

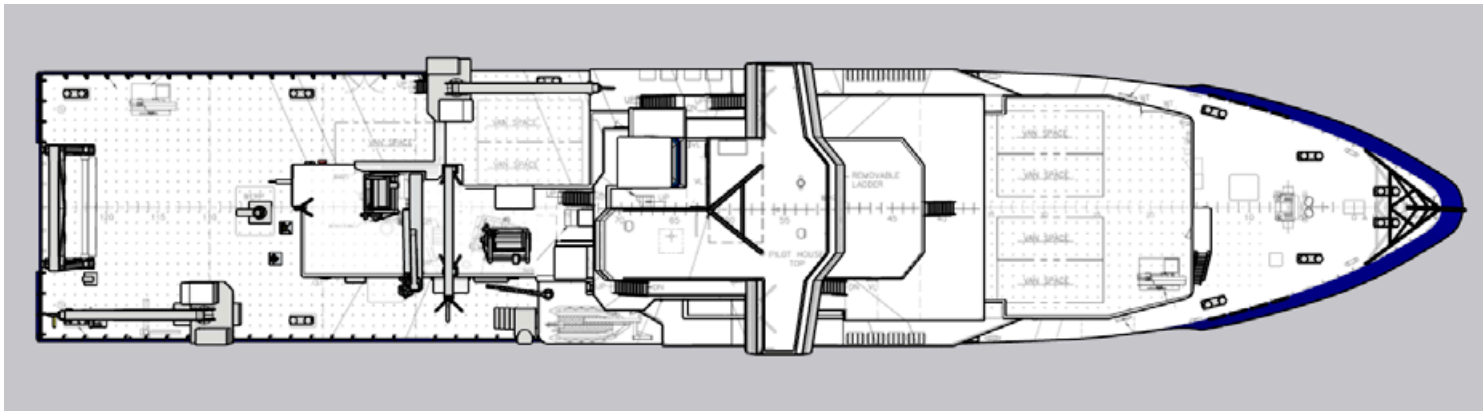
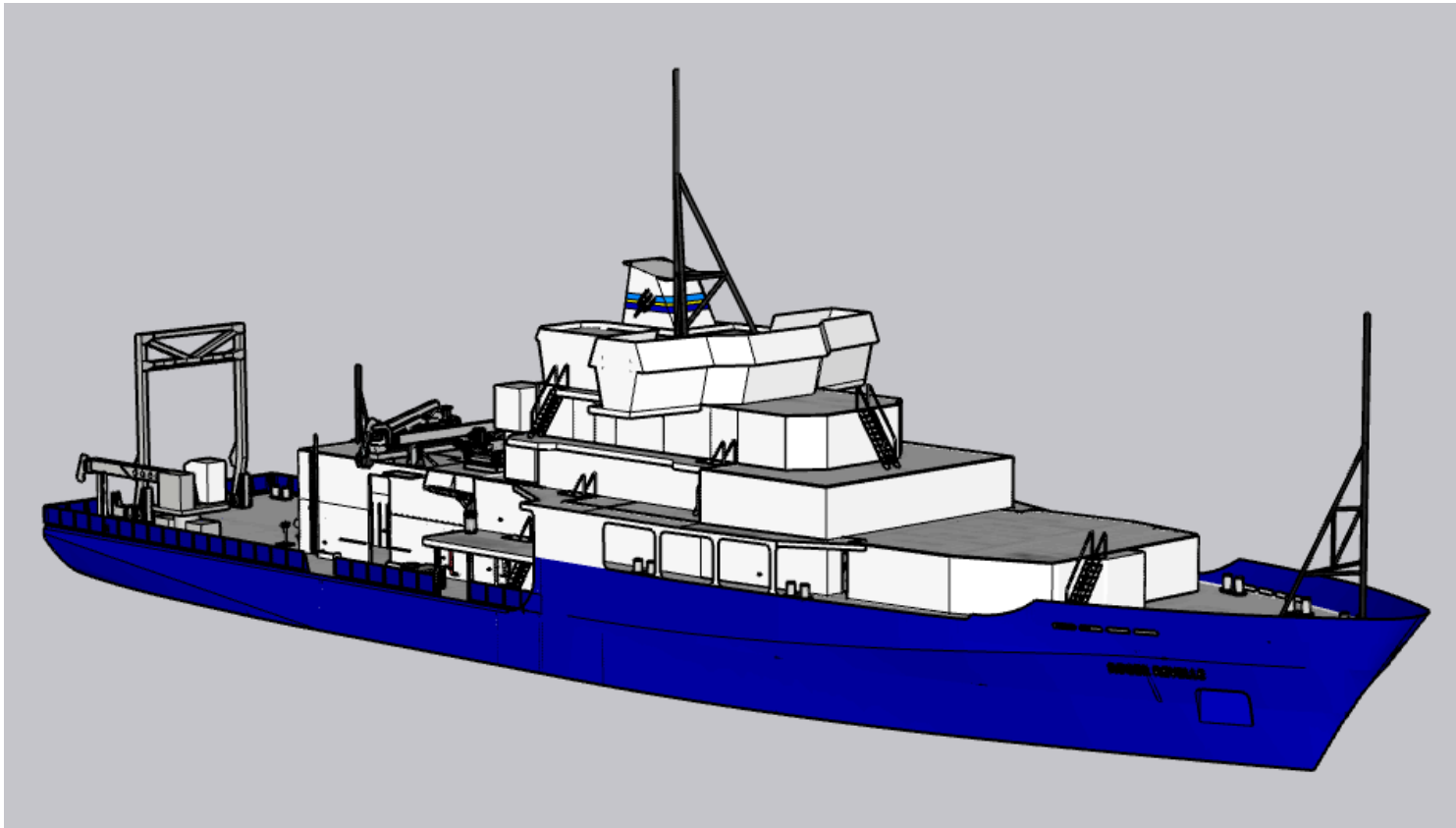
R/V ROGER REVELLE DECK AND LAB SPACES

