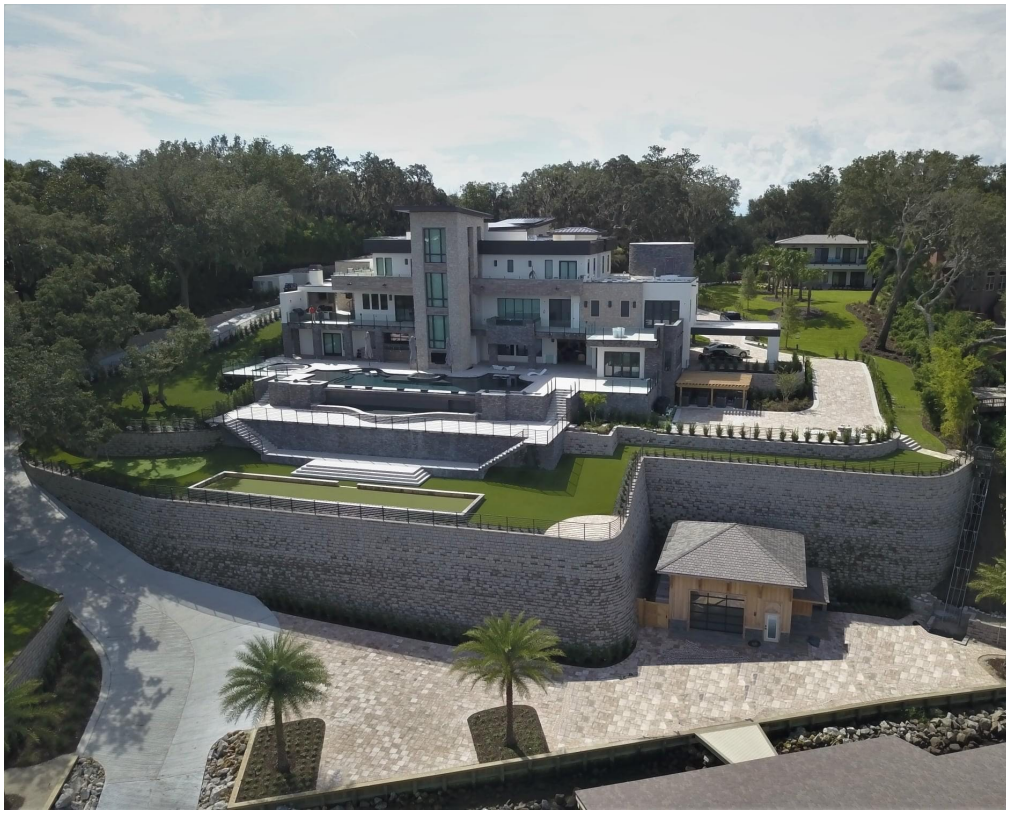
ERS
earthretention.com

St. Johns River

Project Case Study

Spectacular Home . . . Tough Building Site



Project:
St. John's River Residence

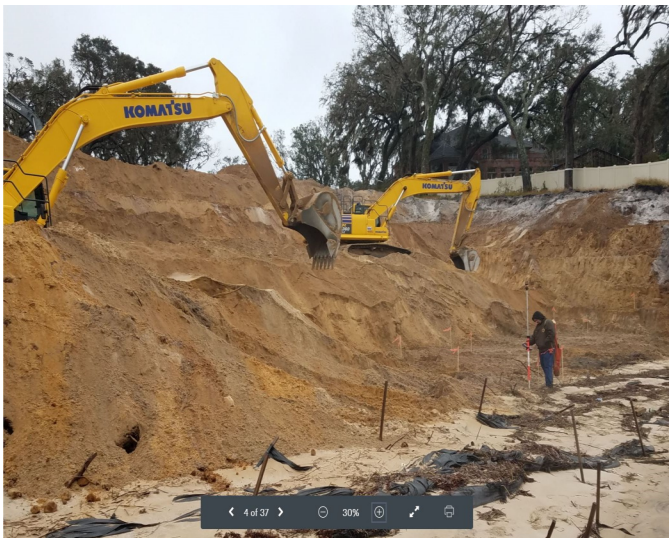
Location:
St. Johns River, Jacksonville, FL

