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PSDS Application Summary Design Report

(Please Print Clearly)

Legal Land Description								
1/4 section	Section	Township	Range	West of		Lot	Block	Plan
Address		Street		Municipality			Lot Size (acres)	
Development Details								
Type: <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Other								
<input type="checkbox"/> New Construction <input type="checkbox"/> Renovation/Repair <input type="checkbox"/> Temporary								
Number of Bedrooms		Number of Occupants		Average Daily Flow		Peak Daily Flow		
Additional Sizing Info:								
Soil Information								
# of Test Pits _____ (1 MINIMUM for Open Discharge, 2 MINIMUM for all others)								
Depth Of Pits _____ (1 foot MINIMUM below Verticle Setback Distance)								
Loading Rate _____ Linear Loading Rate _____								
Texture _____ Shape _____ Grade _____ (Soil Profile Used for Design)								
System Details								
Components to be used (Check all applicable)								
<input type="checkbox"/> Holding Tank		<input type="checkbox"/> Sand Mound		<input type="checkbox"/> Open Discharge		<input type="checkbox"/> Pipe in Gravel		
<input type="checkbox"/> Septic		<input type="checkbox"/> Gravity Field		<input type="checkbox"/> At-Grade		<input type="checkbox"/> Chambers		
<input type="checkbox"/> Treatment Plant		<input type="checkbox"/> Pressure Field		<input type="checkbox"/> Lagoon		<input type="checkbox"/> Other		
Tank Size _____ (Gallons)				Dose Volume _____ (Gallons)				
Flow Rate _____ (GPM)				Head Pressure _____ (Feet)				
Trench Bottom _____ (SqFt)				Sand Layer _____ (SqFt)				
Trench Length _____ (Ft)				Chamber Size _____ (inch)				
Orifice Size _____ (inch)				Squirt Height _____ (Feet)				
Tank/Plant Make and Model _____								
High Level Alarm Make and Model _____								
Effluent Filter/Screen Make and Model _____								
Setback Distances								
Tank to Occupied Building:				Tank to Nearest Property Line:				
Tank to Water Source:				Tank to Soil Treatment:				
Soil Treatment Component to Property Lines (Must be accurate)								
North:		South:		East:		West:		
Soil Treatment Component to Water Source:						Type:		
Soil Treatment Component to Water Course:						Type:		
Soil Treatment Component to Occupied Building:						(Nearest)		
Additional Information								
NOTE: All site evaluations MUST meet Part 7 of the Standard of Practice. Incomplete applications will result in delays or refusal of Permit issuance.								

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
Hori- zon	Depth (cm) (in)		Texture	Lab or HT	Colour	Gleying	Mottling	Structure	Grade	Consistence	Moisture % Coarse Fragments
Depth to Groundwater					Limiting Soil Layer Characteristic, describe						
Depth to Seasonally Saturated Soil					Depth to Limiting Soil Layer						
Limiting Topography					Depth to Highly Permeable Layer						
Key Limiting Features on System Design											
Weather Condition notes:											
Comments: such as root depth and abundance or other pertinent observations:											

Onsite Sewage System Site Evaluation Lot Diagram Sketch and Notes

Project Name:

Lot or Legal Description:

Date:

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

Comments:

Property line GPS coordinates:

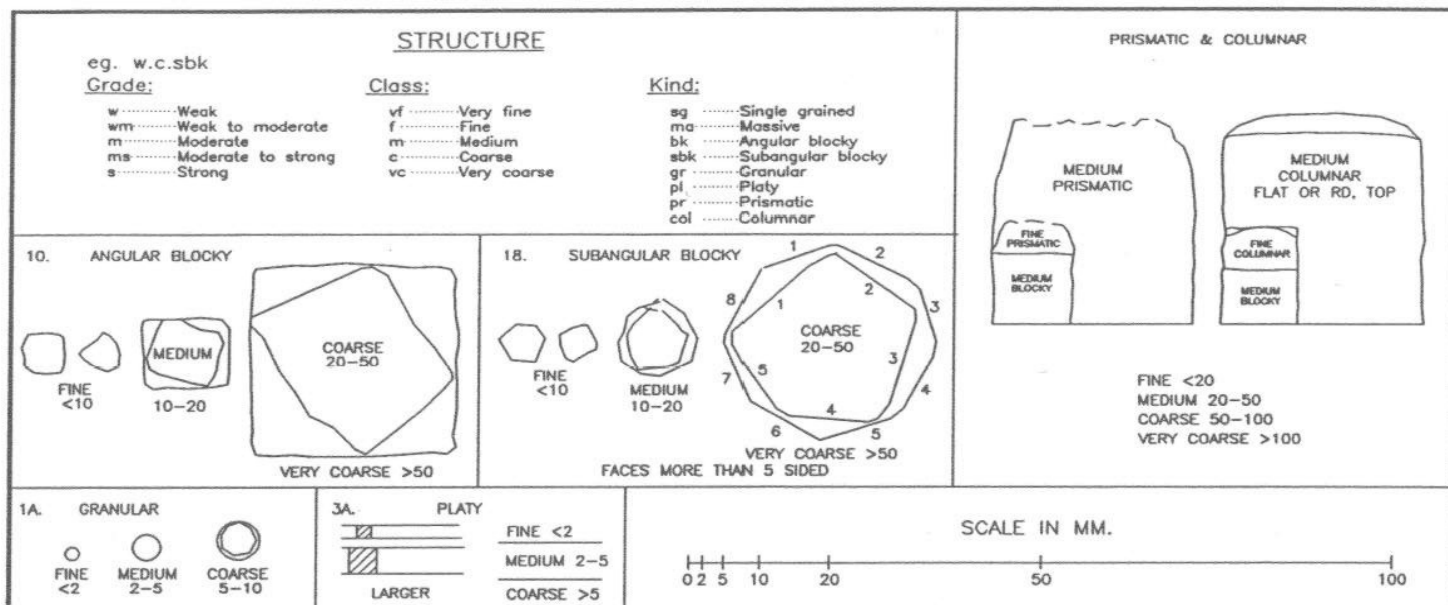
GPS coordinates of well:

