THE WHOLE IS GREATER THAN THE SUM OF ITS PARTS

Leveraging Federal Partnerships and Local Investment to Sustain Oak Island's Coastline

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10/22/2026

Town of Oak Island
"A Place to Coast" North Carolina

moffatt & nichol





ACT 3: 2025/2026 BEACH RENOURISHEMENT PROJECT

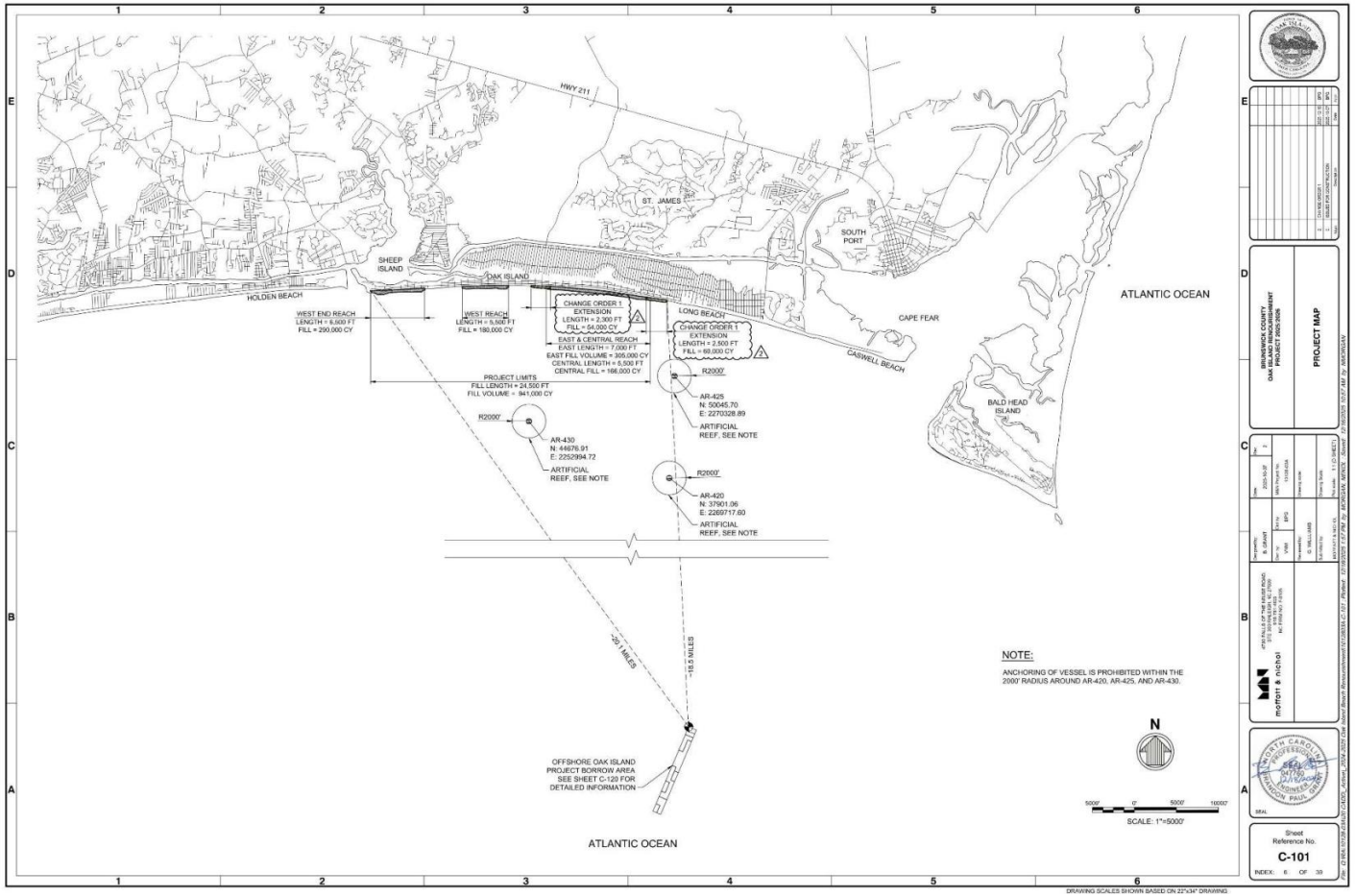
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2025/2026 Beach Renourishment Project: 2026 ASBPA Best Restored Beach Award Recipient!

