Cool and Cobb Engineering Company

Date: 5/10/2022
Job: Jay Desai
Location: 3711 West US Highway 90
Lake City, FL 32055

PUSH PIER DESIGN ANALYSIS

The load requirements for the pilings designed to assist in supporting the identified areas of the subject commercial building were determined. The selected piling locations and the specific piling are identified on the Pier Identification and Location Plan attached. The calculated total loads on the piles in the specific location, including both dead and live loads are documented in the attached table which is designated as Attachment "A". Based on the total load requirements for each of these piles, the push pier driver is to be employed. The push pier driver should be employed with a calculated load of 13,500 lbs., which will provide pile capacity, including the 2 to 1 safety factor of 27,000 lbs. which is greater than the maximum calculated total load of 13,500 lbs. which occurs on the pile identified as no. 1. Based on this analysis, the use of the push pier driver for the ECP piles with a specific load of 27,000 lbs. and a minimum depth of 15' is approved and certified as meeting all the requirements of the Florida Building Code 2020 7th Edition, and good engineering practice. This is not to be the primary support structure, but a supplement support to assist in support of the weight of the structure, which will reduce the total pressure on the existing soils. After completion of installation, Cool and Cobb Engineering Company shall be supplied with a drilling log of the location and depths of each pile installed so they can evaluate the installation and prepare the "As Built" drawings.

General Notes:

1. A log of each pile to be kept by Contractor noting depth for each pile.
2. Piles installed less than 48" apart are to be battered 10° away from each other.
3. This design is based on the loads of the structure placed on the shallow soils under the structure.
4. No deep soils geotechnical testing information was provided for this design.
5. This design does not address any possible sink hole activity as defined in Florida Statute § 627.706.

5/10/2022
Carl Cool, P.E.
State of Florida
Professional Engineer No. 16921

Digitally signed by Carl E Cool
Date: 2022.05.10 15:51:52 -04'00'

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203 W. Main St.
Avon Park, FL 33825
Office: (863) 657-2323
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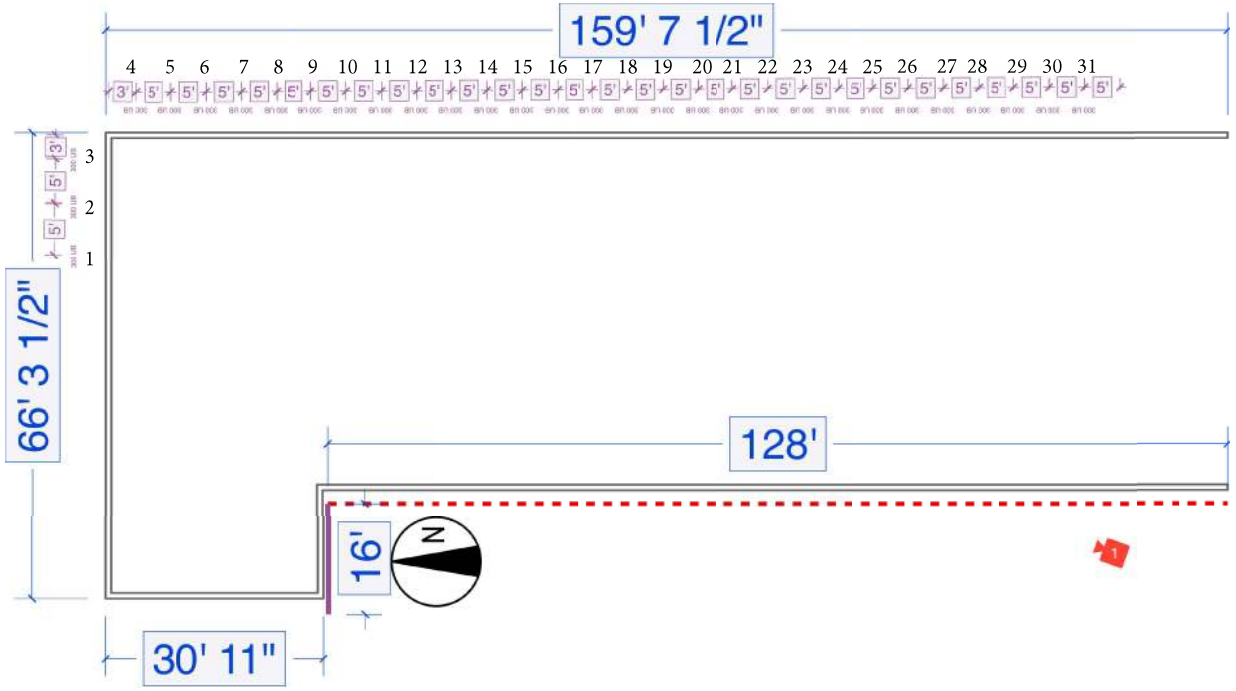
Foundation Professionals of Florida
P.O. Box 1625
Lake City, Florida 32056
www.foundationprosfl.com

Project Address
Jay Desai
3711 West US Highway 90
Lake City, FL 32055

Created By
Conner Rawlins
(386) 406-2191
05/09/2022

Repair Plan



4" Solid PVC Pipe	15.84 ft	5" PVC Grate Drain	128 ft
300 - Utility Bracket	31		

Year structure was built:
N/A

Foundation Type:
Concrete Block with Footer

Construction:
Concrete Block
Two - Story

Veneer:
Concrete Block

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Attachment "A"

Total Load on Pile (Live Load + Dead Load)

PILE NO.	TOTAL CALCULATE LOAD
1	13,500 lbs
2	13,500 lbs
3	10,800 lbs
4	12,150 lbs
5	13,500 lbs
6	13,500 lbs
7	13,500 lbs
8	13,500 lbs
9	13,500 lbs
10	13,500 lbs
11	13,500 lbs
12	13,500 lbs
13	13,500 lbs
14	13,500 lbs
15	13,500 lbs
16	13,500 lbs
17	13,500 lbs
18	13,500 lbs
19	13,500 lbs
20	13,500 lbs
21	13,500 lbs
22	13,500 lbs
23	13,500 lbs
24	13,500 lbs
25	13,500 lbs
26	13,500 lbs
27	13,500 lbs
28	13,500 lbs
29	13,500 lbs
30	13,500 lbs
31	13,500 lbs

Maximum Total Load on Pile: 13,500 lbs

5/10/2022

Carl E. Cool, P.E.

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