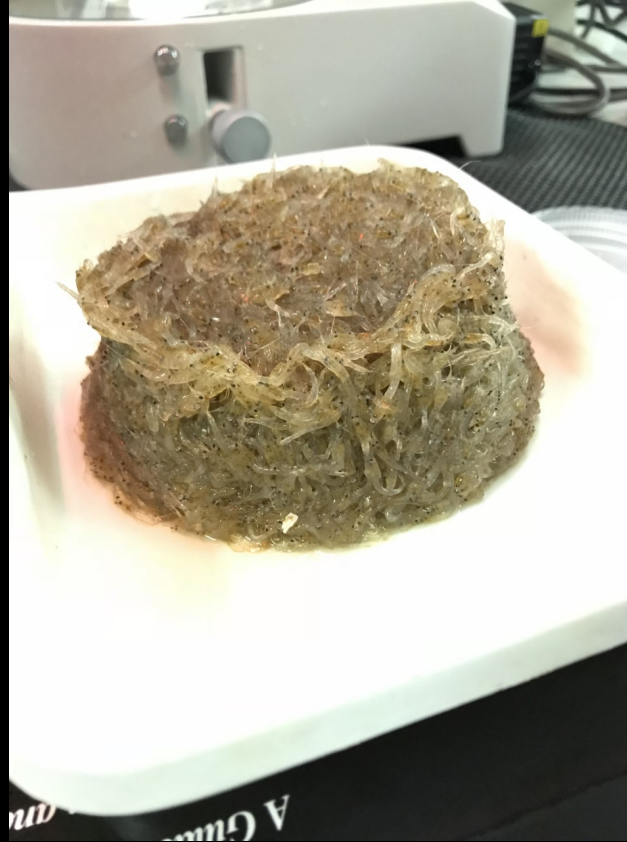


A Bit About Me



- **Northeast Fisheries Observer**
- **Head Marine Technician on R/V Lake Guardian 2011-2019**
- **Master Degree in Fresh Water Science, 100 Ton Master Captains License, ISMA member**



UWM School of Freshwater Sciences

\$50M facility of laboratories, conference & classrooms **2014**

69 years of service , 52 as a Research Vessel



- Currently servicing the GLOS buoys located near Sleeping Bear Dunes, Atwater Beach, Southern Green Bay
- Not only researched based but with strong educational purpose as well.



Current Fund Raising for the Maggie Sue

- Funding Goal \$20 million
- Currently 13 million raised
- \$7 More to go
- \$15 for build \$5 for endowment
- Seacraft Design, Sturgeon Bay



