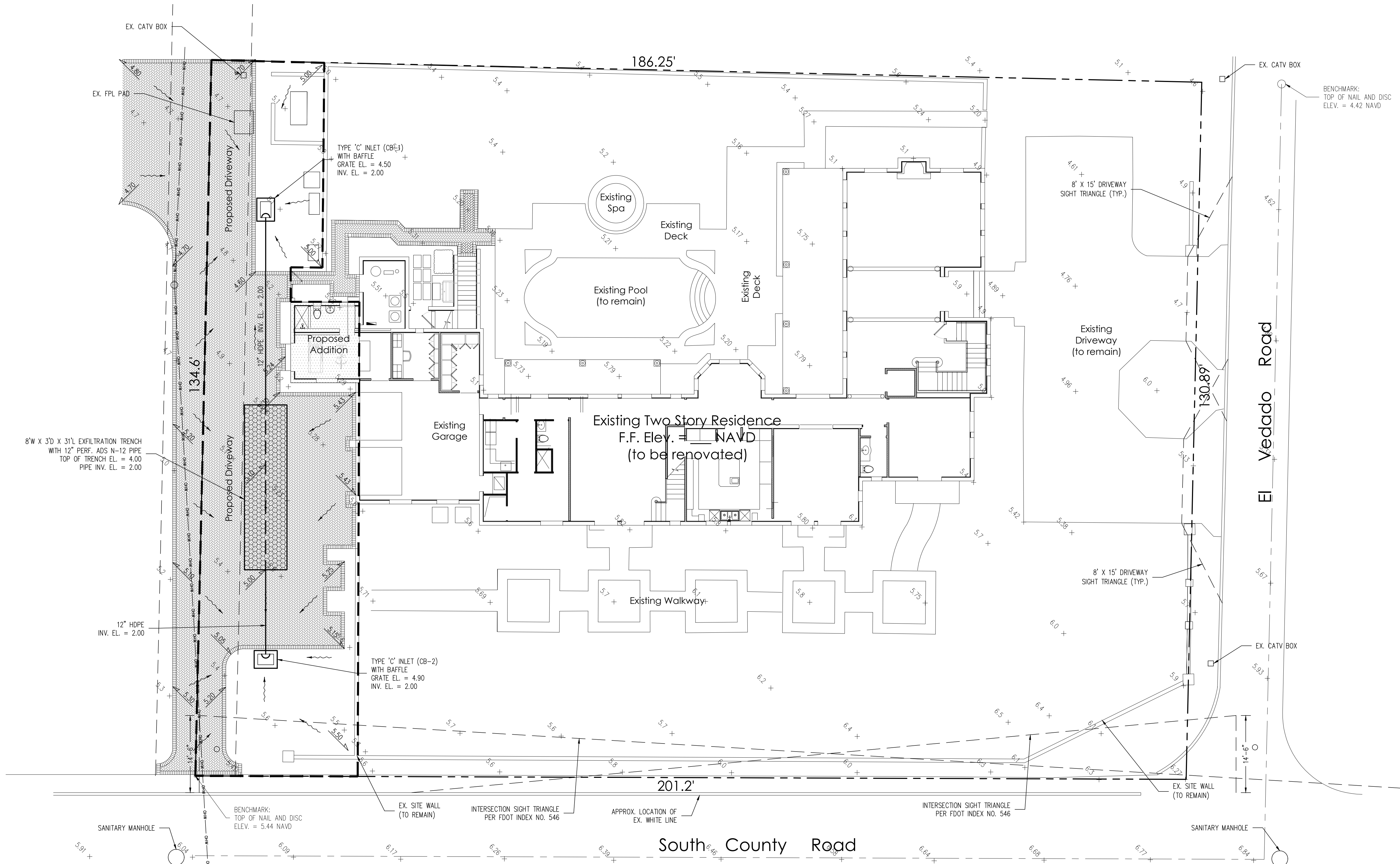




Notes:

- Exfiltration trenches and storm piping to be protected from roots with a root barrier.
- Roof drain downspouts are to be connected to the proposed drainage system. Contractor to provide engineer with downspout locations prior to installation of drainage system.
- Exfiltration trench design uses an assumed value of hydraulic conductivity. Client may obtain a site specific test for hydraulic conductivity prior to exfiltration trench installation.
- Contractor shall mill and overlay all roadway cuts a minimum of 50 ft. on either side of the excavation the entire width of each affected lane.
- Contractor is responsible for installing and maintaining erosion control measures during construction.
- Video inspection of storm drainage system required prior to installation of sod.

STORMWATER RETENTION CALCULATIONS

A. SITE INFORMATION

Total Property Area = 24,747 sq.ft.
Proposed Basin Area = 3,581 sq.ft.
Drainage Area Impervious Surface = 2,415 sq.ft.
Drainage Area Pervious Surface = 1,166 sq.ft.

