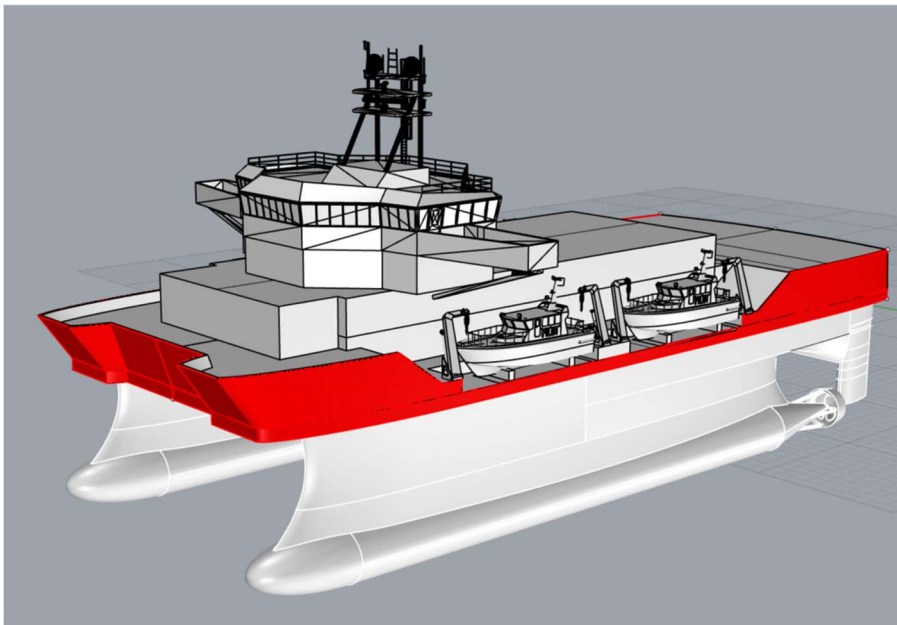


PBR ELIZABETH

Pilot Boat Mother Ship

The Smooth Brians

Christopher Hamilton, Liam Keady, Jim Rodgers



Vessel Mission

The primary mission of the vessel is to serve as the mother ship for a fleet of four fully electric pilot tenders that will transport pilots to and from commercial ships transiting in the Chesapeake Bay region. The vessel is designed to recharge, launch, and recover the pilot tenders as well as perform emergency search and rescue, oil spill recovery, and towing operations.

Principal Characteristics

Length Overall	77m
Length Between Perpendiculars	66m
Beam	30m
Depth	13m
Draft (Full Load)	8m
Displacement (Full Load)	4000 tonnes
Design Speed	15 kts
Complement	32 persons
Endurance	30 days
Cost	135 million USD
Total Installed Electric Load	3700 kW

Operational Profile

Station Keeping	95%
Transiting	2%
Emergency Operation	3%

Diesel-Electric System

The vessel will be powered by five CAT C32 950 kW generators to meet the full electric load included two 1000 kW main propulsion induction motors. The diesel-electric system allows for the generators to be on the machinery deck instead of inside the submerged hulls. Power can readily be supplied to recharge the pilot tenders 815 kWhr batteries, propel the ship, and power hotel services.

Special Features

- Aft Helideck
- 4x Two Point Pilot Tender Davit Lift
- 12,000 lb SWL Towing Bitt
- Solar Panel Array
- 2x Wind Turbines
- 2x Bow Thrusters
- Meets DP1 Standards

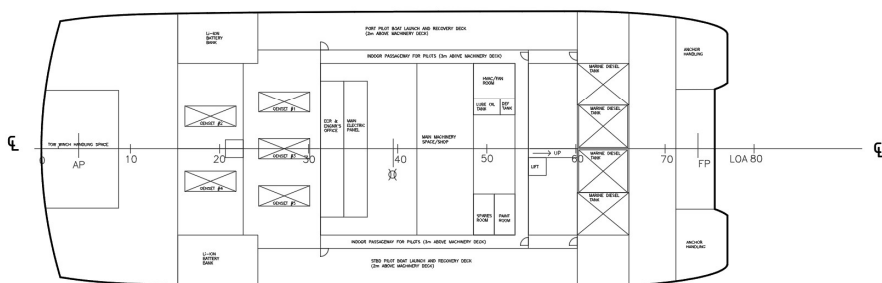
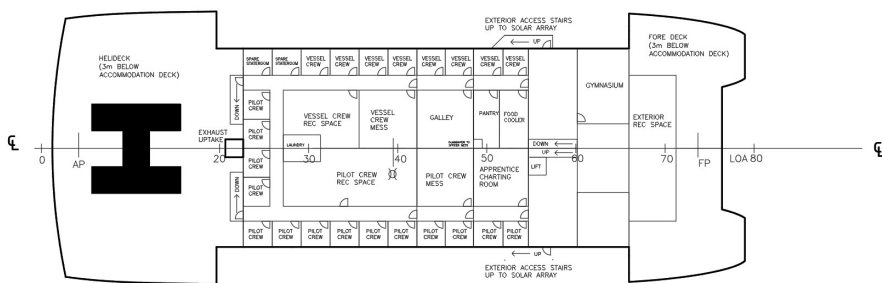
Accommodation Features

- 32 Single Berths
- Separate Vessel Crew, Pilot Crew and Officer Recreation areas
- Pilot Apprentice Charting Room
- Gymnasium

SWATH Hull Form

Small Waterplane Area Twin Hull

- Reduced Roll Motions in Heavy Seas leading to increased comfort for crew
- More Flexibility for machinery arrangement justifying the use of a diesel electric system



Meet the Smooth Brians

Christopher Hamilton – Clovis, CA

- Naval architecture intern at DLBA Naval Architects
- Laboratory assistant at the University of Rhode Island
- Marine engineering intern at Metal Shark Boats
- Research assistant at Webb Institute
- Plans to enter into the industry as a naval architect



Liam Keady – Hanover, MA

- Hydrodynamics intern at Mercury Marine
- Naval architecture intern at Martin Defense LLC
- Engineering intern at Brooklin Boat Yard
- Lifelong experiences working on boats
- Plans to enter Marine Industry as a Naval Architect or Engineer



Jim Rodgers – Ann Arbor, MI

- Marine engineering intern at Great Lakes Shipyard
- Naval architecture intern at ReconCraft
- Engine cadet aboard the S.S. Arthur M. Anderson
- Interested in the Private Yacht and Wooden Boat Sector