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

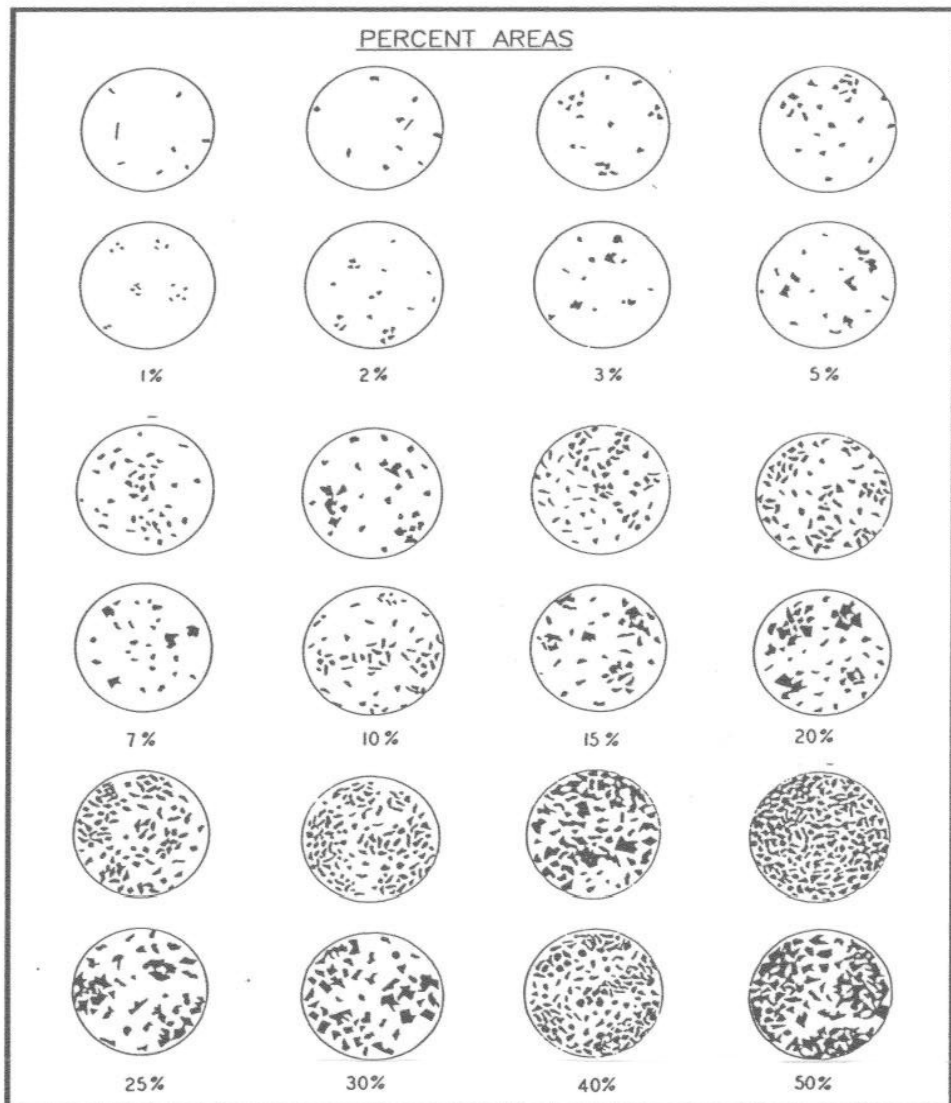


Table 10. Types, kinds and classes of soil structure.

