



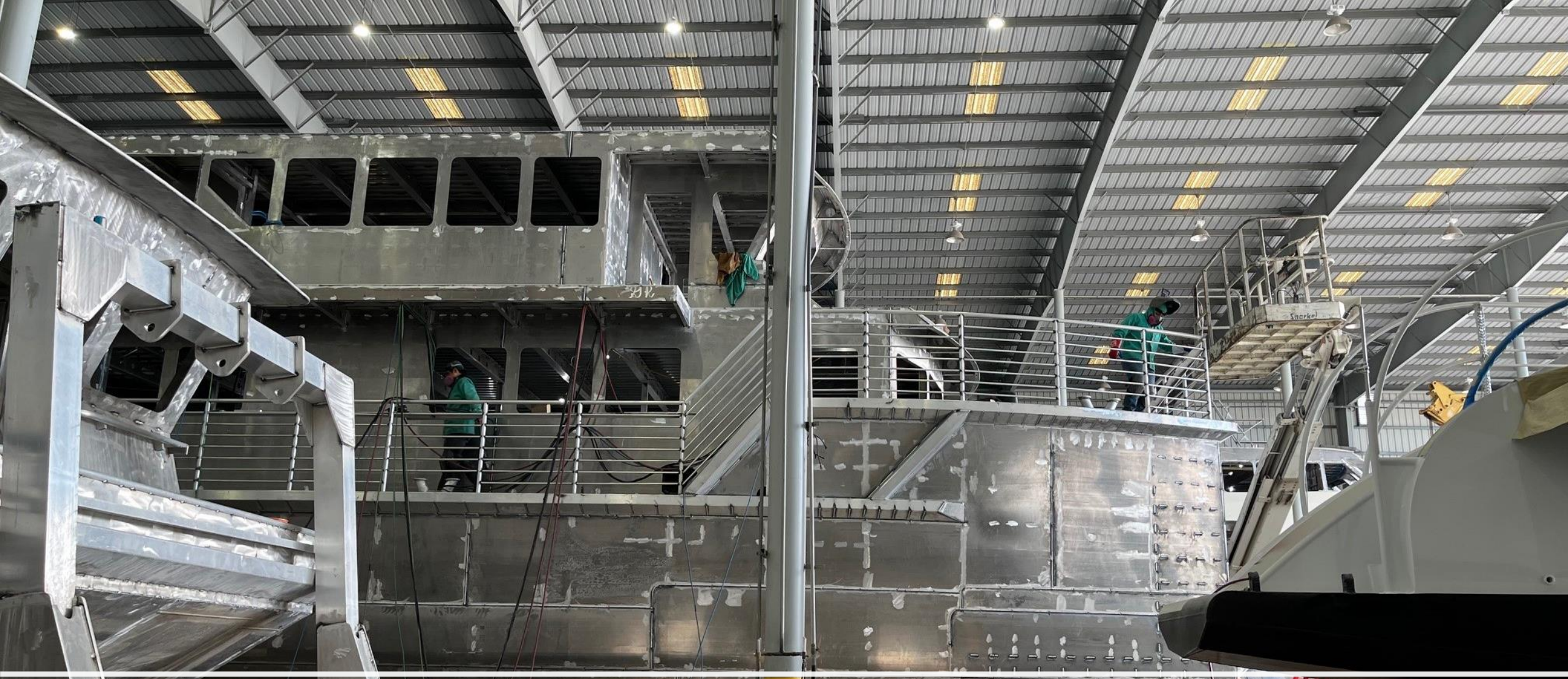
Sadie Ann Update



January 11, 2024

Presented to:
Great Lakes Association of Science Ships
27th Annual Science Vessel
Coordination Workshop





Midship Marine, Harvey, LA











Specifications

Length = 65'

Beam = 24'

Draft = 4.6'

