

Milo Residence
11901 S.W. 63rd Avenue
Pinecrest, FL 33156

March 26, 2025

Project Description

Construction of a one-story single-family home with a pool, pool deck, walkways and driveways on an existing vacant lot. Storm water will be retained on site.

Existing conditions

Total Site Area: 40,118 sf

Impervious Area:	0 sf = 0.00%
Pervious Area:	40,118 sf = $\frac{100.00\%}{100.00\%}$

Proposed Site Distribution

Total Site Area: 40,118 sf

Roof Area:	8,337 sf / 42,253 = 20.78%
Driveways, walkways & equip. pads:	3,342 sf / 42,253 = 8.33%
Pool & Pool Deck:	2,249 sf / 42,253 = 5.60%
Pervious Area:	26,190 sf / 42,253 = $\frac{65.29\%}{100.00\%}$

Required Storage

Rainfall amount (P) = 9.5" (from SFWMD Manual)
Average October water table level = 3.00' NGVD
Average pervious elevation 17.50'
Depth to water table 17.50' - 3.00' = 14.50'
Compacted soil storage = 8.175" (from SFWMD Manual)

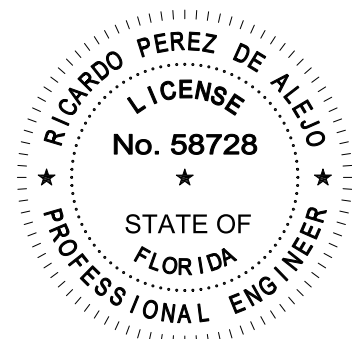
Existing Conditions

$S = (\text{Pervious Area} / \text{Site Area}) \times (\text{Compacted Soil Storage})$
 $S = (40,118 / 40,118) \times 8.175$
 $S = 1 \times 8.175$
 $S = 8.175"$

$\text{Runoff (R)} = (P - 0.2S)^2 / (P + 0.8S)$
 $R = (9.5 - 0.2(8.175))^2 / (9.5 + 0.8(8.175))$
 $R = (9.5 - 1.635)^2 / (9.5 + 6.54)$
 $R = (7.865)^2 / 16.04$
 $R = 61.86 / 16.04$
 $R = 3.86"$

Ricardo
Perez
de Alejo

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by Ricardo
Perez de Alejo
Date:
2025.04.28
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Volume of Runoff (V)

$$V = (A \times R) / 12$$

$$V = (40,118 \times 3.86) / 12$$

$$V = 12,904.62 \text{ cf}$$

Proposed Conditions

$$S = (\text{Pervious Area} / \text{Site Area}) \times (\text{Compacted Soil Storage})$$

$$S = (26,190 / 40,118) \times 8.175$$

$$S = 0.65 \times 8.175$$

$$S = 5.34''$$

$$\text{Runoff (R)} = (P - 0.2S)^2 / (P + 0.8S)$$

$$R = (9.5 - 0.2(5.34))^2 / (9.5 + 0.8(5.34))$$

$$R = (9.5 - 1.068)^2 / (9.5 + 4.27)$$

$$R = (8.432)^2 / 13.77$$

$$R = 71.10 / 13.77$$

$$R = 5.16''$$

Volume of Runoff (V)

$$V = (A \times R) / 12$$

$$V = (40,118 \times 5.16) / 12$$

$$V = 17,250.74 \text{ cf}$$

Difference in Runoff Proposed and Existing

$$17,250.74 \text{ cf} - 12,904.62 \text{ cf} = 4,346.12 \text{ cf}$$

$$1.0'' \times 40,118 \text{ sf} / 12'' = 3,343.17 \text{ cf}$$

$$2.5'' \times 13,928 \text{ sf} / 12'' = 2,901.67 \text{ cf}$$

Provided Site Storage (Refer to Stormwater Retention Summary on sheet G1.1)

Catchment Area Storage ((Top Area + Bottom Area) / 2) x Depth of Area

Depth of Areas, varies – refer to plan

Total of Areas 1 to 5 = 3,001 cf

French drains for roof downspouts (8,337 sf area) – refer to plan for

Total drain volume provided by trench drains= 1,125 cf

Total on site storage provided = 3,001 + 1,125 = **4,126 cf**

4,126 cf > 3,343 cf