

2023 NACTA Soils Judging Contest  
2-Year Division Scorecard

VaKOTA Road

Contestant Name	
Contestant Number	
College	

Pit Number	
Number of Horizons	
Profile Depth	
Nail Depth	

Part I. Morphology

Part I. Morphology

HORIZON- ATION	BOUNDARY		COLOR			MOIST CONSIST	TEXTURE		STRUCTURE	SOIL FEATURES	SCORE
	Depth (cm)	Dist.	Hue	Value	Chroma		Rock Fragment Modifier	Class			
Master											
(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(5)	(5)	(2)	(28)
1. A	0-8	A	10YR	2	2	VFR	-	SL	GR	-	
2. A	8-30	G	10YR	3	2	FR	-	SL	SBK	-	
3. B	30-56	G	10YR	3	3	FR	-	SL	SBK	-	
4. B	56-92	G	10YR	3	3	FR	-	SL	SBK	-	
5. B	92-140	G	10YR	4	4	FR	-	SL	SBK	-	
6. C	140- <del>170</del> 170*	-	10YR	4	6	FR	-	LS	M	-	
A	Record lower depth in cm.	Abrupt (A) Clear (C) Gradual (G) Diffuse (D) None (-)				Loose (L) V. Friable (VFR) Friable (FR) Firm (FI) V. Firm (VFI) Ext. Firm (EFI)	None (-) Gravelly (GR) Very Grav. (VGR) Extrem. Grav. (EGR)	S. LS, SL. L. SCL, SC. C. SIC, SICL, CL, SIL, SI	GR SBK ABK PL WEG	PR CO MA SGR	None (-) Concentrations (C) Depletions (D) White (W)

**Part II – Site and Soil Characteristics**

1) Local Landform (5)

- Upland
- Upland depression
- Alluvial fan
- Stream terracè
- Floodplain
- Footslope
- Paleoterrace
- Dunes/Interdunes

2) Parent Material (5 pts each correct)

- Alluvium
- Colluvium
- Eolian sand/Eolian loam
- Loess
- Residuum

3) Slope (5)

- Concave
- 0 - < 2%
- 2 - < 5%
- 5 - < 10%
- 10 - < 15%
- 15 - 20%
- > 20%

4) Hillslope Profile Position (5)

- Summit
- Shoulder
- Backslope
- Footslope
- Toeslope
- None (slope <2%)

5) Surface Ruoff (5)

- Negligible
- Very slow
- Slow
- Moderate
- Rapid
- Very rapid

6) Soil Erosion Potential (5)

- Low
- Medium
- High

7) Soil Wetness Class (5)

- Not wet above 150 cm (WD)
- Wet between 50 to 150 cm (MWD)
- Wet between 25 to <50 cm (SWPD)
- Wet above 25 cm (PD)

8) Effective Soil Depth (5)

- Very shallow (< 25 cm)
- Shallow (25 - < 50 cm)
- Moderately deep (50 - < 100 cm)
- Deep (100 - 150 cm)
- Very deep (> 150 cm)

9) Hydraulic Conductivity – Surface (5)

- Slow
- Moderate
- Rapid

10) Hydraulic Conductivity – Limiting (5)

- Slow
- Moderate
- Rapid

11) Water Retention Difference (5)

- Very low (< 7.5 cm)
- Low (7.5 - < 15 cm)
- Moderate (15 – 22.5 cm)
- High (> 22.5 cm)

**Part III – Interpretations**

1) Roadfill (5)

- Good
- Fair
- Poor

\_\_\_\_\_ Feature (5)

2) Septic Tank Absorption Fields (5)

- Good
- Fair
- Poor

\_\_\_\_\_ Feature (5)

3) Sewage Lagoons (5)

- Good
- Fair
- Poor

\_\_\_\_\_ Feature (5)

Tic Breaker (Surface)

% clay \_\_\_\_\_ % Sand \_\_\_\_\_

Part II and III Score \_\_\_\_\_

**Total Score** \_\_\_\_\_

NACTA SOILS CONTEST  
4-Year Division  
SITE CARD

SITE NO. Dakota Rd

Describe \_\_\_\_\_ horizons to a depth of 170 cm.

6.8

no marker

pH

6

Blue marker is in the third horizon at \_\_\_\_\_ cm.

Horizon		% Base Sat.	% Organic C	% CaCO <sub>3</sub>
1.	7.1	50	2.5	—
2.	7.1	53	2	—
3.	6.9	51	1.5	—
4.	6.9	49	1.5	—
	6.9	48	0.2	—
6.		48	0.1	