General Contractor:
Summit Contracting Group

Retaining Walls Installer:
ACP, Inc

Engineering Firms:
Abbey Civil Engineering and
Earth Retention Systems, LLC

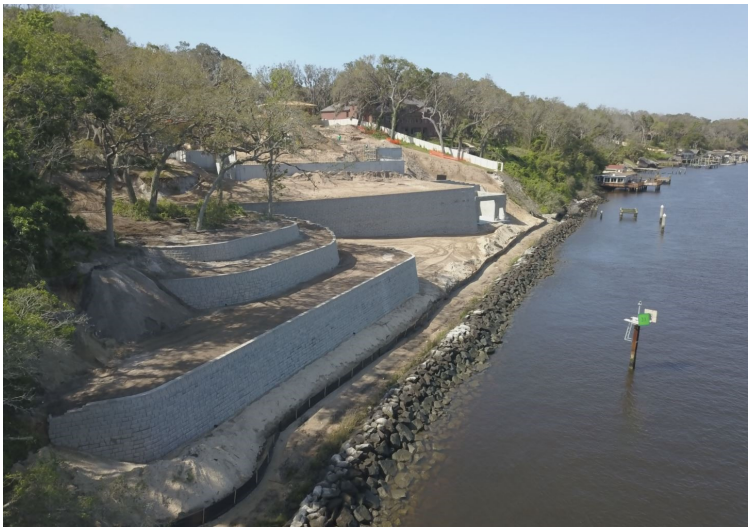
This homesite sits on a bluff overlooking the St. Johns River in northeast Florida. The distance from the back of the house to the water's edge is 120 ft. with a change in elevation of 75 ft. The soils are a silty sand with a phi angle of 32°. Steep slope angles on this site required numerous retaining walls, complicated drainage control during and after construction, and serious concerns with the deep foundation soils settling due to global instability of the whole area. Adjacent homes in the neighborhood had ill-fitting windows and doors due to the settlement.



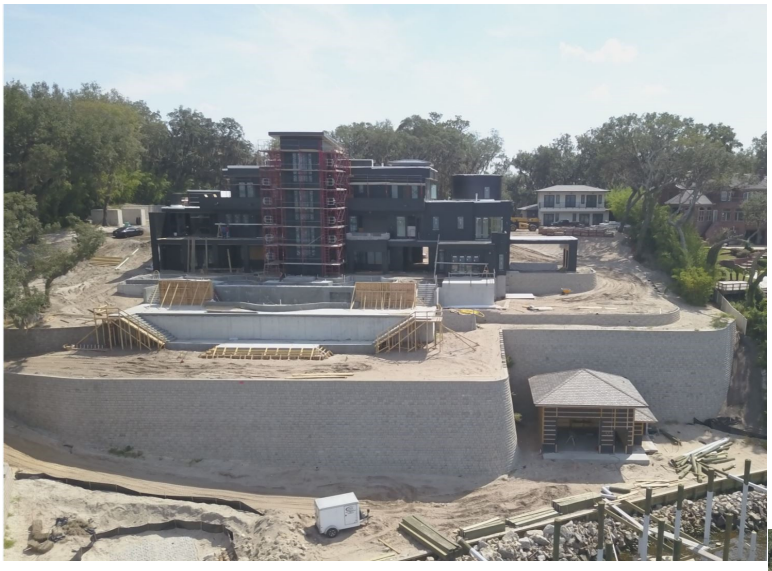
Design+Supply+Support

St. Johns River

The initial retaining wall analysis was performed by a national retaining wall company. Their design did not include a more rigorous global stability analysis which considers potential deep-seated, rotational failure surfaces outside of the traditional “reinforced soil zone”.

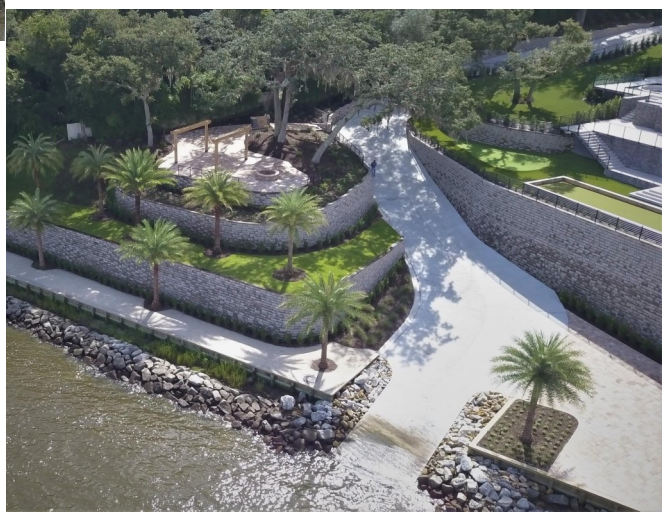


Earth Retention Systems (ERS) was contracted to perform an overall soil reinforcement design, which resulted in significantly longer geogrid lengths and an increased number of layers to stabilize the entire bluff.



Working closely with ACP, a large retaining wall installer in Florida, ERS was able to coordinate the stamped engineering, site supervision, and wall installation with the architect and general contractor. The result is a spectacular home, placed atop a fully geogrid-stabilized soil mass, with all required factors of safety. **The result: an architecturally beautiful solution to a tough site, and a satisfied owner.**

Compared to alternative designs and retaining wall types (big block walls, soil nailing, poured-in-place concrete walls), the ERS-designed segmental retaining wall (SRW) solution achieved cost savings of over 60%.



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