B. ESTIMATED STORMWATER RETENTION VOLUME

The retention volume is estimated using the Rational Method ($Q=CiA$) where:
 $C = 1.0$ (Impervious surface)
 $C = 0.2$ (pervious surface)
 $i = 2 \text{ in/hr}$

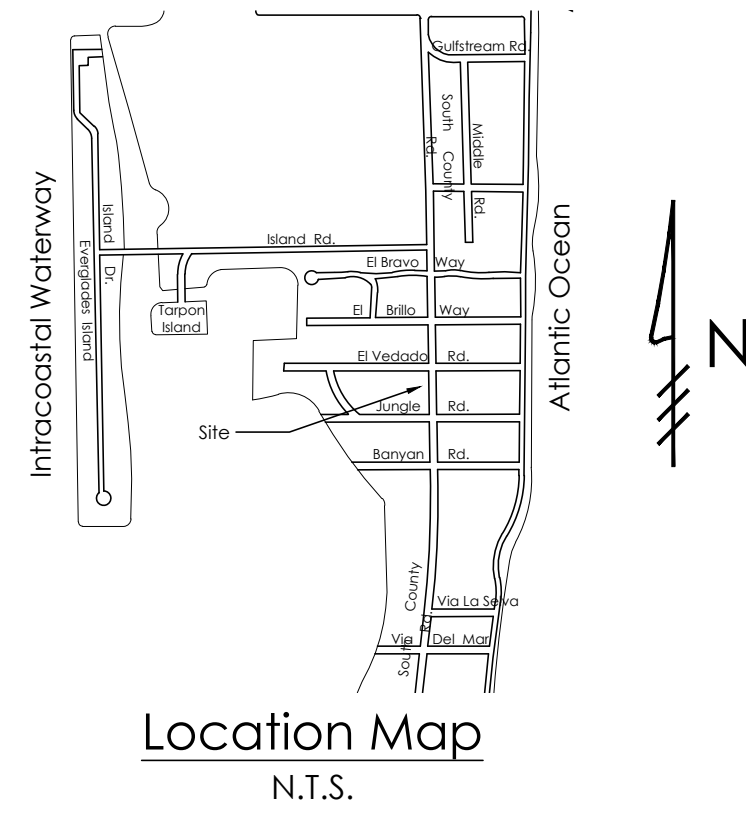
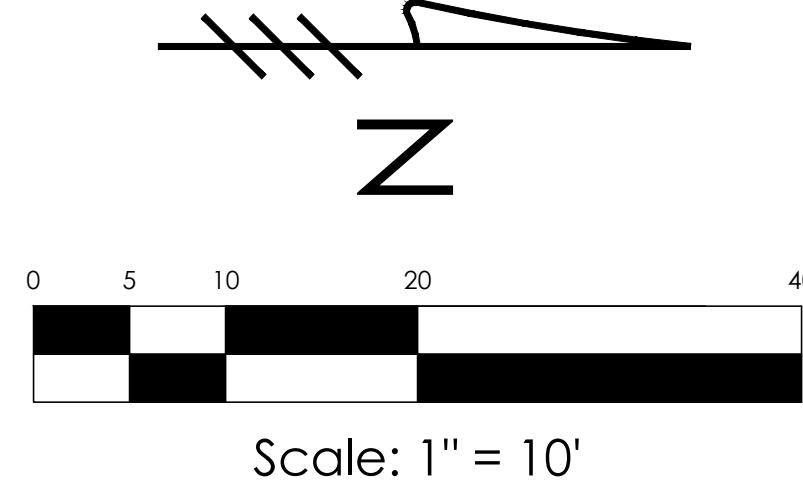
Impervious Surface Runoff Volume:
 $1.0 \times 2 \text{ in/hr} \times 2,415 \text{ sq.ft.} \times 1 \text{ ft./12 in.} = 403 \text{ cu.ft.}$
Pervious Runoff Volume:
 $0.2 \times 2 \text{ in/hr} \times 1,166 \text{ sq.ft.} \times 1 \text{ ft./12 in.} = 39 \text{ cu.ft.}$

C. PROPOSED EXFILTRATION TRENCH SIZING

L	=	Total Length of Trench Provided	=	31	ft
W	=	Trench Width	=	8.00	ft
K	=	Hydraulic Conductivity	=	0.00005	cts/sq.ft./ft. of head
H2	=	Depth to Water Table	=	3.30	ft
DU	=	Un-Saturated Trench Depth	=	2.50	ft
DS	=	Saturated Trench Depth	=	0.50	ft
V	=	Volume Treated	=	538	cu.ft.

Legend

- EXISTING ELEVATION PER R.L. VAUGHT & ASSOC. (NAVD-88)
- PROPOSED ELEVATION (NAVD-88)
- PROPOSED ELEVATION CONTOUR (NAVD-88)
- FLOW DIRECTION
- EXFILTRATION TRENCH
- AREA DRAIN
- 24" NYLOPLAST DRAIN BASIN WITH BAFFLE



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CALL OF FLORIDA, INC.

Contractor is responsible for obtaining location of existing utilities prior to commencement of construction activities.

Conceptual Site Grading & Drainage Plan For:
SERVICE DRIVE RENOVATION

200 El Vedado Road
Palm Beach, Florida

PROJECT INFORMATION:

Project No.	2024-0011
Issue Date	03/11/2024
Scale	1" = 10'

REVISIONS:

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CHAD M. GRUBER
FLORIDA P.E. NO. 57466

This item has been electronically signed and sealed by Chad M. Gruber on the date adjacent to the seal using a SIA authentication code. Printed copies of this document are not considered signed and sealed and the SIA authentication code must be verified on any electronic copies.

SHEET NUMBER:

C-1

Plan Background from Hardscape Plan by Nievera Williams Design Received 3/5/24

ARC-24-032

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