Fuel = 1320 gallons

Passengers = 49

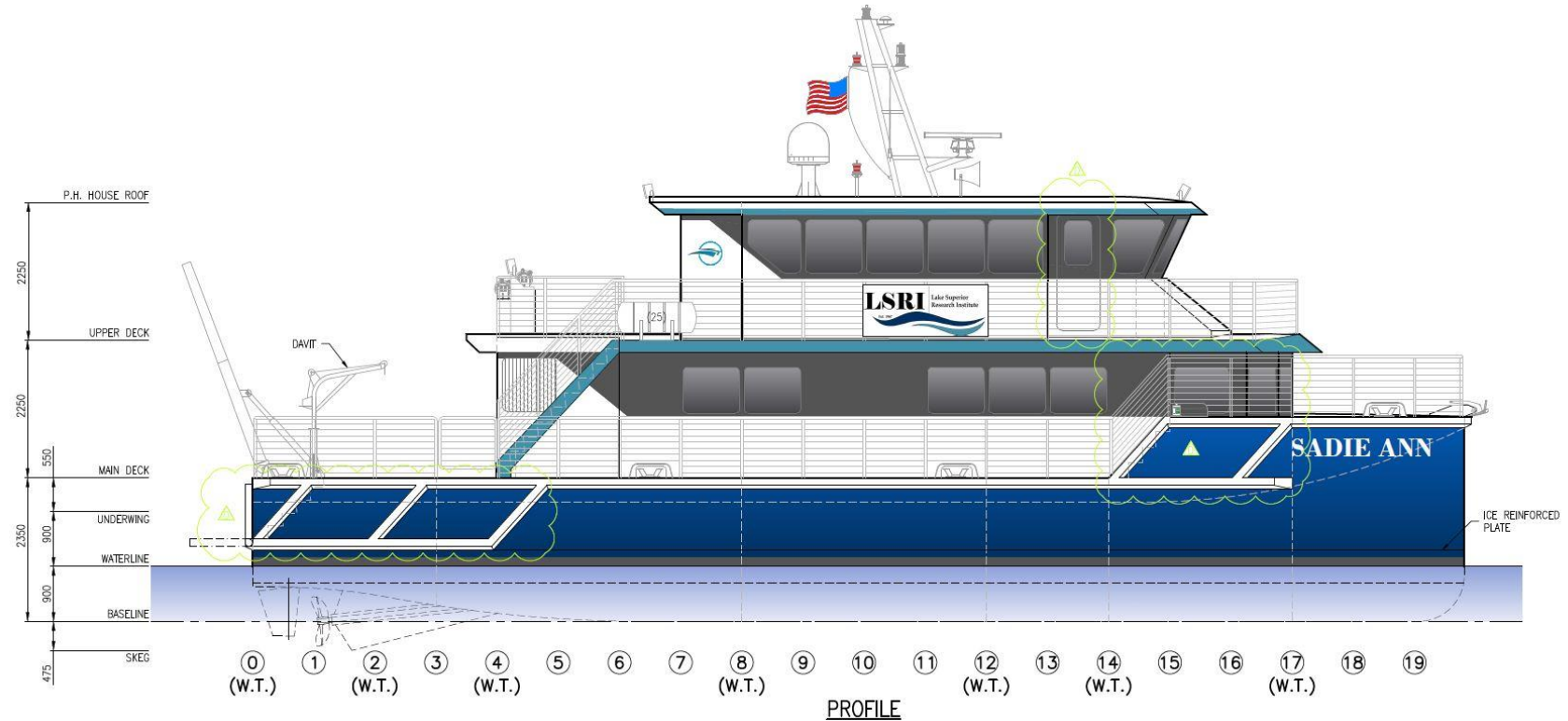
Crew = 8 (Operate w/2-3)