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DOCUMENT SCOPE

R/V *Roger Revelle* is a Global Class Auxiliary General Oceanographic Research (AGOR 24) vessel designed to perform multidisciplinary oceanographic research worldwide.

The deck and lab spaces aboard were built to be highly modular between cruises, capable of being configured to meet the needs of various science mission requirements.

This document is intended to provide ship users an overview and reference to the capabilities of science spaces on *Roger Revelle*. From these specifications, layout of scientific instrumentation and deck equipment will be coordinated through the resident marine technician group (ResTechs) as a part of the cruise planning process.



OVERHEAD VIEW OF MAIN DECK

The main lab, computer lab, hydro lab, wet lab, science holds, staging bay, and weather decks are configurable to needs of the science party.

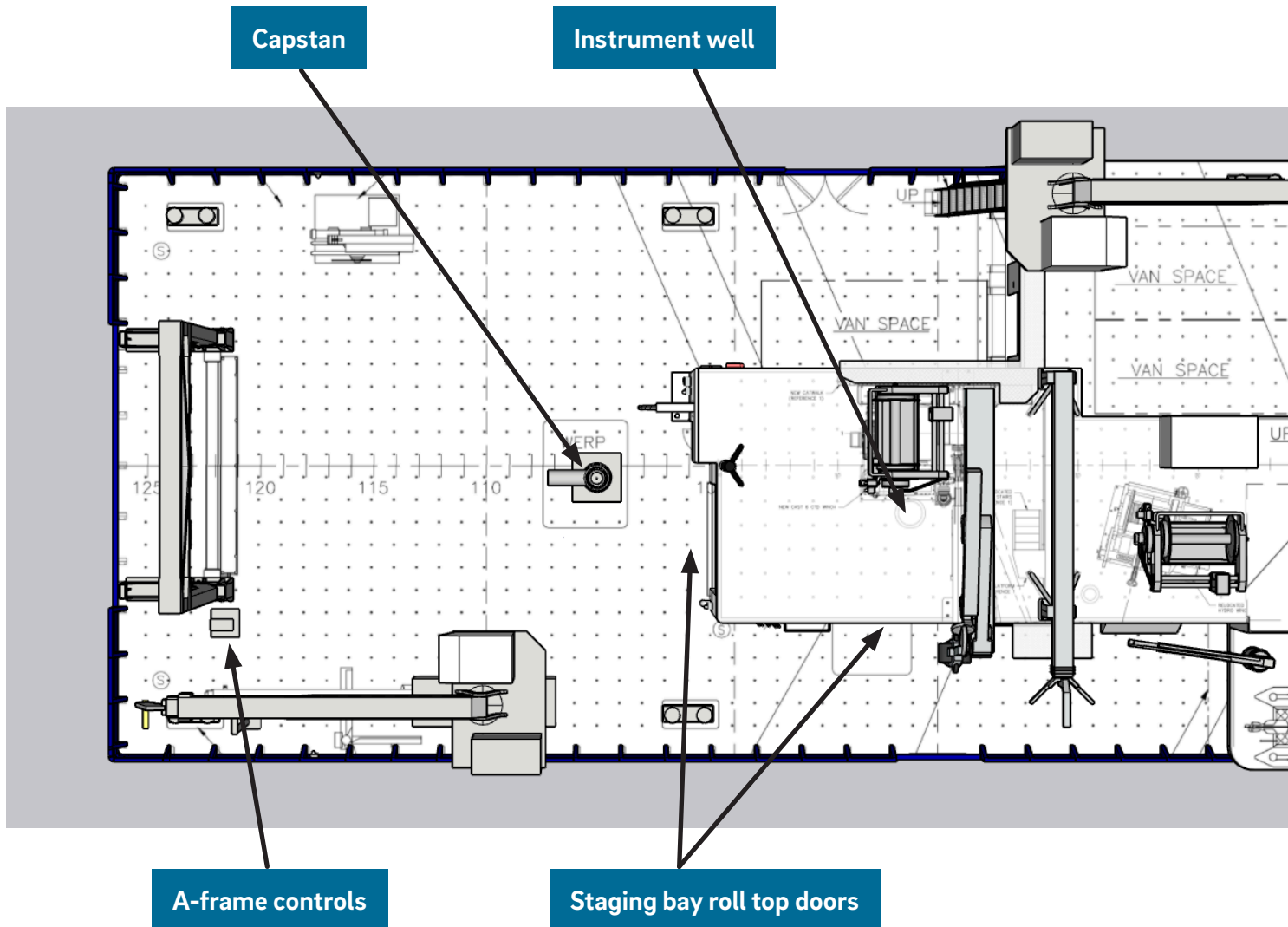
2' x 2' Deck Socket Pattern

- 1"-8 sockets on weather deck
- 1/2"-13 sockets on interior lab decks
- Standard across UNOLS vessels

1' x 6" Lab Bench Socket Pattern

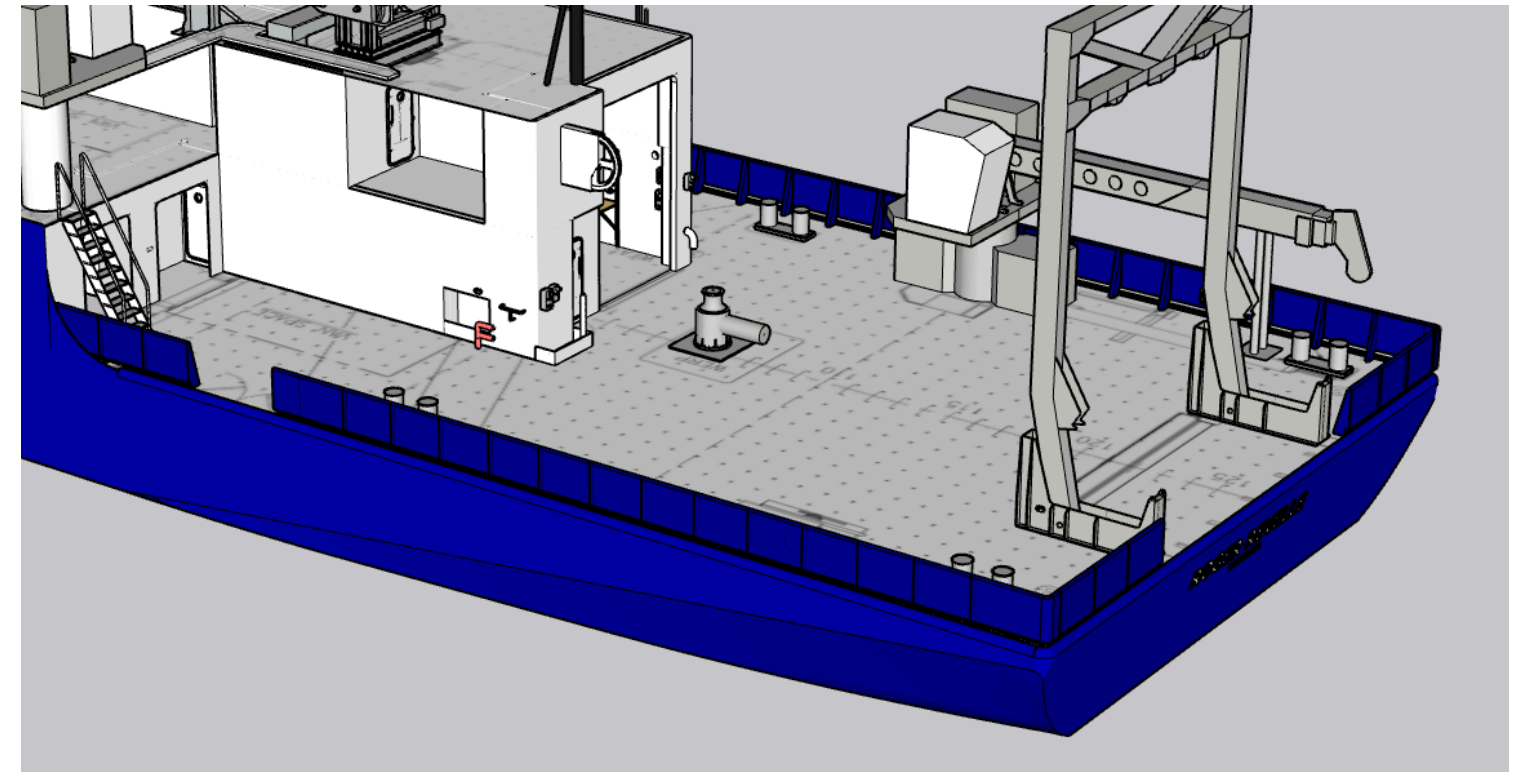
- 1/4"-20 sockets on perimeter bench tops
- No drilling permitted on perimeter lab benches
- Drilling permitted on nesting lab tables