800
SQUARE FEET
OF LAB SPACE

VEGETABLE-BASED
FUELS & LUBRICANTS

OVERNIGHT ACCOMMODATIONS FOR **18** SCIENTISTS AND CREW

CLASSROOM
SPACE FOR UP TO
24 STUDENTS

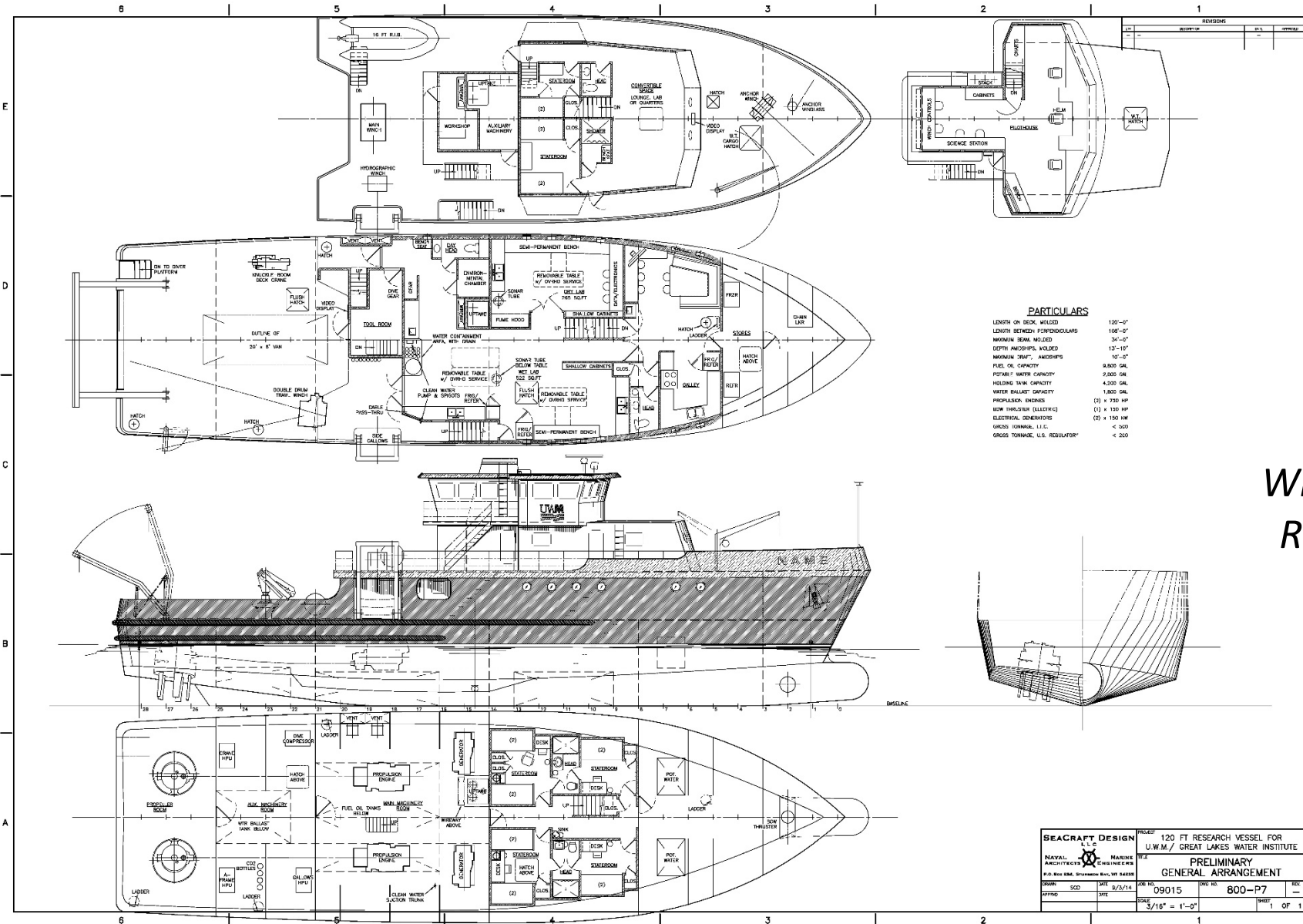
EQUIPPED TO STAY
10-DAYS
AT SEA

SENSORS COLLECT
REAL-TIME DATA
WHILE UNDER WAY




INTERCHANGEABLE
LAB "PODS"
FOR DIFFERENT
**RESEARCH
GROUPS**