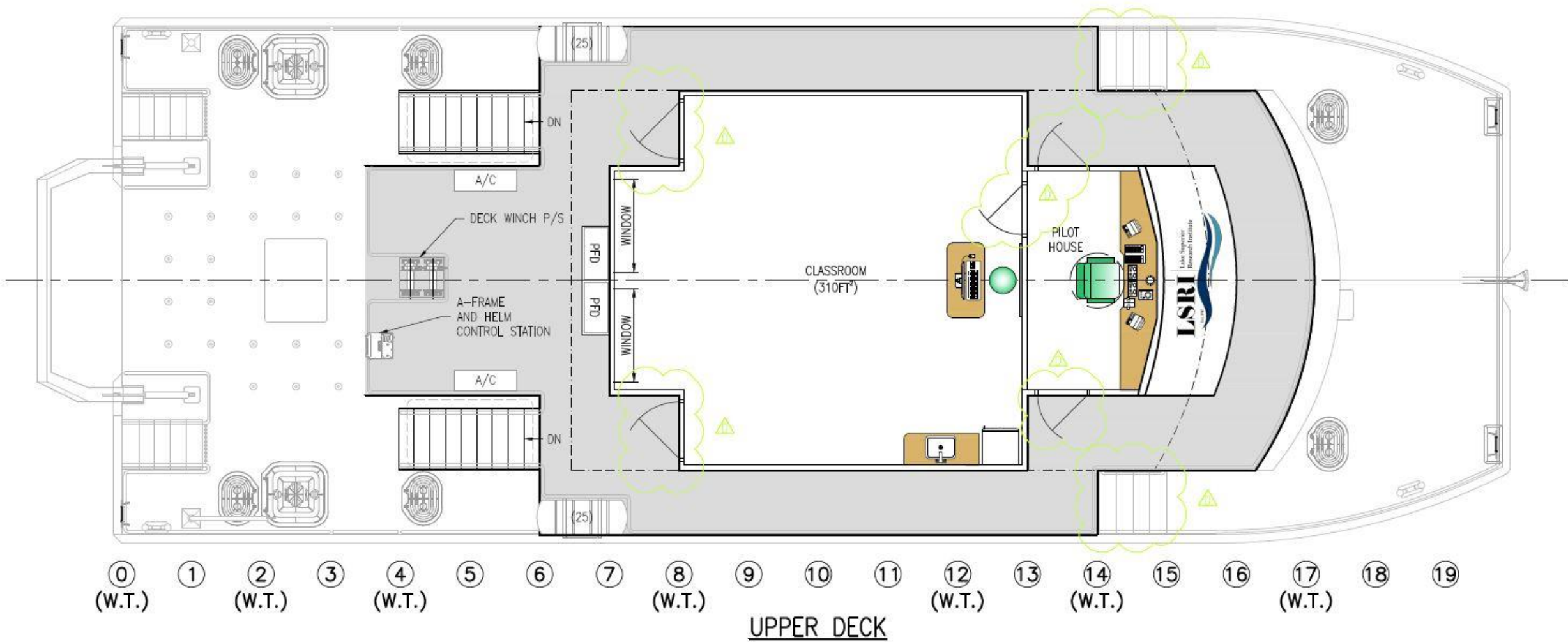
No sleeping quarters

ADA Head

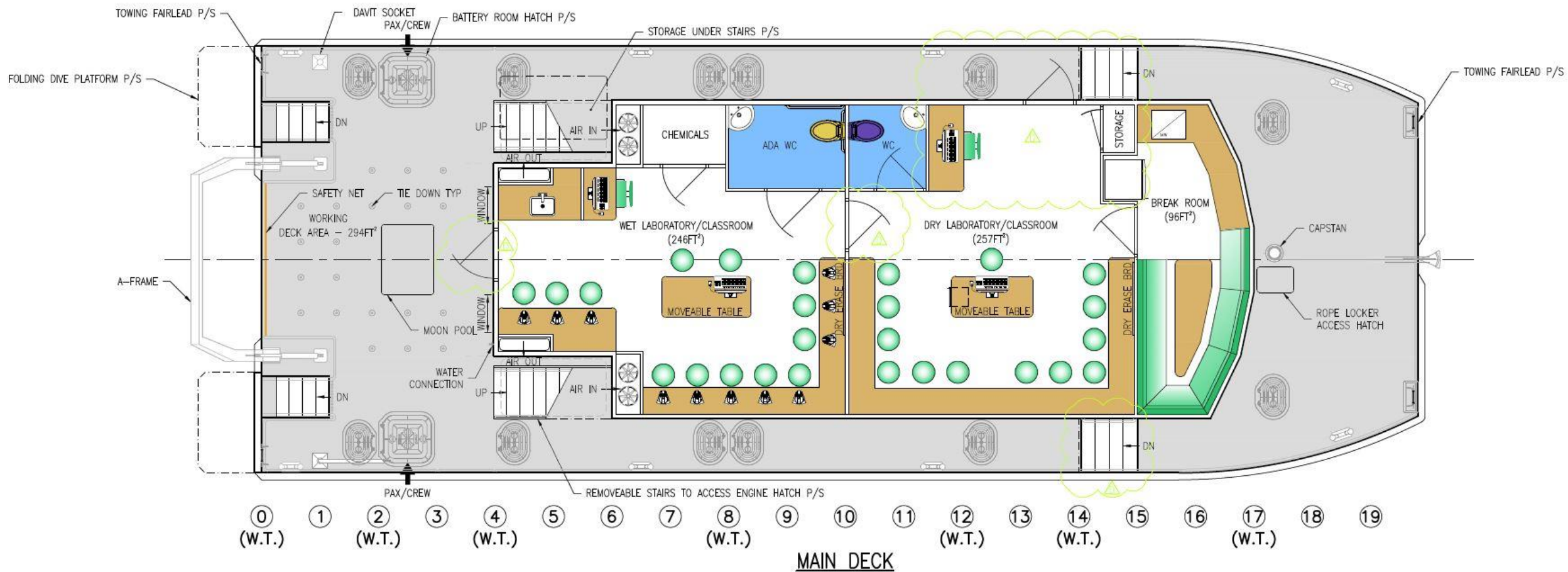
Wet/Dry Lab

Moon Pool Opening





Upper Deck



Main Deck

Range & Performance

- US 46 CFR Subchapter T – Great Lakes Exposed Waters
- Gross Tons, US, approx. 83 GRT / (66 Net Tons)
- Diesel/Electric Hybrid Propulsion
- Range, 12 knots, 10% Reserve Fuel = 600 nm
- Estimated Performance = Speed, Calm Water, Half Operational DWT, 100% MCR = 18 knots



