

A Forensic Engineering Perspective:

Integration of Building Products in the Building Envelope

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Southern Yatch Club

Notes for RCI Pool:

Dammon Engineering received a phone call from Jerry Householder, a forensic Engineer who was hired to investigate the pool at Southern Yatch Club. He requested our calculations for the pool floor. The pool floor is a pile supported 8" thick concrete slab with #4 bars 10" O.C. The pilings were placed 6' - 7" from the edge of the sides of the pool creating a cantilever beam. Calculations were generated (see attached) & Pete and I called Mr. Householder on 3-24-2013 to talk about the calculations. We reviewed the drawings and the soils analysis. Mr. Householder wanted to evaluate the cantilever using elastic deformation method rather than the design method. The cantilever is 8" thick with #4 bars 10" O.C. and 6' - 7" long. The deepest location was selected for the pool slab to present the location of the maximum loads.

The distributed loads for the cantilever beam from the water @ 6.5 feet deep and the self weight of the beam was estimated @ 420 # per linear foot. The side wall of the pool was considered a point load at the end of the cantilever beam at 809 #.

The soils analysis reported that the soil at 7.5 feet deep could support 1100psf however the soil at 14.5 feet could only support 480 psf, therefore it was agreed that the soil could support a minimum of 600psf.

After analysing the beam for elastic deformation it was determined that the cantilever beam could support the loads. Mr. Householder then told Pete and I that we could consider this issue closed.

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Jerry + Householder
STRUCTURAL ENGINEER
DEFLECTIONS
AROUND
POOL
3/24/13
RCI #318
ANY
SUPPORT.

JL HOUSE
HOLDER
e 6 MAX. COME
ELASTIC DEFLECTION
THICKNESS
6-7" :R