HOLDS POSITION EVEN **AGAINST CURRENT**

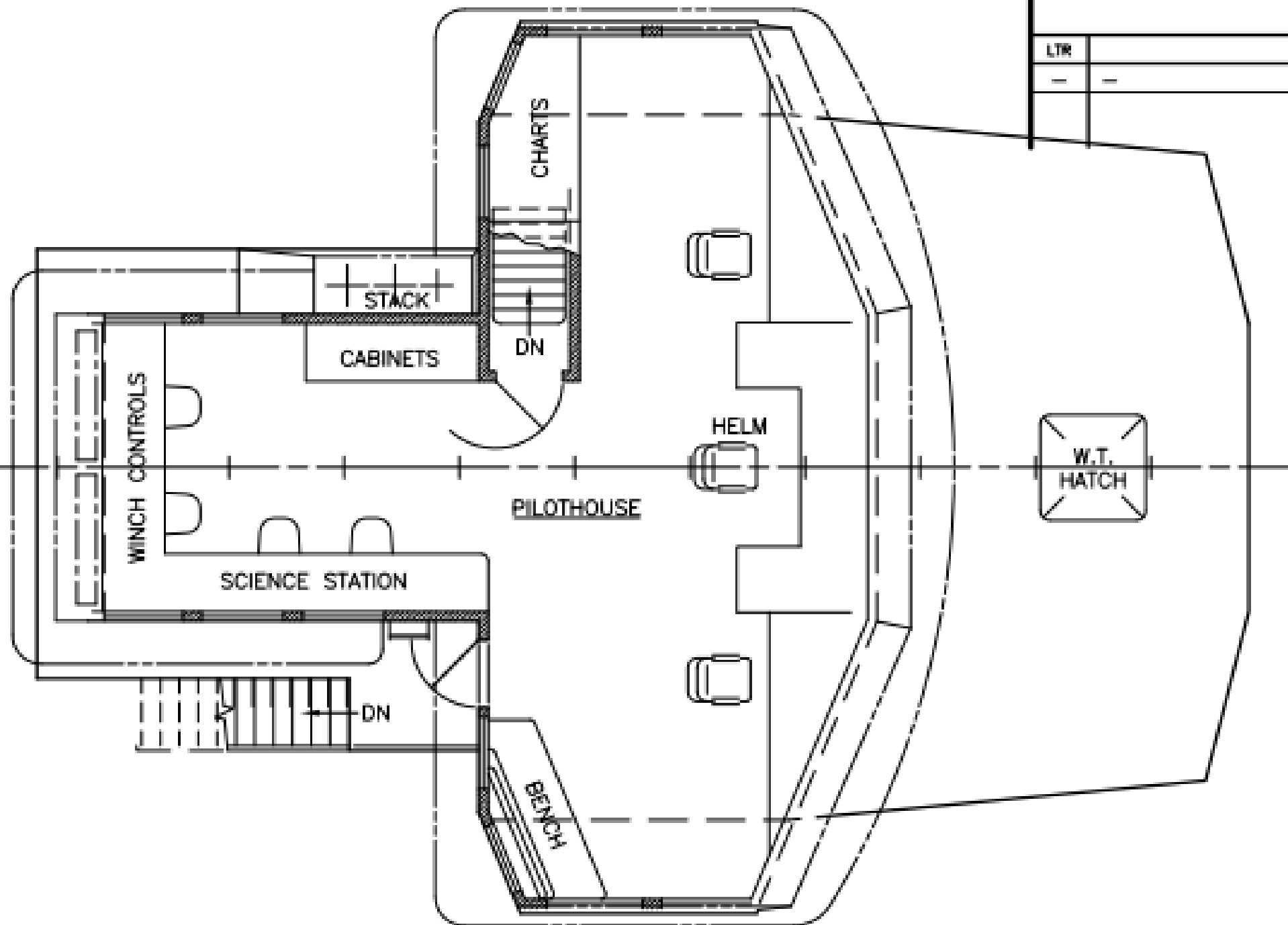
<https://uwm.edu/freshwater/facilities/fleet/maggi-sue/>



Wisconsin's New Millennium Flagship Research Vessel for the Great Lakes

-  research & exploration
-  training & education
-  security & safety

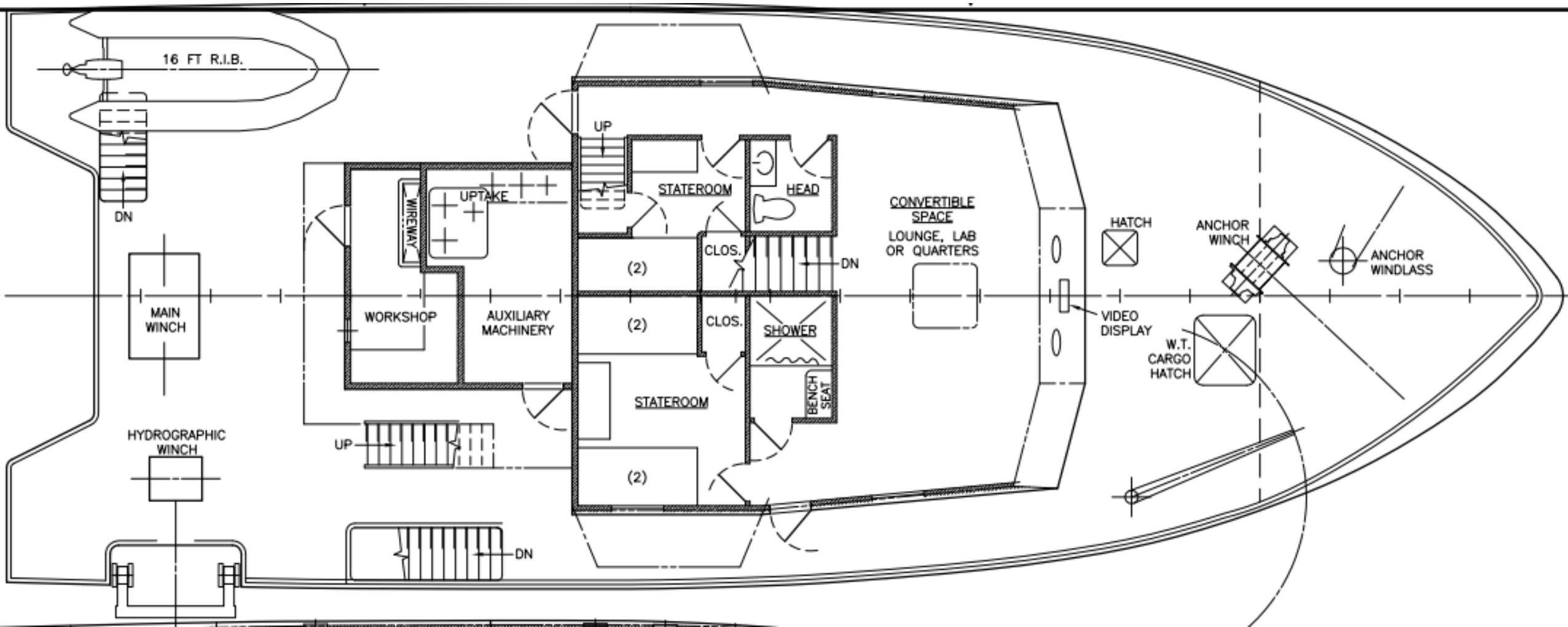
With your support!



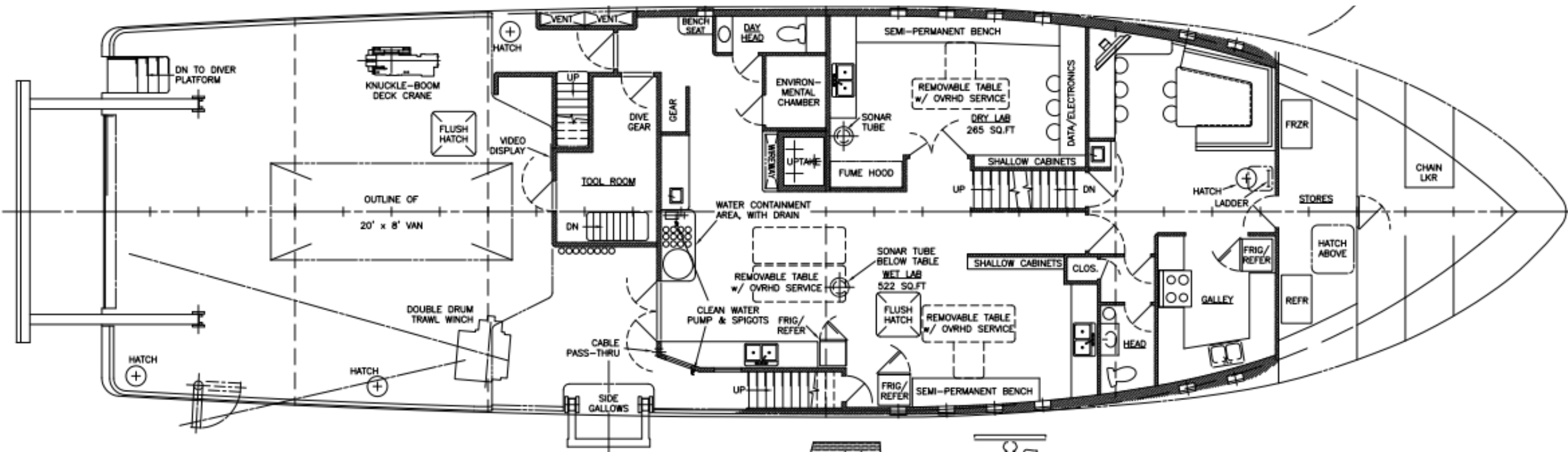
LTR	
-	-

Pilothouse

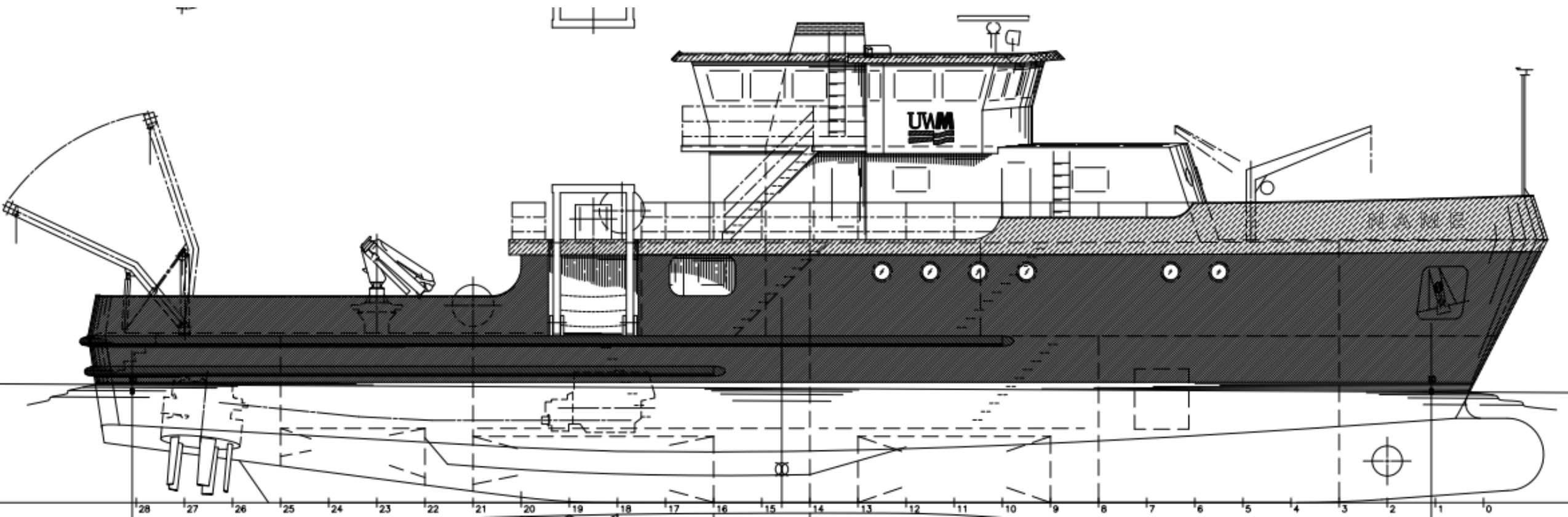
Second Deck