- 1,057,577 cy of beach compatible sand placed
- Restored Level of Protection & provided advance fill to counteract long-term erosion
- Use of Federally managed offshore sand resource
- Project adaptation to rising construction costs through value engineering
- Aligning project timing with ongoing federal beneficial use efforts
- Environmental compliance across Federal and State permits



Nourishment Project Objective



10-year storm protection objective

6-year nourishment interval

Advance fill to address background erosion

Beach and dune protection for oceanfront infrastructure

Habitat and recreational beach benefits

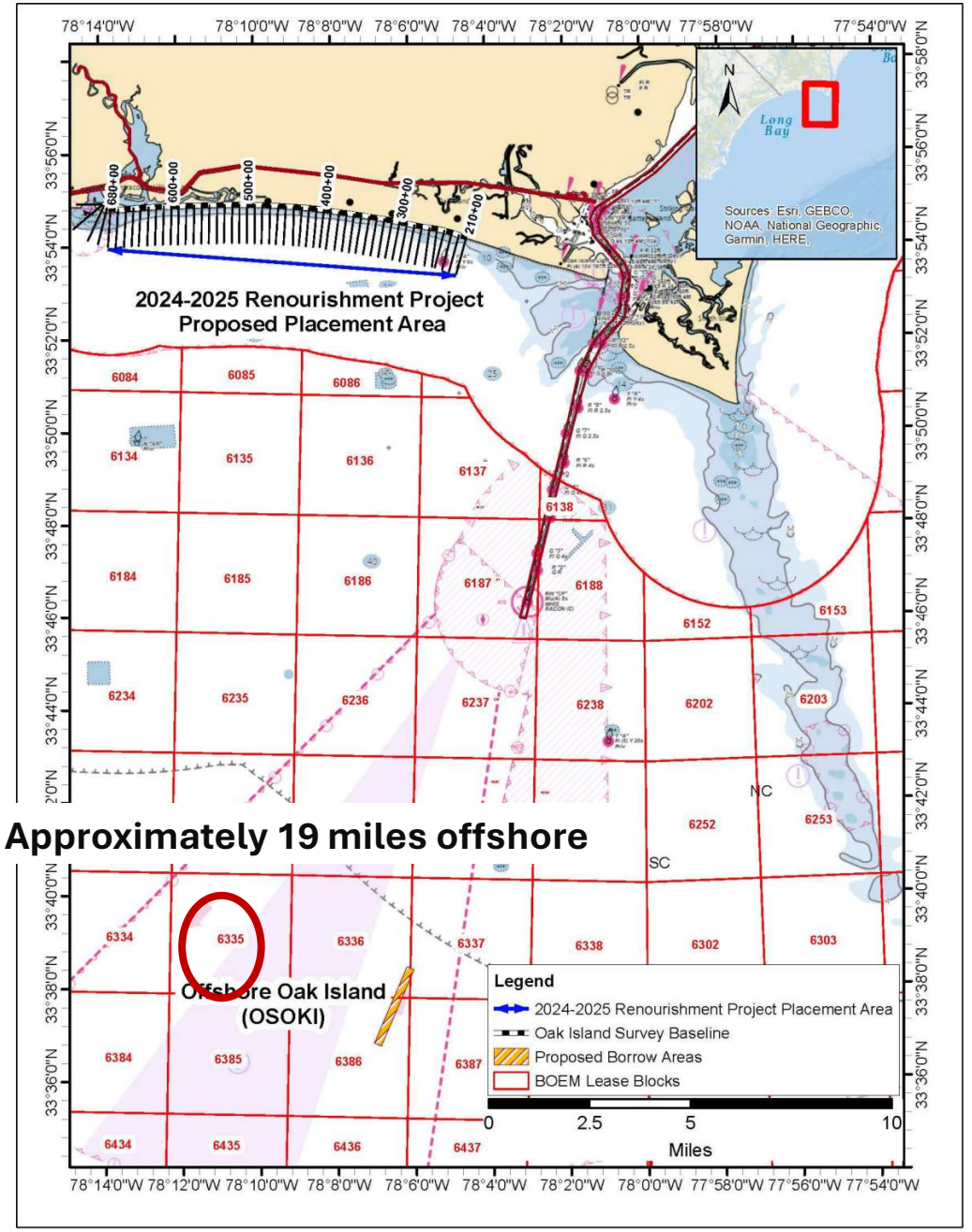
2025/2026 Renourishment Project

OSOKI borrow source and resource coordination

A collaboration opportunity during the Town funded sand search

- During the offshore sand search, ongoing coordination with BOEM made the project team aware of BOEM geotechnical investigations in the region.
- Some BOEM cores indicated potentially beach-compatible material offshore of Oak Island.
- Working collaboratively with BOEM, the Town and project team built on those data and focused additional investigation in the area.
- The coordinated investigation ultimately helped identify and characterize the offshore borrow source used for the 2025/2026 renourishment project.

