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Small footprint, substantial facelift

Archbold Biological Station

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Disturbance, buildings, an old tennis court and a large stand of non-native bamboo on the future location of Archbold's Learn Center and Lodge in March 2005. Main Drive is on the right.

ARCHBOLD BIOLOGICAL STATION PHOTO

Every real estate person lives by the maxim — location, location, location. When Archbold designed and built the Station's Frances Archbold Hufty Learning Center, location was the pressing issue. But it wasn't about where to site a new facility to increase market value. Dr. Hilary Swain explained there were many questions for Archbold staff, the architect and the engineers: "Could Archbold add a

large new facility dedicated to outreach and education while minimizing impacts? Could a building serve as a portal to the Florida scrub and be in harmony with nature? Could it be built without disturbing or degrading any native scrub or wetland habitats? Could the design complement the existing historic buildings and not detract from their appearance?”

The answers were all yes; Archbold selected a location that met all these goals, but it took a lot of thinking and planning to get there. This is the second in a series of monthly articles on the principles of ‘green building’ design, using Archbold’s Learning Center to illustrate how to build while also enhancing rather than degrading the environment.

Archbold owns and manages nearly 20,000 acres in Highlands County with more than 9,000 acres at the Station. All its buildings and facilities are located at the Main Campus just off Old State Road 8, occupying about 11 acres. For the engineers and planners involved in the early design of the Learning Center it seemed like there was land, land, land everywhere and Archbold kept saying, “not a square inch of habitat should be disturbed.”

The only option ended up being a small 3.3-acre corner at the end of Archbold’s Main Drive. Despite initial grumblings the engineers rose to the challenges, and very cleverly managed to fit everything — buildings, parking, stormwater treatment, septic, landscaping—into this small, previously disturbed space. Small footprint achieved! Not a square inch of native habitat removed.

The location had lots of other practical advantages. It was distant enough, nearly 200 yards away from Archbold’s historic buildings, such that the modern Learning Center could be built without detracting from the iconic architecture and construction of these National Historic Register buildings. Bert Crawford, Archbold’s Operations Manager added he, “Also wanted the site to be practical for power, water, and communications. This location was next to Archbold’s large water main that loops around the campus and was accessible for the main power distribution center of the campus.”

Photos taken during 1929-1931, when Main Drive was built by the Roeblings, show many palmettos had already been cleared from the site, a drainage ditch dug, and a large shed constructed where the modern Learning Center is now located. There is an interesting photo of Roebling’s Red Hill Estate engineer/architect, Alexander Blair on his horse Buddy, next to his stables, which were also built on this site.

As the years passed the 3.3-acres became increasingly disturbed, a bit of an eyesore at the end of Archbold's lovely entrance drive. Before Learning Center construction commenced in 2010, the site was home to a shabby tennis court, dumpsters and trash piles, an abandoned two-room concrete block building constructed in earlier years for honey bee research, several dilapidated aviaries previously used for work on Crested Caracaras, an abandoned orange grove planted in the 1930s, and a two-acre stand of non-native bamboo. At last, here was the chance for a significant facelift of this rather unseemly corner at Archbold's entranceway.

During site preparation, several oaks and pines were protected and some of the remaining native palmettos along the Main Drive were preserved. Fifty truckloads of excavated dirt were used to restore wetlands on Archbold land nearby. Three ~70-year-old pine trees were removed to make way for the building. Two large tree slices (or tree cookies) from one of the pines were prepared as an exhibit in the Learning Center with the tree rings providing interpretation of the history of the land (growth rates, fire, insect damage etc.) over the preceding decades. Some of the wood was used to build benches in the Learning Center.

Old aviaries and buildings were demolished but the concrete foundation of the 'bee house' was retained and re-purposed as the base for a shaded pavilion at the start of the Nature Trail. The dense patch of non-native 40-foot-high bamboo planted by the Roeblings was dug up and burned. Some old Roebling concrete pavement, which is very deep and incredibly strong, was retained for parking to limit unnecessary demolition waste.

The area now serves as an inviting gateway to the scrub. Archbold created a compact 0.43-acre building footprint within this triangle-shaped 3.3-acre site constrained by Main Drive to the south, the railroad to the west, and the historic drainage ditch to the east. The buildings are surrounded by nearly two-acres of open space, graced by native landscaping. Dr. Hilary Swain concluded, "What Archbold achieved was an enduring symbiosis of form, function, and natural beauty. We are proud to have achieved the double benefit for a green building: combining a very small footprint with a very substantial facelift."