

Living Shoreline Construction

LivingShorelines



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*Protecting Embankments &
Natural Resources*

A living shoreline is a constructed stabilization technique built to protect an embankment which:

Mimics natural habitat

Provides increased opportunities for species diversity and productivity

Can serve to improve water quality and the ecological integrity of the area.

Before



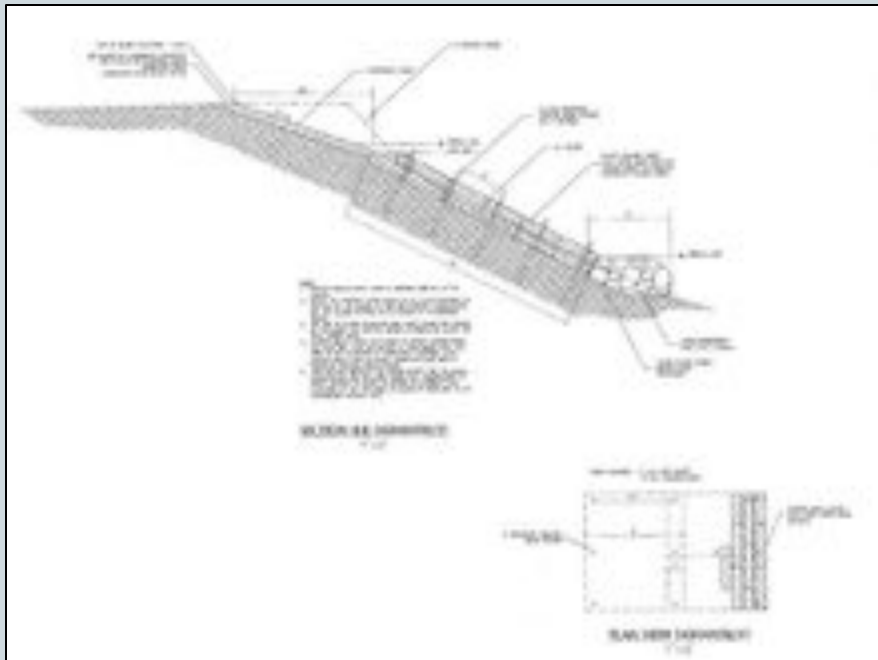
During



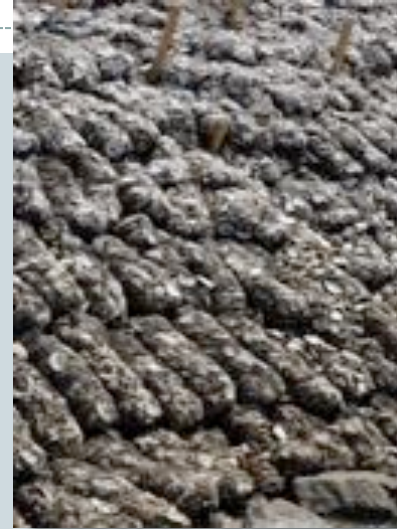
After



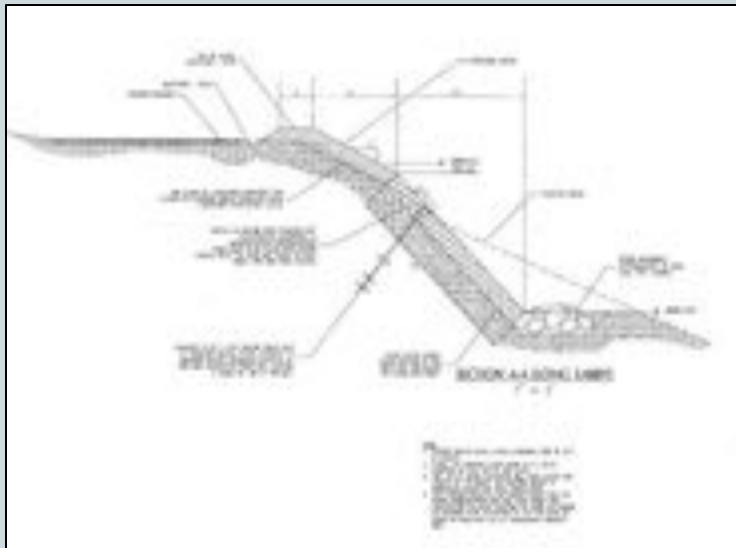
Sapelo Island – Ashantilly Site



Ashantilly



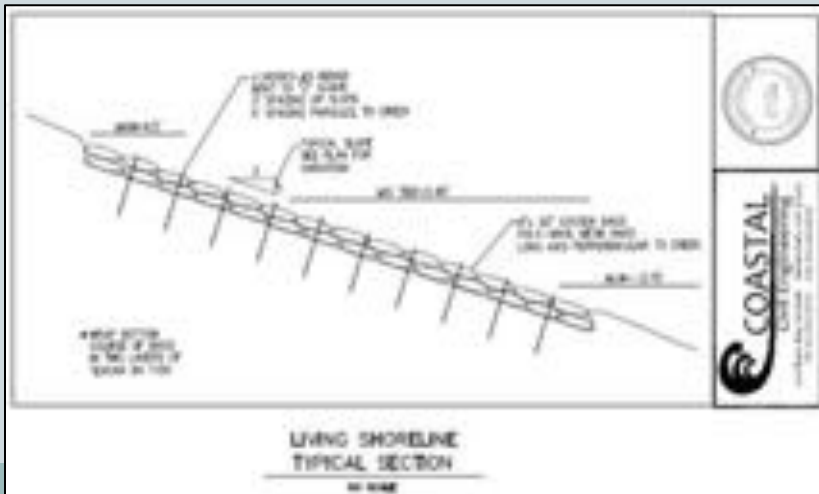
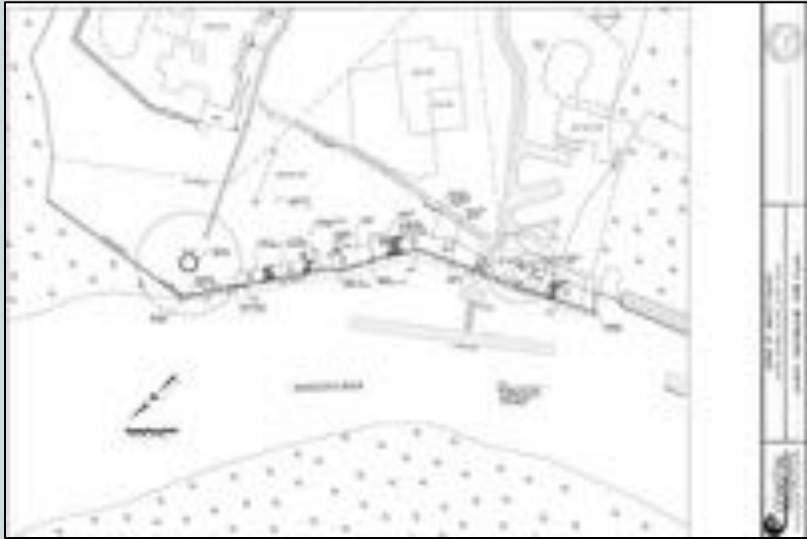
Sapelo Island – Long Tabby



