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GEOTECHNICAL AND MATERIALS ENGINEERING CONSULTANTS

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March 22, 2016

Mr. Jaime Teachout
21418 Florence Road
Mandeville, Louisiana

Report No. 140216-1

Ref: Geotechnical Engineering Analyses
Axial Pile Capacity Computations
Lot at 1716 Claiborne Street
Mandeville, Louisiana

Dear Mr. Teachout:

At the request of Mr. David Dammon of Dammon Engineering, Inc., we have performed additional engineering analyses for the referenced project. This work was authorized by your execution of our contract agreement on March 17, 2016.

Based on conversations with Mr. Dammon, we understand that plans are to support the proposed residence on a deep foundation consisting of driven timber piles (Class A- 8" Butt/ 6" Tip). At Mr. Dammon's request, we performed analyses to estimate axial capacities of driven timber pile foundations. The calculations were limited to a depth of 25 ft which is the maximum depth of the borings made at the site.

Pile capacity computations were performed using design procedures established by the US Army Corps of Engineers as coded in the ENSOFT computer program APile Plus v4.0. The compression capacity of an individual pile consists of a combination of skin friction around the perimeter of the pile shaft and end bearing at the tip. The skin friction in the upper 3 ft was neglected in our computations. The ultimate compression capacity was computed for the average subsurface soil conditions revealed by the borings and conservative estimates of soil strength. Computed ultimate compressive capacity was divided by a factor of safety of 2.5 to arrive at allowable capacity. The estimated capacity for a timber pile with an 8-in butt and 6-in tip is presented on Figure 1 as a plot of allowable compression capacity versus depth.

The reduction in individual pile capacity due to pile group effects depends on a number of factors including the configuration of the group, number of piles in the group, pile size, the depth of installation, and the pile spacing. In our opinion, no reduction in the single-pile capacities are necessary for the effects of group action for the piling provided a center to center spacing of no less than three diameters is utilized. This recommended spacing should also reduce installation problems. If piles are spaced closer than three diameters, we recommend that we be retained to review the design and comment on axial group effects.

For the recommended factor of safety, long-term settlement of piles is expected to be within normal tolerable limits. We roughly estimate that piles supporting the residence should experience settlement of 1/2 in. or less for single piles or pile groups, depending on the length and actual loading on the piles.

We appreciate the opportunity to be of service. If you should have any questions concerning this letter, please do not hesitate to call us.

Very truly yours,

BURNS COOLEY DENNIS, INC.

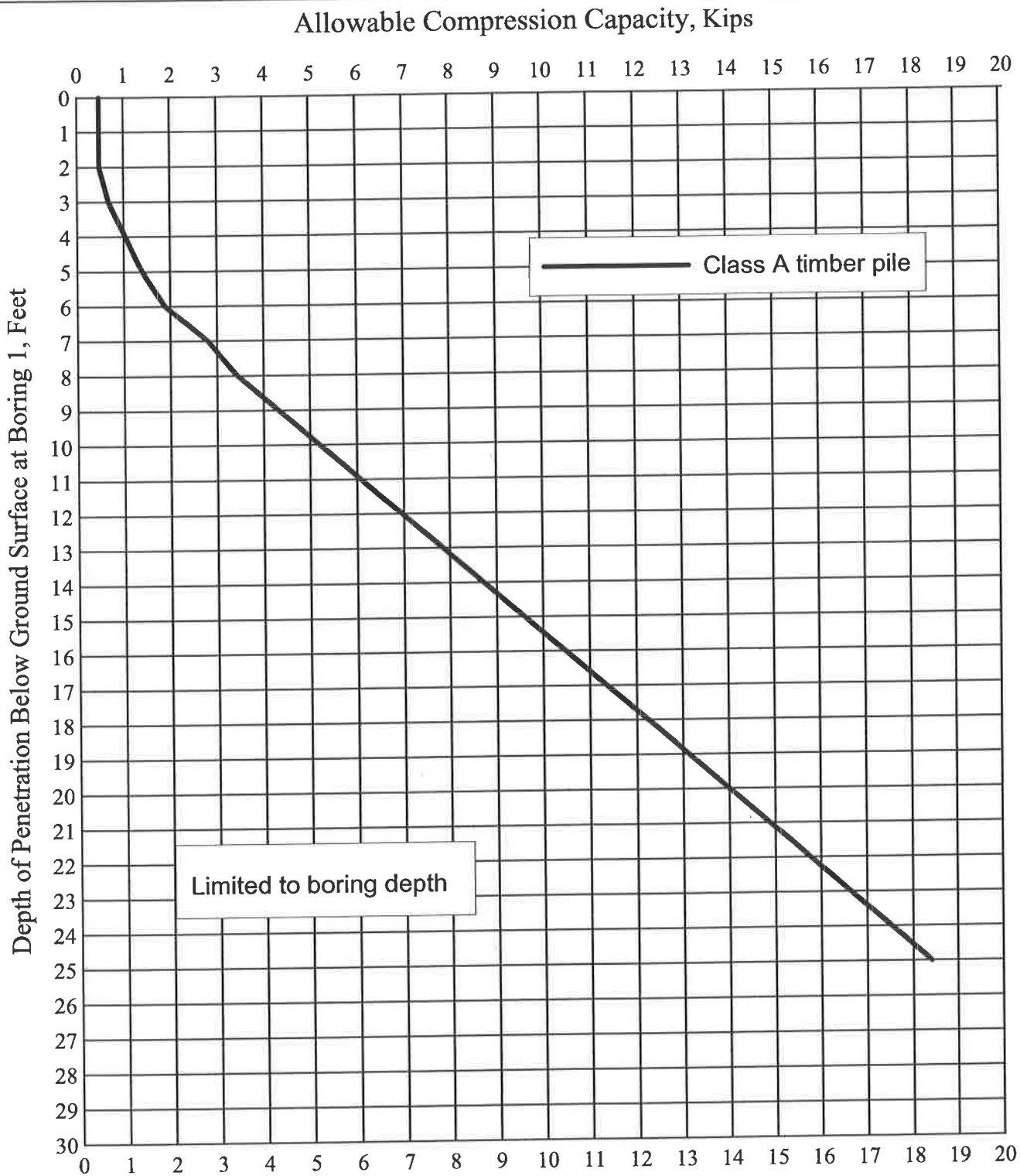
J. F. Rodrigues

J. F. Rodrigues, P.E.



Alexis E. Templeton, P.E.

MR/AET
Copies Submitted: (1)



**ALLOWABLE COMPRESSION CAPACITY CURVE
 TIMBER PILE (CLASS A - 8" BUTT/ 6" TIP)
 LOT AT 1716 CLAIBORNE STREET
 MANDEVILLE, LOUISIANA**