GRAIN-SIZE ANALYSIS (HYDROMETER METHOD)

1. PROJECT		2. DATE
3. BORING NUMBER	4. SAMPLE OR SPECIMEN NUMBER	5. CLASSIFICATION
6. DISH NUMBER	7. GRADUATE NUMBER	8. HYDROMETER NUMBER/TYPE *(151H/152H)*
9. DISPERSING AGENT USED		10. QUANTITY
11. COMPOSITE CORRECTION	12. DECIMAL FINES *(Block 29, DD Form 1206)*	13. SPECIFIC GRAVITY OF SOLIDS *(Block 6n, DD Form 1208)* G_s =

14. TIME	15. ELAPSED TIME, *(T) minutes*	16. ACTUAL HYDROMETER READING *(R^1)*	17. CORRECTED READING *(R)*	18. TEMP *(°C)*	19. TEMPERATURE AND SPECIFIC GRAVITY CONSTANT *(K)*	20. EFFECTIVE DEPTH *(L)*	21. PARTICLE DIAMETER *(D), mm*	22. PERCENT FINER	
								a. PARTIAL	b. TOTAL

WEIGHT *(Grams)*	
	23. DISH + DRY SOIL
	24. DISH
	25. DRY SOIL *(W_s)*

The particle diameter (D) is calculated from Stokes' equation using the corrected hydrometer reading. Use the following formula to solve for particle diameter (D): $D = K\sqrt{L/T}$

Corrected hydrometer reading (R) = actual hydrometer reading (R^1) + composite correction

W_s = Oven-dry weight (in grams) of soil used for hydrometer analysis

Hydrometer graduated in specific gravity (151H)

$$\text{Partial Percent Finer} = \left[\frac{G_s}{G_s - 1} \times \frac{100{,}000}{W_s}\right](R - 1)$$

Hydrometer graduated in grams per liter (152H)

$$\frac{(R)(a)}{W_s} \times 100$$

(a = specific gravity of solids correction factor)

Total Percent Finer = Partial Percent Finer x Decimal fines (Block 12)

26. REMARKS

FROST GROUP:

27. TECHNICIAN *(Signature)*	28. COMPUTED BY *(Signature)*	29. CHECKED BY *(Signature)*