Long Tabby



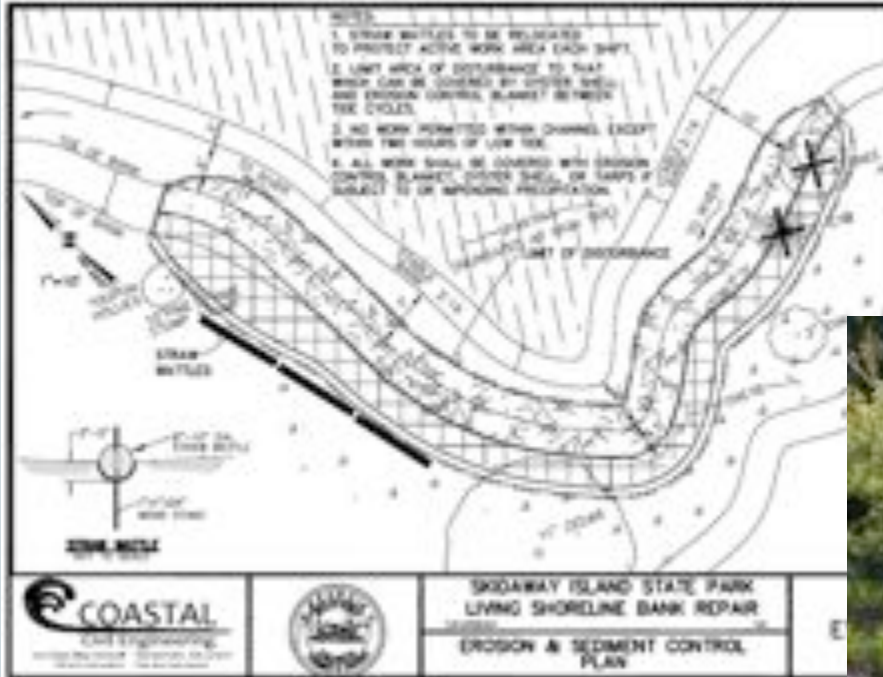
Little St Simons Island



Little St Simons Island



Skidaway Island State Park



Skidaway



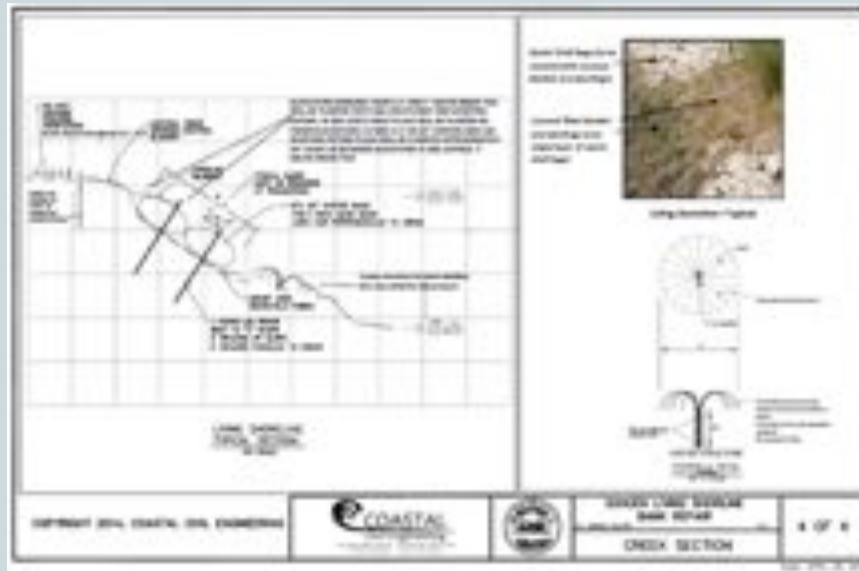
Canons Point Preserve



Canon's Point



St Simons Residential



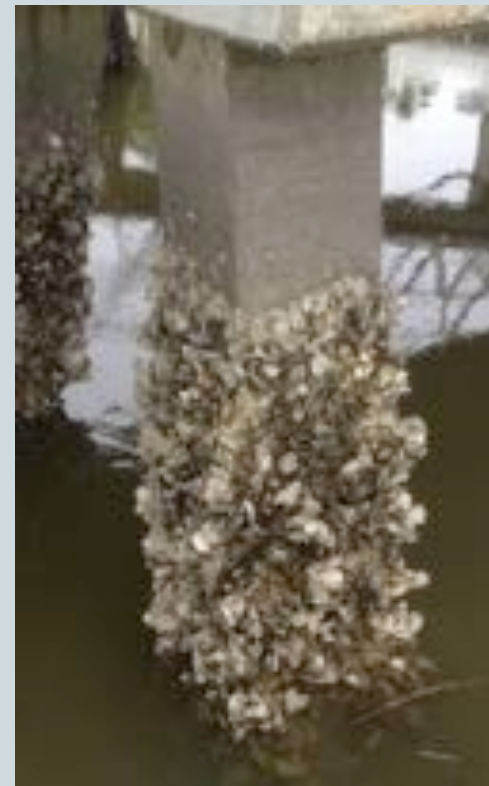
St Simons Residential



Assessment of Site Conditions



- **Tidal Energy**
- **Slope of Bank**
- **Vegetation**
- **Elevations**
- **Soil**



Overview of Construction Process



- Set elevations
- Set Grades
- Match living shoreline to plans
- Anchor bags in areas of strong current
- Consult with owner
- Adapt as required

- **Construction Methods Outline**

- **Planning**

- Measurement of the embankment and determination of the limits of disturbance.
- Identification of existing elevations, soil conditions, drainage patterns, tidal variance and predictions, staging areas, and vegetation to be removed.
- “Ground-truthing” and reconciliation of proposed work-site with actual conditions.
- Establishment of benchmarks and flagging of all appropriate features.
- Creation of a construction plan, communication of the plan, discussion of any necessary modifications with project team and owner, and adaptation of plans accordingly.

- **Tools used: Surveying equipment; measuring tape.**

- **Prepping**

- Clearing of necessary vegetation.
- Removal of necessary tree material from upland and embankment within the limits of disturbance.

- **Tools used: chainsaw; 50,000 lb. excavator; dump truck.**

- **Constructing**

- Grading of embankment to required slope and confirmation of proper grade.
- Installation of geotextile and rip rap, and confirmation of rip rap elevations.
- Installation of oyster bags, reno-mattresses, and/or stabilization method and confirmation of proper elevations.
- Installation of stakes and/or anchors.

- **Tools used: transit; 4’ level; measuring tape; 50,000 lb. excavator; masonry string.**

- **Finalizing**

- Finish grading the top of bank.
- Installation of erosion control blanket.
- Cleanup of site.
- Replacement of dock.

- **Tools used: skidsteer loader; dump truck; circular saw; wrenches; power drill; saws-all.**

Conclusions



**STRUCTURAL STABILITY
ENVIRONMENTAL IMPACT**