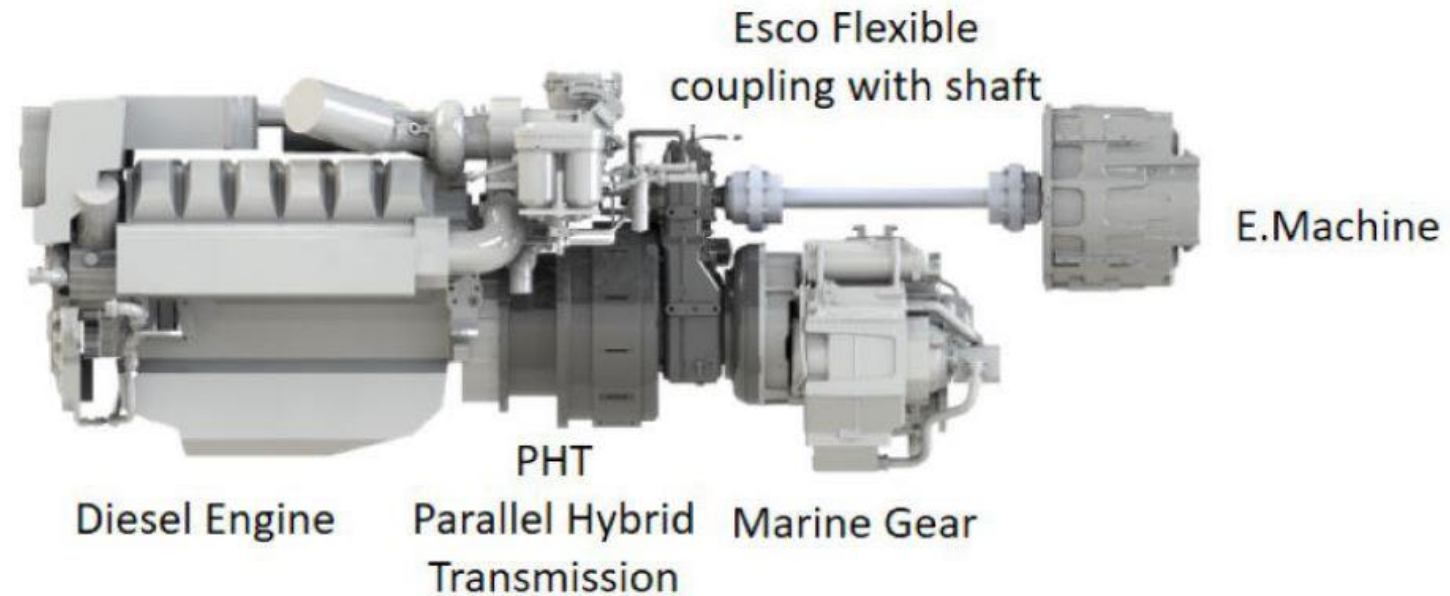


John Deere Marine Propulsion Engine - 6090SFM85
9.0L PowerTech™
242-410 kW (325-550 hp)
EPA Commercial Marine Tier 3



Esco Power Parallel Hybrid

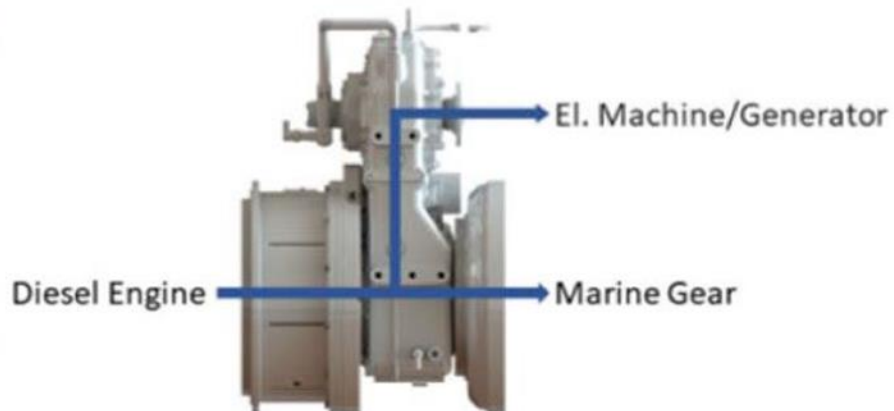
From conventional Diesel driveline to Parallel Hybrid driveline



