show the proposed location of the onsite sewage system and the following items indicating their distances from the proposed system:  trees floodplains wells water sources surface water bedrock outcrops buildings property lines easement lines ditches or  interceptors banks or steep slopes fills driveways existing sewage systems underground utilities soil test pit and borehole locations
drainage course 	slope direction 			borehole BH 1 			Test Pit P1 					

**Comments:**

Property line GPS coordinates:  
 GPS coordinates of well:  
 GPS coordinate of tank:  
 GPS coordinates of soil treatment component corners:

**Additional information is required separately for the system design detail.**

**Figure 4: Diagrammatic representation of soil structure**



**SLOPE CLASSES OF LOCAL LANDFORMS**

Slope Class	Percent Slope	Approximate Degrees	Description
1	0-0.5	0	level
2	0.5-2.5	0.3-1.5	nearly level
3	2-5	1-3	very gentle slopes
4	6-9	3.5-5	gentle slopes
5	10-15	6-8.5	moderate slopes
6	16-30	9-17	strong slopes
7	31-45	17-24	very strong slopes
8	46-70	25-35	extreme slopes
9	71-100	35-45	steep slopes
10	>100	>45	very steep slopes

**SURFACE STONINESS**

	Surface Area	Distance Apart (cm)
S0 non-stony	<0.01%	>30
S1 slightly stony	0.01-0.1%	10-30
S2 moderately stony	0.1-3%	2-10
S3 very stony	3-15%	1-2
S4 exceedingly stony	15-50%	0.1-5
S5 excessively stony	50%	0.1

**SLOPE POSITION**

c	— crest
u	— upper slope
m	— mid slope
l	— lower slope
t	— toe
d	— depression
l	— level

**DRAINAGE**

VR	- very rapidly
R	- rapidly
w	- well
M	- moderately well
I	- imperfectly
P	- poorly
VP	- very poorly

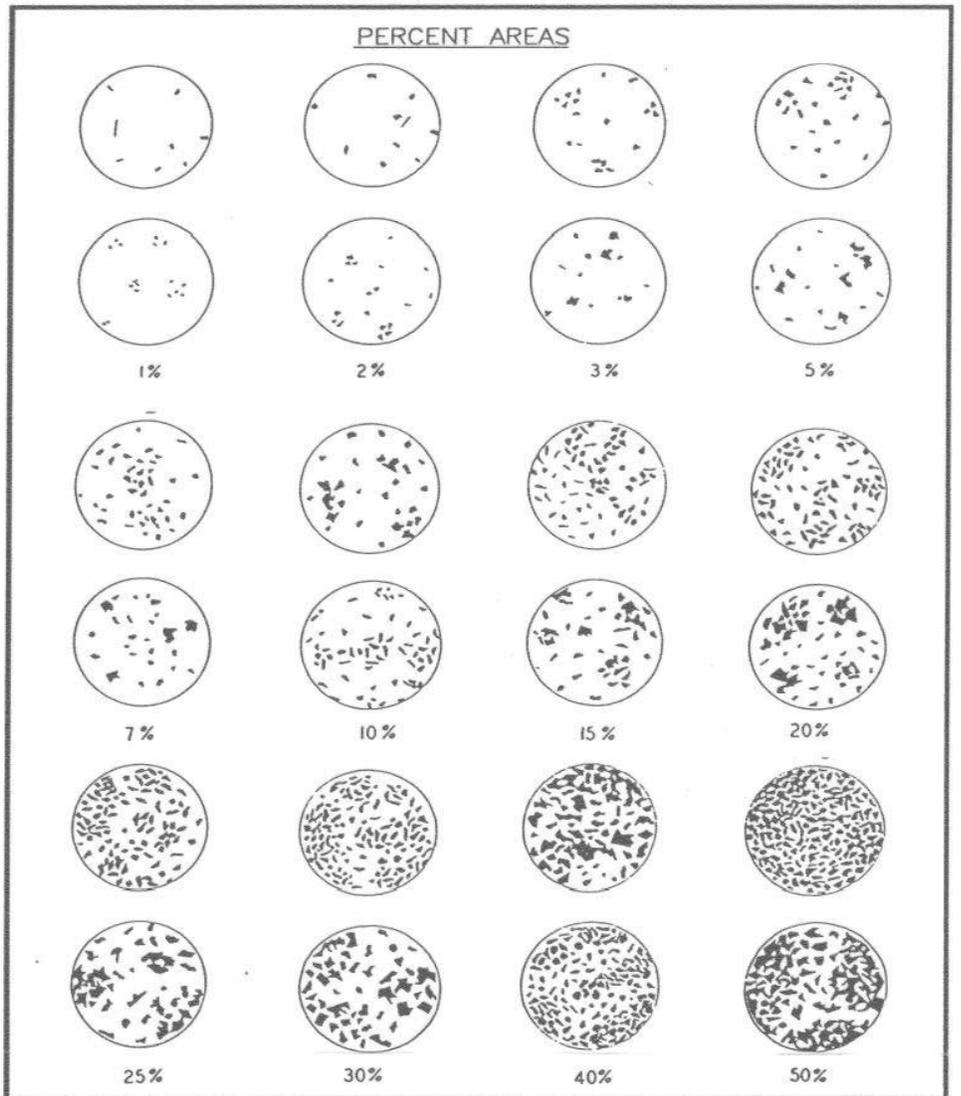


Table 10. Types, kinds and classes of soil structure.

Type	Kind (Kind Code)	Structure Class and Code	Size <sup>1</sup> (mm)
<b>Blocklike</b> - soil particles arranged around a point and bounded by flat or rounded surfaces <b>BK</b>	<b>Angular blocky (ABK)</b> peds bounded by flattened, rectangular faces intersecting at relatively sharp angles	<b>VF:</b> very fine angular blocky <b>F:</b> fine angular blocky <b>M:</b> medium angular blocky <b>C:</b> coarse angular blocky <b>VC:</b> very coarse angular blocky	<5 5-10 10-20 20-50 >50
	<b>Subangular blocky (SBK):</b> peds bounded by slightly rounded, subrectangular faces with vertices <sup>2</sup> of their intersections mostly subrounded	<b>VF:</b> very fine subangular blocky <b>F:</b> fine subangular blocky <b>M:</b> medium subangular blocky <b>C:</b> coarse subangular blocky <b>VC:</b> very coarse subangular blocky	<5 5-10 10-20 20-50 >50
	<b>Granular (GR):</b> spheroidal peds bounded by curved or very irregular faces that do not adjoin those of adjacent peds	<b>VF:</b> very fine granular <b>F:</b> fine granular <b>M:</b> medium granular <b>C:</b> coarse granular <b>VC:</b> very coarse granular	<1 1-2 2-5 5-10 >10
<b>Platelike:</b> soil particles arranged around a horizontal plane and generally bounded by relatively flat horizontal surfaces <b>PL</b>	<b>Platy (PL):</b> peds flat or platelike; horizontal planes more or less well developed	<b>VF:</b> very fine platy <b>F:</b> fine platy <b>M:</b> medium platy <b>C:</b> coarse platy <b>VC:</b> very coarse platy	<1 1-2 2-5 5-10 >10
		<b>Prismatic (PR):</b> vertical faces of peds well defined and vertices <sup>2</sup> angular (edges sharp); prism tops essentially flat	<b>VF:</b> very fine prismatic <b>F:</b> fine prismatic <b>M:</b> medium prismatic <b>C:</b> coarse prismatic <b>VC:</b> very coarse prismatic
<b>Structureless:</b> no observable aggregation of primary particles or no definite orderly arrangement around natural lines of weakness <b>MA</b>	<b>Columnar (COL):</b> vertical edges near top of columns not sharp (vertices <sup>2</sup> subrounded); column tops flat, rounded, or irregular	<b>VF:</b> very fine columnar <b>F:</b> fine columnar <b>M:</b> medium columnar <b>C:</b> coarse columnar <b>VC:</b> very coarse prismatic	<10 10-20 20-50 50-100 >100
	<b>Single grained (SGR):</b>	Loose, incoherent mass of individual primary particles, as in sands	
	<b>Massive (MA):</b>	amorphous; a coherent mass showing no evidence of any distinct arrangement of soil particles; separates into clusters of particles; not peds	
<b>Cloddy (CDY):</b> not a structure; used to indicate the condition of some ploughed surface, grade, class, and shape too varied to be described in standard terms.			