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

¹ 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.

² 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	Massive /or single grained used to describe sands	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	Weak	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.
2	Moderate	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.
3	Strong	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.

Mottling Descriptions

Parameter	Code	Description
Abundance	Few	<2% of the exposed surface
	Common	2-20% of the exposed surface
	Many	>20% of the exposed surface
Size	Fine	< 5 mm
	Medium	5-15 mm
	Coarse	>15 mm
Contrast	Faint	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.
	Distinct	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.
	Prominent	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**



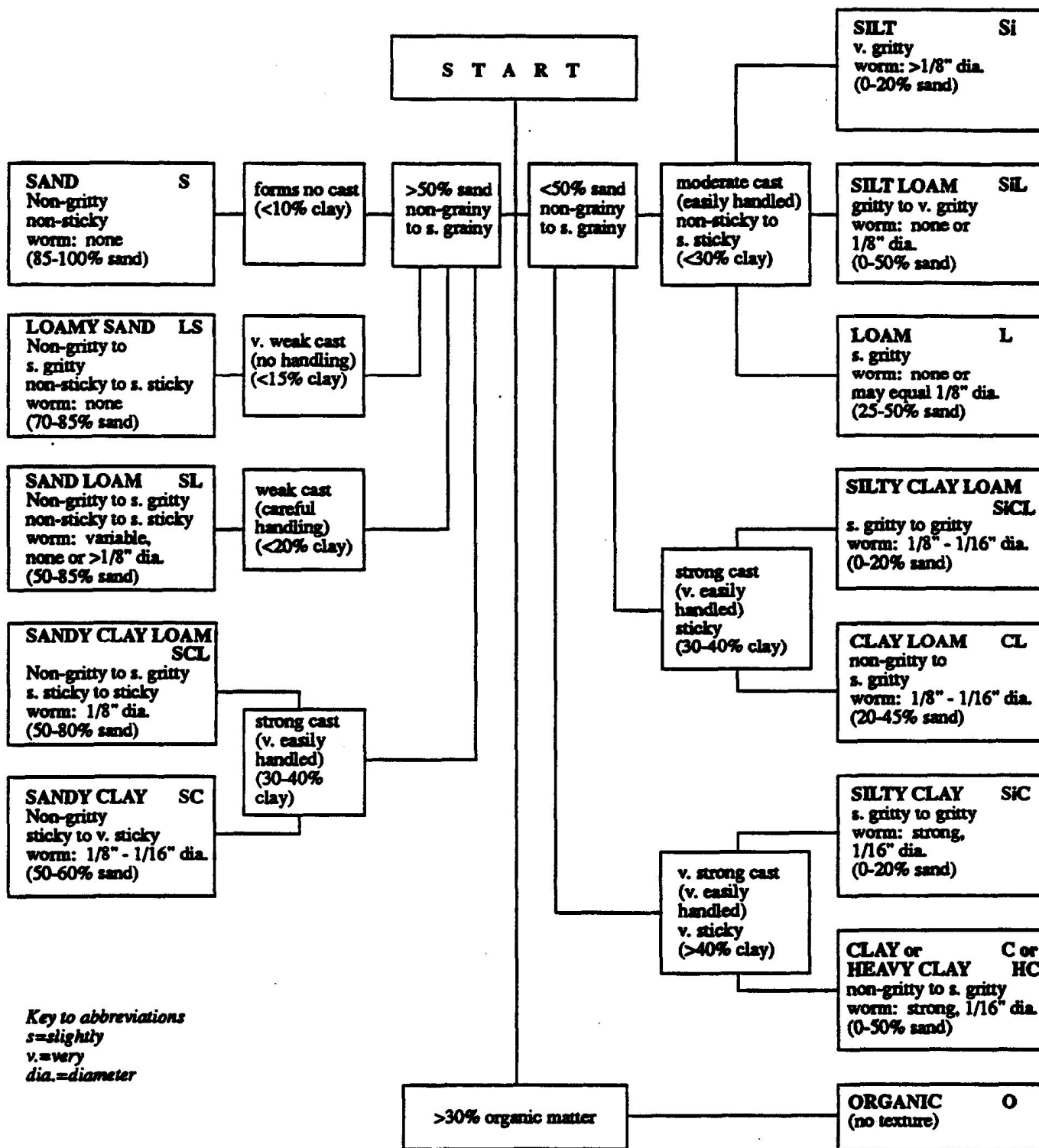
**Graininess Test
(Organic Matter Test)**



**Moist Cast Test
Stickiness Test**



**Taste Test
Worm Test**



SYSTEM DRAWING

✓ Complete drawing of proposed system, layout of laterals, position and location of tank etc.



Comments:
