
APPENDIX C

FIELD PERMEABILITY TEST CALCULATION SHEET

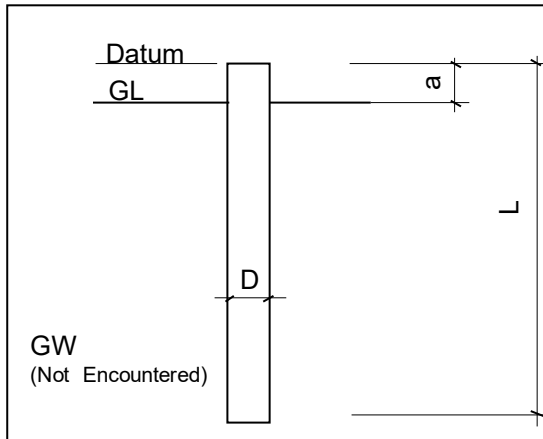
(FALLING HEAD METHOD: OPEN HOLE IN UNIFORM SOIL)

Site Improvements at DOT Kahului Baseyard

650 Palapala Drive

TMK: (2) 3-8-079: 018

Kahului, Maui, Hawaii



Boring:

GW table, (not encountered):

Datum, a (above ground):

Open hole Length, L:

Diameter of open hole (D):

Factor of m ($\sqrt{\frac{k_h}{k_v}}$)

B-2

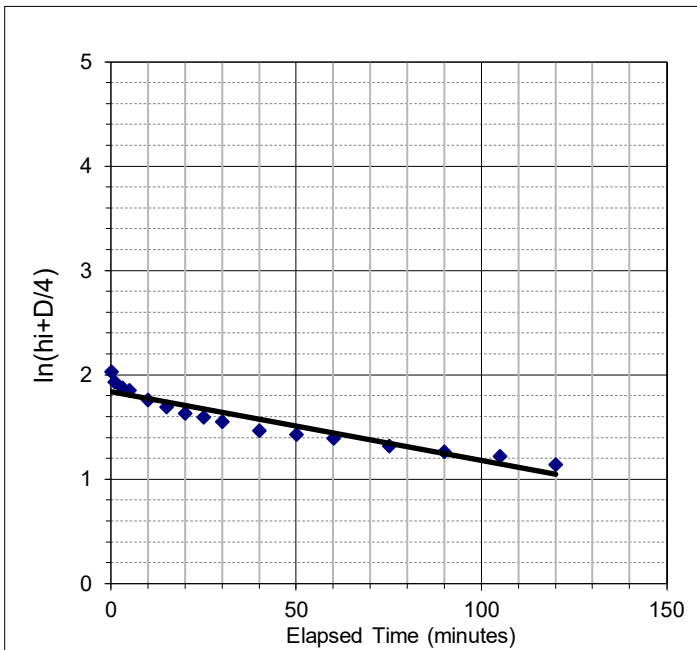
N/A feet

0.00 feet

10.00 feet

6.5 inches

1.00



Time (min)	Depth of water (from datum) (feet)	$\ln(h_i + D/4)$
0.0	2.50	2.03
1.0	3.20	1.94
3.0	3.60	1.88
5.0	3.75	1.85
10.0	4.30	1.76
15.0	4.70	1.69
20.0	5.00	1.64
25.0	5.20	1.60
30.0	5.40	1.56
40.0	5.80	1.47
50.0	5.95	1.43
60.0	6.10	1.40
75.0	6.38	1.32
90.0	6.60	1.26
105.0	6.75	1.22
120.0	7.00	1.14

Constant factor of the trendline $y = \text{Slope} * x + c$

Slope: $\frac{\ln(h_i + \frac{D}{4}) - \ln(h_{i+1} + \frac{D}{4})}{t_{i+1} - t_i}$ **-0.007** $K_{fs} = \frac{D}{4} \times \frac{\ln(h_i + \frac{D}{4}) - \ln(h_{i+1} + \frac{D}{4})}{t_{i+1} - t_i}$

8.9E-04 ft/min

4.5E-04 cm/s