<sup>1</sup> The size limits refer to measurements in the smallest dimension of platy, prismatic, and columnar peds and to the largest of the nearly equal dimensions of blocky and granular peds.

<sup>2</sup> Definition of vertex (plural, vertices): the intersection of two planes of a geometrical figure.

Consistence – moist soil	
• Loose:	No intact sample can be obtained.
• Friable:	Structure breaks down with slight force between the fingers.
• Firm:	Structure breaks down with moderate force between the fingers.
• Extremely firm:	Structure breaks down with moderate force between the hands or slight foot pressure.
• Rigid:	Structure breaks down only with foot pressure.

## Structure Grade Descriptions

Code		Structure Grade Definition
0	<b>Massive /or single grained used to describe sands</b>	This describes a soil that has no developed structure. There is no aggregation of primary particles or no definite orderly arrangement around natural lines of weakness.
1	<b>Weak</b>	Peds are either indistinct and barely evident in place, or observable in place but incompletely separated from adjacent peds. When disturbed, the soil material separates into a mixture of only a few entire peds, many broken peds and much unaggregated material.  Peds are moderately durable, and are evident but not distinct in the undisturbed soil. When disturbed, the soil material parts into a mixture of many well formed, entire peds, some broken peds, and little unaggregated material. The peds may be handled without breaking and they part from adjoining peds to reveal nearly entire surfaces which have properties distinct from those caused by fracturing.
2	<b>Moderate</b>	Peds are durable and evident in the undisturbed soil, adhere weakly to one another, withstand displacement and separate cleanly when the soil is disturbed. When removed, the soil material separates mainly into entire peds. Surfaces of unbroken peds have distinctive properties, compared to surfaces that result from fracturing.
3	<b>Strong</b>	

## Mottling Descriptions

Parameter	Code	Description
<b>Abundance</b>	<b>Few</b>	<2% of the exposed surface
	<b>Common</b>	2-20% of the exposed surface
	<b>Many</b>	>20% of the exposed surface
<b>Size</b>	<b>Fine</b>	< 5 mm
	<b>Medium</b>	5-15 mm
	<b>Coarse</b>	>15 mm
<b>Contrast</b>	<b>Faint</b>	Evident only on close examination. Faint mottles commonly have the same hue as the colour to which they are compared and differ by no more than 1 unit of chroma or 2 units of value. Some faint mottles of similar but low chroma and value can differ by 2.5 units of hue.
	<b>Distinct</b>	Readily seen, but contrast only moderately with the colour to which they are compared. Distinct mottles commonly have the same hue as the colour to which they are compared, but differ by 2 to 4 units of chroma or 3 to 4 units of value; or differ from the colour to which they are compared by 2.5 units of hue but by no more than 1 unit of chroma or 2 units of value.
	<b>Prominent</b>	Contrast strongly with the colour to which they are compared. Prominent mottles are commonly the most obvious colour feature in a soil. Prominent mottles that have medium chroma and value commonly differ from the colour to which they are compared by at least 5 units of hue if chroma and value are the same; or at least 1 unit of chroma or 2 units of value if hue differs by 2.5 units.