The partnership created value before permitting: it helped the Town find the sand resource that made the project possible.



2025/2026 Renourishment Project

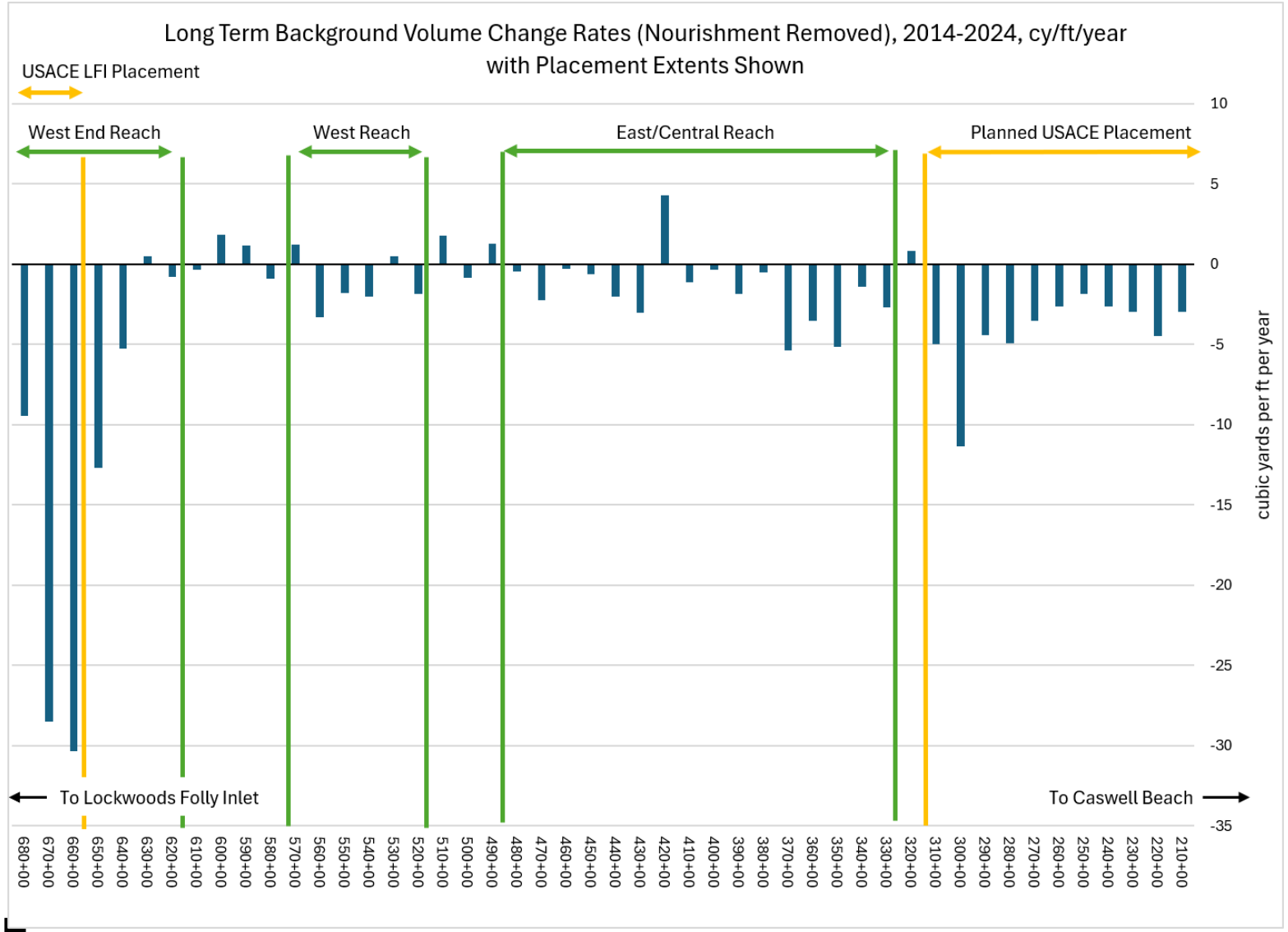
Redesign and negotiation brought the project within budget

Value engineering focused the nourishment plan on vulnerable shoreline reaches

NOV 2024 BIDS	MAY 2025 REBID	FINAL NEGOTIATED CONTRACT
1,412,300 cy	**941,020 cy**	**1,055,000 cy**
Design volume	Design volume	Final design volume
$39.2–59.5M	**$32.7M**	**$35.77M**
Bid range	Bid range	

Refined placement limits • Prioritized vulnerable reaches • Coordinated USACE placement

Project Alignment and Value Engineering



PRIORITIZE EROSION HOTSPOTS

The largest background losses occur near the western end.