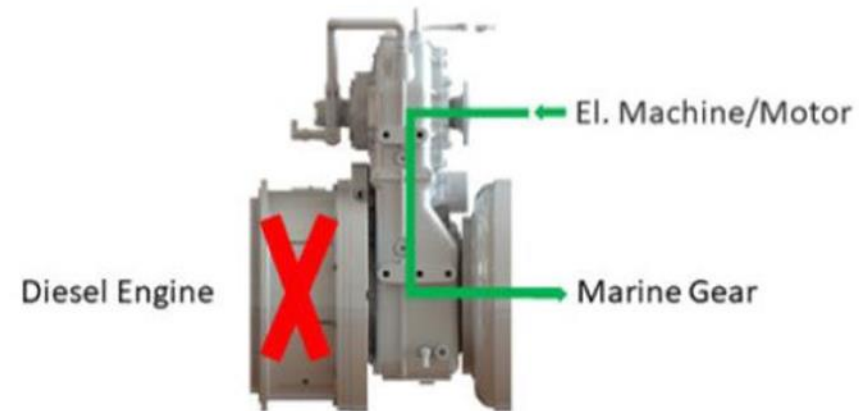


Mode selection panel

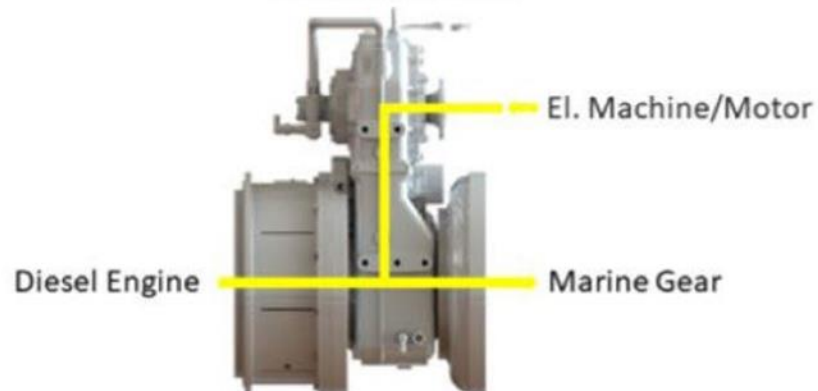
DIESEL MODE



E-MOTOR MODE

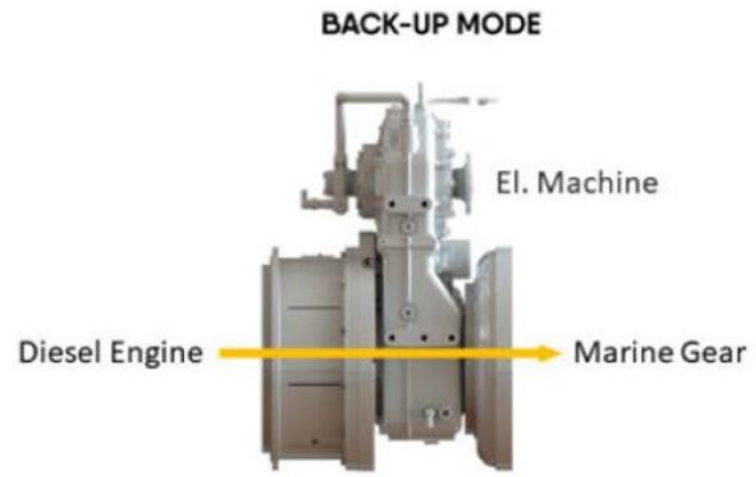
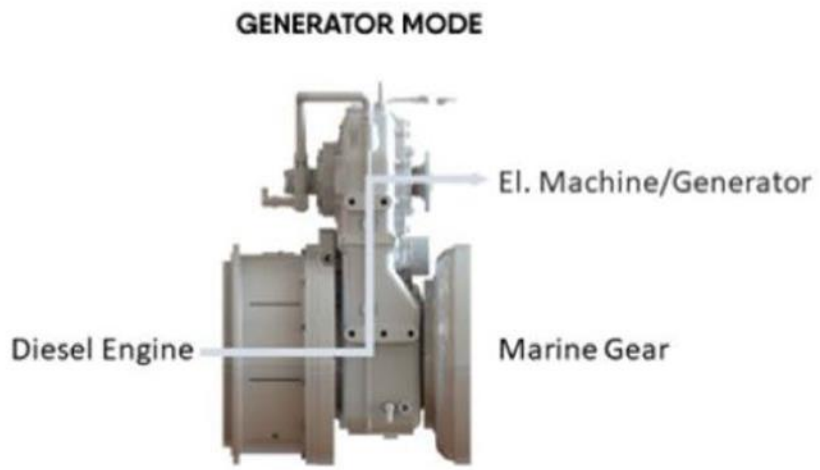


AUTOMATIC MODE





Mode selection panel



To bypass the hybrid system and to operate the vessel in a conventional way



Acta Marine, Offshore Supply Vessel 2022
LOA: 43 m
Under rebuild to Hybrid



Parallel Hybrid System
