

Soilprobe Engineering & Testing, Inc.

April 31, 2022

C Ron Construction

7085 Nova Drive
Davie, FL 33317

RE: FDOT Exfiltration Test

Proposed Duplexes
400 SW Pompano Park Place
Pompano Beach, FL 33060

As per your request, representative of this office performed one FDOT standard exfiltration test at the referenced site. The purpose of this test was to determine the type of soil underlying the site and their percolation characteristics required for the design of the storm water system. The following presents the test data and evaluation:

A. Location of test: Center East half of property.

B. Soil profile:

Depth in feet:	Soil description:
0'-0" to 1'-0"	Dark gravelly sand with roots
1'-0" to 5'-0"	Tan gravelly sand
5'-0" to 7'-0"	Tan sand
7'-0" to 10'-0"	Tan sandy limestone

C. Hydraulic conductivity:

$$K = \frac{4Q}{\pi (20.25 H_2 - H_2^2 - 9)} = 3.0316 \times 10^{-4} \text{ (CFS/FT.}^2 \text{ -FT. HEAD)}$$

$$Q = \text{Stabilized flow rate} = 0.013333 \text{ CFS (6.00 GPM)}$$

$$H_2 = \text{Depth to water table} = 4.00 \text{ FT.}$$

DRC

PZ22-12000014

08/16/2023

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The above test was performed in substantial accordance with the FDOT test method procedures as outlined in the attached Exhibit "A".

Should you have any questions regarding the above, or if you require additional information, please contact this office.

Sincerely,

SOILPROBE ENGINEERING & TESTING, INC.



Paul

Peana, P.E.

Digitally signed
by Paul Peana,
P.E.
Date: 2023.03.21
09:39:43 -04'00'

Paul Peana, P.E. State of Florida, Professional Engineer, License No. 37334

This item has been digitally signed and sealed by Paul Peana, P.E. on the date indicated here.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies..

Paul Peana, PE.

#37334

Enc. Exhibit "A"

DRC

PZ22-12000014

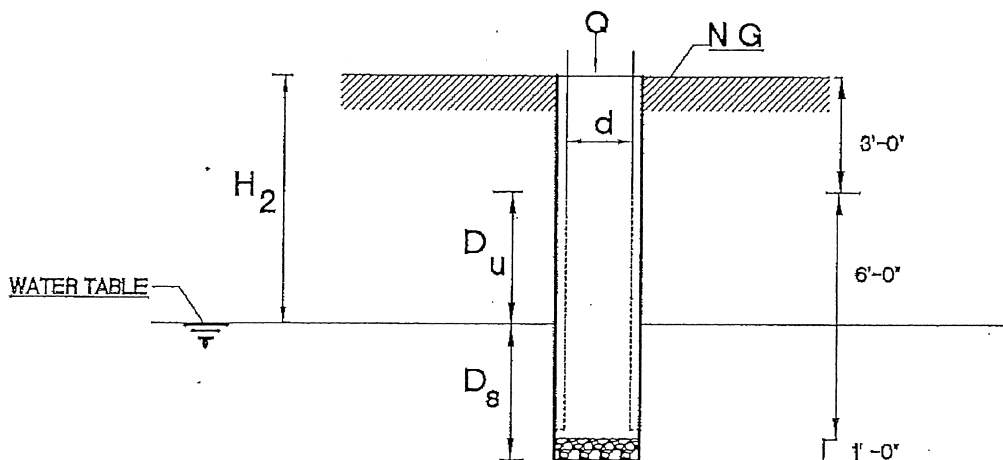
06/21/2023

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09/20/2023

D.O.T. STANDARD TEST



FOR $H_2 > 3.0$ FEET

$$K = \frac{4Q}{\pi(2.025 H_2 - H_2^2 - 9)}$$

K = HYDRAULIC CONDUCTIVITY (CFS / FT.² - FT. HEAD)

Q = STABILIZED FLOW RATE (CFS)

d = DIAMETER OF TEST HOLE (FEET)

D_u = UNSATURATED HOLE DEPTH (FEET)

D_s = SATURATED HOLE DEPTH (FEET)

H_2 = DEPTH TO WATER TABLE (FEET)

FOR $H_2 < 3.0$ FEET

$$K = \frac{Q}{\pi 0.2 H_2}$$

EXHIBIT "A"

D.O.T. Standard Test

The Florida Department of Transportation utilizes a standard test for design of seepage trenches in conjunction with highway projects. The D.O.T. test procedure is as follows:

1. Auger a 7 inch diameter hole to a depth of 10 feet below normal ground surface.
2. Record distance from ground surface to water table prior to addition of test water.
3. Pour 1/8 cubic foot of ½ inch diameter gravel in hole to prevent scouring.
4. Lower a 6 inch diameter perforated 10 gauge aluminum casing into hole. Casing to be 9 feet in length with perforations in the bottom 6 feet of the casing.
5. Fill hole with water and maintain water level at ground surface. Record rate of pumping in g.p.m. giving direct readings from water meter at fixed intervals. Use one minute intervals or greater, depending on the hydraulic conductivity of the soil. Continue recording rate of pumping for 10 minutes following the stabilization of the recorded pumping rate.

A schematic cross-section of the D.O.T. test hole is shown in Figure 4 with a formula which relates the hydraulic conductivity to the field data.