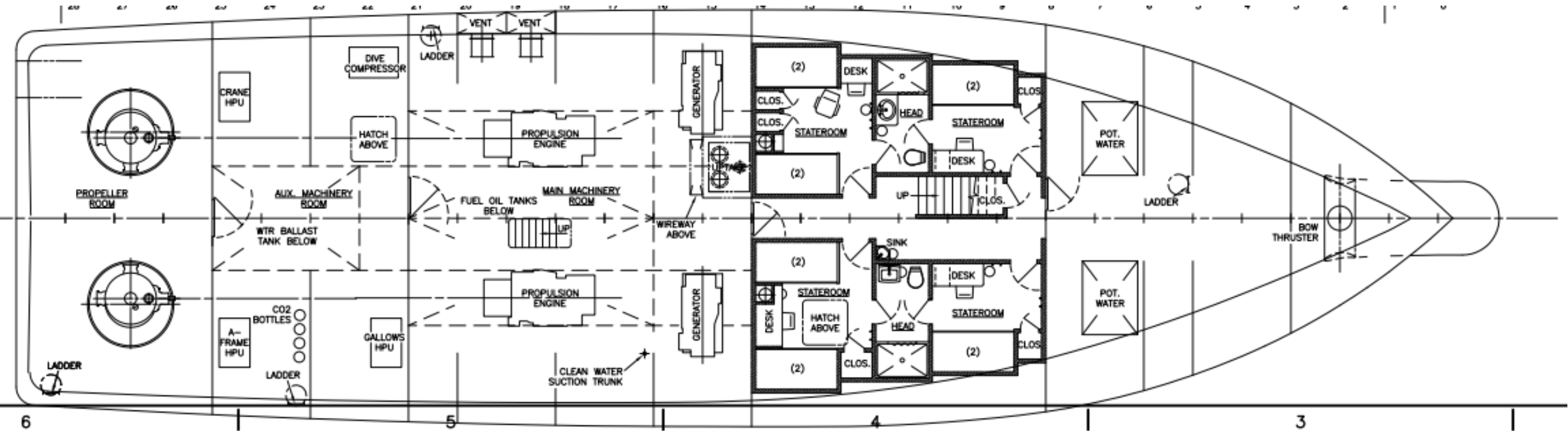
First Deck



Side Profile

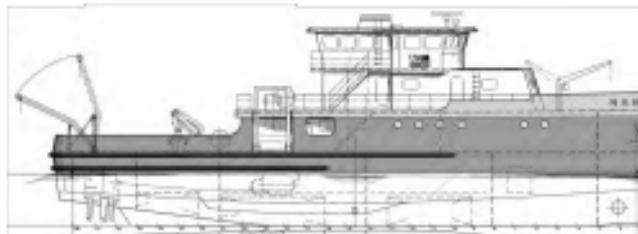
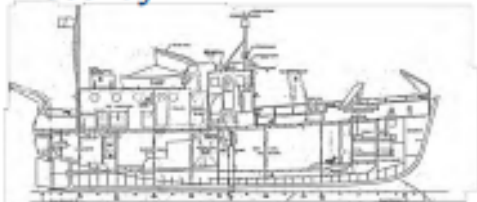