3x Caterpillar C18 357kW @ 1800 rpm
3x PHT700A911 ratio 1.7 with HESP102/3 with 3x 102kW E-motors

is mainly active at an UNESCO World Heritage Site, where it is used for supply and support



Marbella III, Heisley 1999
LOA: 28.96m
Beam: 6.72m
Rebuild to Hybrid



Parallel Hybrid System
2x 599kW Diesel
2x PHT700A101 ratio 1.7 with 2x 140kW E-motors



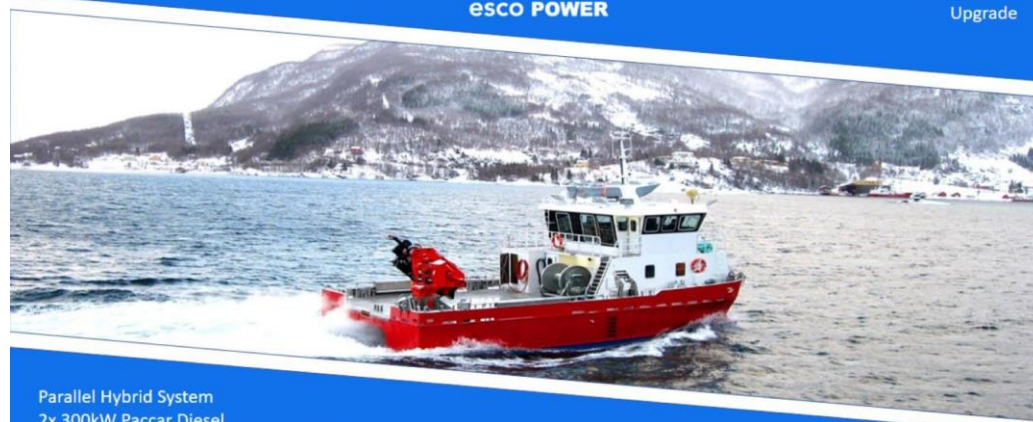
NOS, Bunkering Tanker 2022
LOA: 46 m
Under rebuild