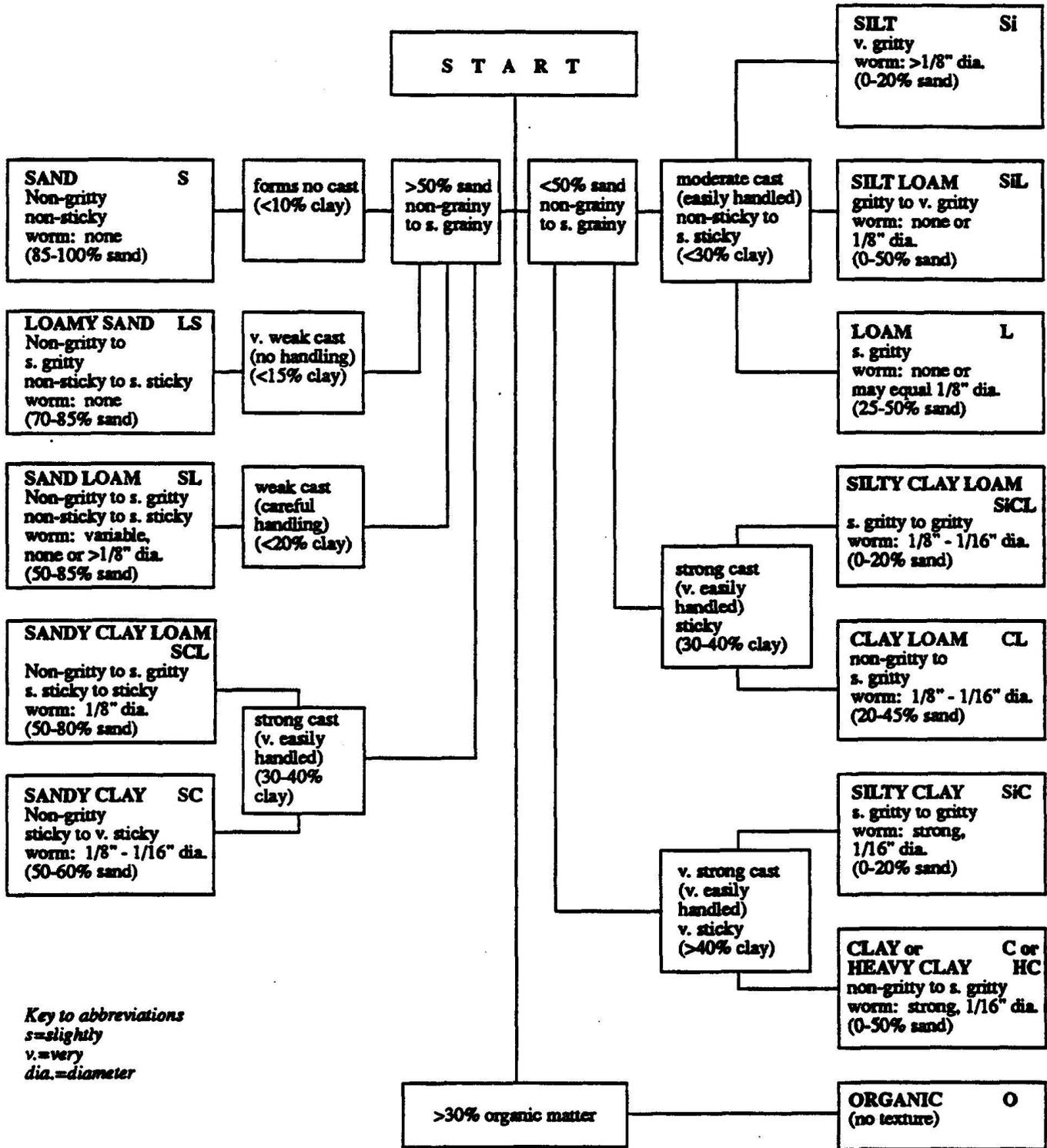
**Taste Test  
Stickiness Test  
Worm Test**

**Moist  
Cast Test**

**Graininess Test  
(Organic Matter Test)**

**Moist Cast Test  
Stickiness Test**

**Taste Test  
Worm Test**



*Key to abbreviations*  
s=slightly  
v.=very  
dia.=diameter