TARGET PLACEMENT

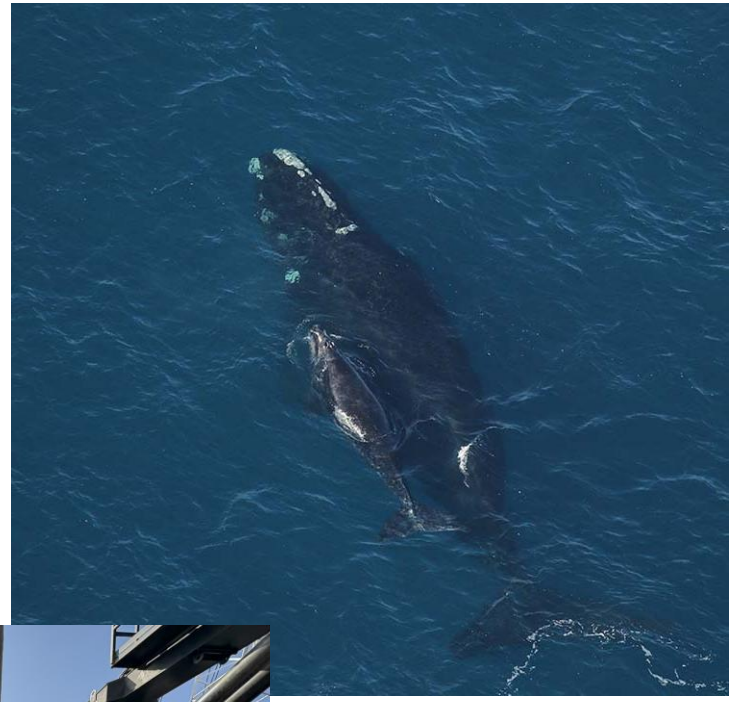
Focus placement to vulnerable locations.

ACCOUNT FOR USACE SAND

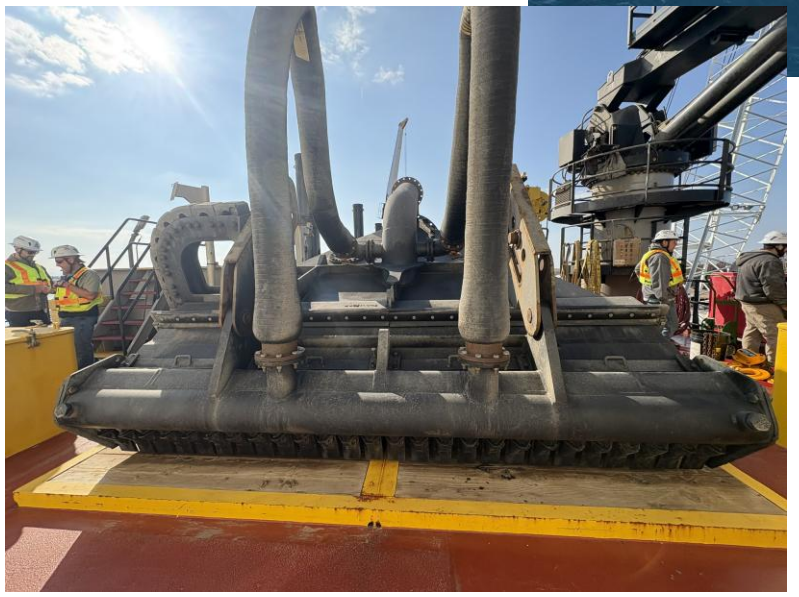
Coordinate with placement at the shoreline ends.

Environmental Compliance

- Vessel speed restrictions to avoid whale encounters
- Use of Environmental Species Observers (ESOs)
- 24-hour protected-species monitoring protocols
- Sand visual inspections daily and testing every 3 days
- Escarpment leveling
- Dredge tracking to maintain borrow area restrictions



North Atlantic Right Whale (NARW) calving season



Draghead deflector on dredge

Key Takeaways

Collaboration creates value early

Marine Minerals Administration (MMA) data and interagency relationships helped identify the sand resource.

Town partnership makes tradeoffs actionable

Shared priorities supported redesign and an affordable construction scope.

Value engineering retains the protection objective

Target placement using erosion patterns and complementary USACE sand.

The project succeeded not because there was abundant funding, but because every available resource was strategically leveraged