Parallel Hybrid System
2x Volvo DI13MH 368kW @ 1800 rpm
2x PHT420A101 ratio 1.7 with HESP08/2 with 2x 14
5kW E-motors



Fish Farming Vessel, 2020
LOA: m
Beam: m
Upgrade



Parallel Hybrid System
2x 300kW Paccar Diesel
2x PHT300A303 ratio 1.7 with 2x 150 kW E-motors

Route Home

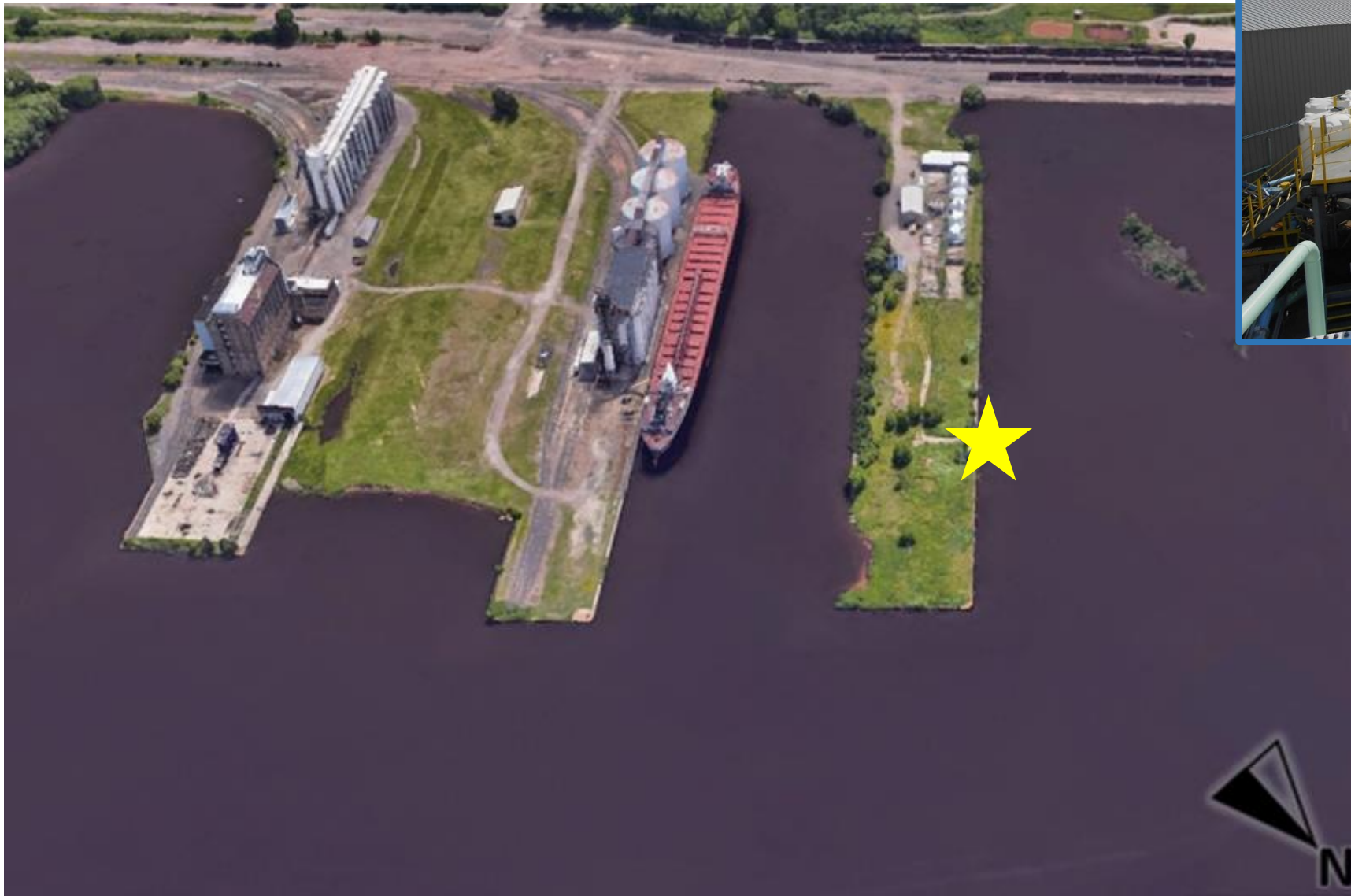


Sailing Home Options

- The lowest fixed span bridge (that cannot open) on the entire Great Loop is in Lemont IL at mile 300.6 on the Chicago Sanitary and Ship Canal.
- Its vertical clearance is 19.6 feet above the normal water level.



Dock at Montreal Pier

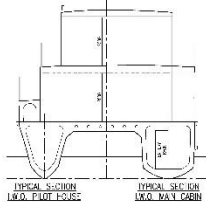
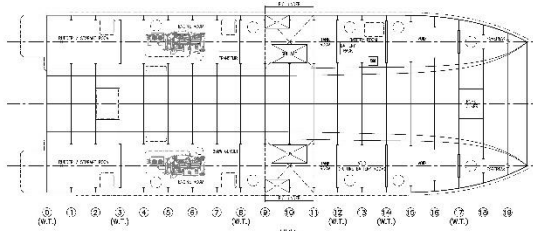