Engine Room and Below Deck



Technical Specifications

A Comparison of the New Millennium Research Vessel with the R/ Neesky



New Millennium Research Vessel and Floating Classroom

R/V Neesky

71'
17'
350 sq ft of deck space accommodates 5 ton stern gallows frame
Day only cruises throughout Lake Michigan
Traditional Props
Accommodations for four
10 students
Petroleum-based fuel
120 sq ft of lab space
Neesky lacks high-tech capabilities
Two fore and aft winches are limited to single deployment of Great Lakes monitoring equipment

Length

Width

Deck Space

Range

Thrust

Accommodations

Student Capacity

Fuel

Laboratories

Equipment

Deployment Capabilities

120'

34'

2,100 sq ft of deck space accommodates 10 ton stern gallows frame

10+ day cruises reaching Lake Superior, Lake Huron & Lake Erie

Twin cycloidal drives & electric bow thruster allow dynamic positioning

Overnight accommodations for 18 scientists & crew

24 students

Green ship: vegetable-based fuels & lubricants

800 sq ft wet & dry labs, with running lake water;

Flexible pod design allows easy reconfiguration of vessel to accommodate different research needs

Sensors on hull and real time data acquisition stations map currents, bathymetry & fish while underway;

Environmental chamber allows for live sample collection and on-board experimentation;
Electronics workshop and SCUBA dive locker support dives and on-board research.

Multiple & multipurpose winches make vessel highly versatile, with capacity to deploy multiple buoys, moorings, remotely operated vehicles, and observing systems on single mission

Platform for new technology, better educational resources and research capabilities



MISSION PROFILE:

Type of Cruise	Description	Frequency	Science Crew	Notes
Bathymetric survey	Cruise to survey area. Low speed survey- "mow the lawn". If more than 1-2 hours from port may stay on station (away from the dock) for entire duration. Expect a cruise of 5 days at 12h/day	uncertain of frequency	2-6	
Net tows underway	Cruise to survey area. Tow nets or instruments.	1/month except 2/month April & October	2-6	
Extended cruise in Lake Michigan	Port to port 5-10 days	4-5 day cruises (Jun, Jul, Aug, Sep). May have extended cruise of 15 d but will only come into port 2x in 15 days	large: up to maximum science	Year schedule reflects 4-5day and 2-10 day cruises. Longer cruises may occur.
Buoy operations	Cruise to buoy location. Deploy or retrieve buoy, with testing and/or maintenance	4d/month, April-November	4-6	
Hydrographic Sampling: Fox Point	Cruise to 2-4 sampling stations. Stay on station to collect water, biological, sediment samples using Niskin bottles, nets, grabs, etc.	1/month every month	3-8	Routine sampling program
Hydrographic sampling: Extended	Cruise to multiple stations. At each station collect water, biological, sediment samples using Niskin bottles, nets, grabs, etc.	possibly 4/year with some replacing normal hydrographic sampling.	large: up to maximum science	There may be a blending of extended hydrographic cruises and general extended cruises.
ROV Operations	Cruise to station, maneuver to site. Use anchor and or DP to remain on station or to follow ROV	Jan-Mar: 1/mo. Apr-May: 2/mo, Jun-Aug: 3/mo, Sep-Oct: 4/mo, Nov: 3, Dec: 2 (Average 2.6/mo)	2-6	ROV operations could involve several days (2-5) on station with essentially continuous ROV work. This would involve 24 hr anchor or DP.
Diel Survey	Cruise to station. Anchor and conduct sampling for 24hr.	Estimate 2 per year. Transit time determined by station position.	3-8	
Emergency Ops	Emergency on board or respond to emergency on lake	1/yr. Generally in winter months when Coast Guard cannot assemble resources.	0	
Education-Goodwill-Outreach	Short trips at full capacity (40-50)	2d/month	maximum capacity of vessel	lunch may be served (usually catered- box lunch)