SEAWALL REPAIR NETWORK

Case Study

Repairing a Seawall to Stop Adjacent Property Damage

Seawalls protecting coastal properties often erode, threatening the stability of adjacent structures. In this case, an 80-foot-long seawall was deteriorating, causing soil loss that damaged a nearby swimming pool deck. In this location, the permitting process for a traditional seawall replacement can sometimes take over a year. However, Seawall Repair Network® contractor Atlas Seawall Solutions was able to address the issue quickly and effectively without replacing the structure.



Repair Materials

The primary repair material used was SW-RP1, a structural polymer foam. This eco-friendly seawall repair foam offers exceptional strength and durability. Once cured, it surpasses the strength of traditional repair materials like cement grout. Additionally, SW-RP1 is NSF-certified to meet strict environmental standards, making it a safe repair option. A hydrostatic pressure control system was also installed to regulate water pressure behind the wall. This system allows water build-up on the landward side to drain through the wall without taking supporting soil with it, thus preventing erosion behind the structure.

Procedures

The repair process began with technicians injecting SW-RP1 behind the entire 80-foot seawall. They made injections three feet apart, five feet deep, using one gallon per vertical foot. Due to extensive horizontal cracking, more injections than usual were required. A standard repair job would require the injections to be around 5 feet apart. The closer spacing of injections helped seal the cracks and better stabilize the structure. Next, technicians installed hydrostatic pressure filters. As stated above, this system maintains the equilibrium of hydrostatic pressure while preventing soil migration.

Results

The repair team completed the entire seawall in just three days. This quick turnaround allowed the general contractor to repair the deck and add backfill to reverse soil erosion around the pool. Most importantly, the property owners were satisfied with the outcome. This efficient repair method not only saved time but also proved to be cost-effective. This approach typically costs 70-80% less than replacing a seawall. Additionally, it requires no excavation, minimizing property disruption.