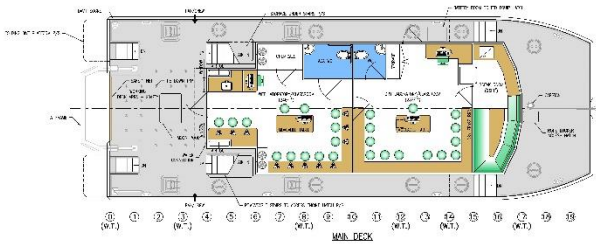
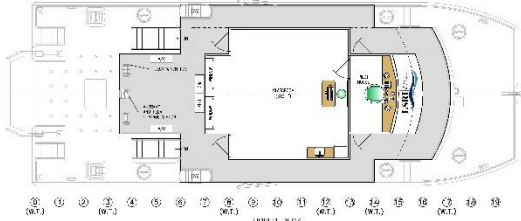
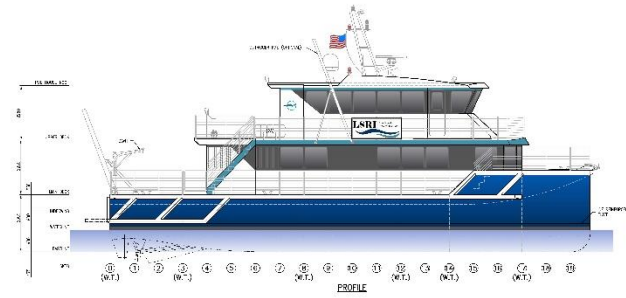


Next Steps

- Continue to raise funds
- Captain and Program Manager Recruiting in Progress
- COI in LA and again in Duluth
- Expected summer 2024
- Will be available to others to use



AT CROWTHER



SPECIFICATIONS

DESIGNER	INCAT CROWTHER
CLIENT	LAKE SUPERIOR RESEARCH INSTITUTE
PROJECT NO.	011-00-01
DATE	2018
SCALE	AS SHOWN
PROJECT LOCATION	LAKE SUPERIOR
PROJECT TYPE	RESEARCH VESSEL
PROJECT STATUS	CONCEPT DESIGN

INCAT CROWTHER
MARINE ENGINEERING

PROJECT: INCA CROWN R-V 20
DRAWING NO: 011-00-01
DATE: 2018



Questions?