FANTAIL OVERHEAD VIEW

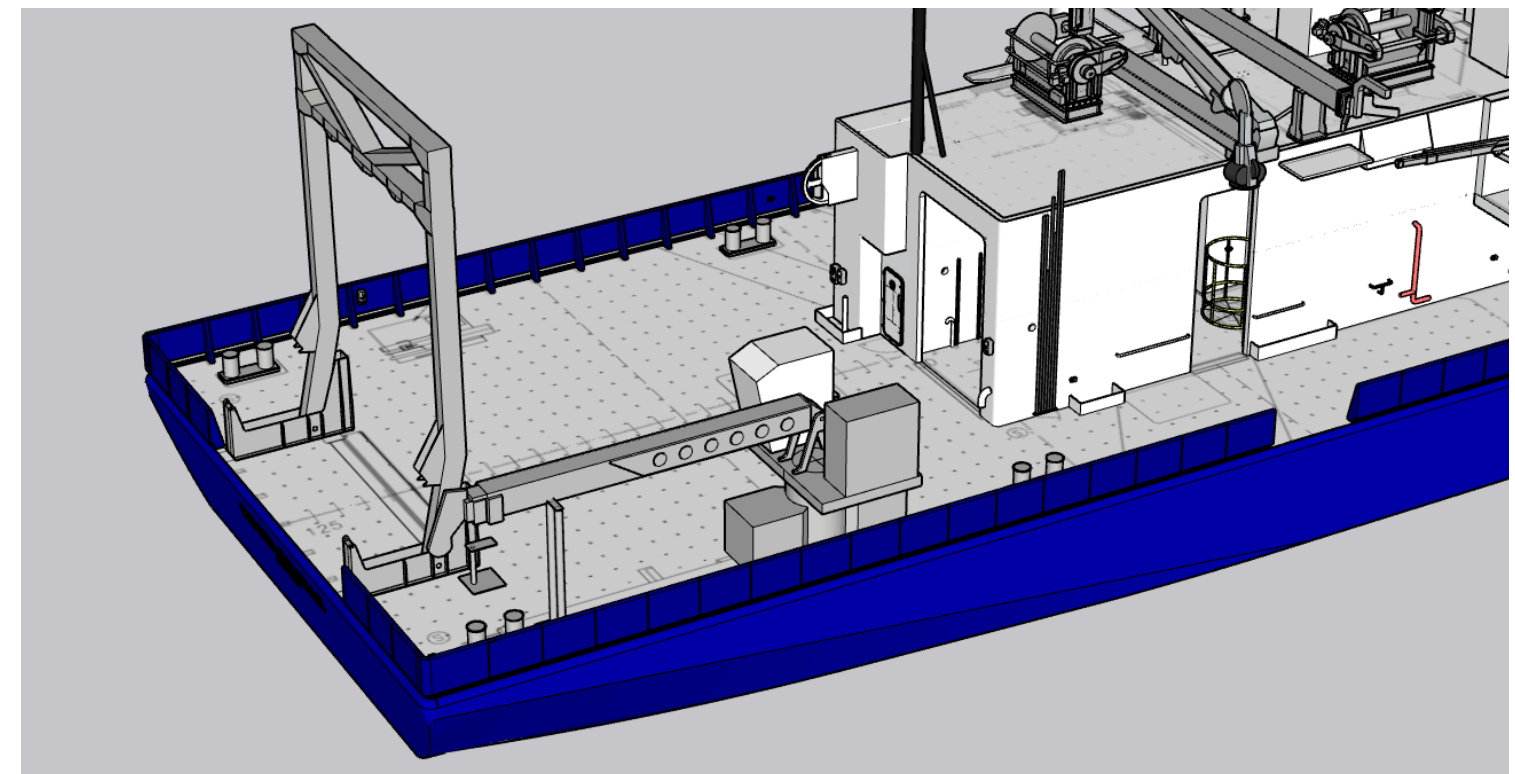


- Instrument well and pipe string, which allows for temporary installation of a sonar flush with hull
- Enclosed staging bay with roll top doors, high clearance, chain hoists on fore-aft trollies
- SAFE brand work boat with twin outboards
- Portable capstan
- Various deck hardware available including cleats, lifting straps, lines, pig weights, padeyes, blocks and securing gear

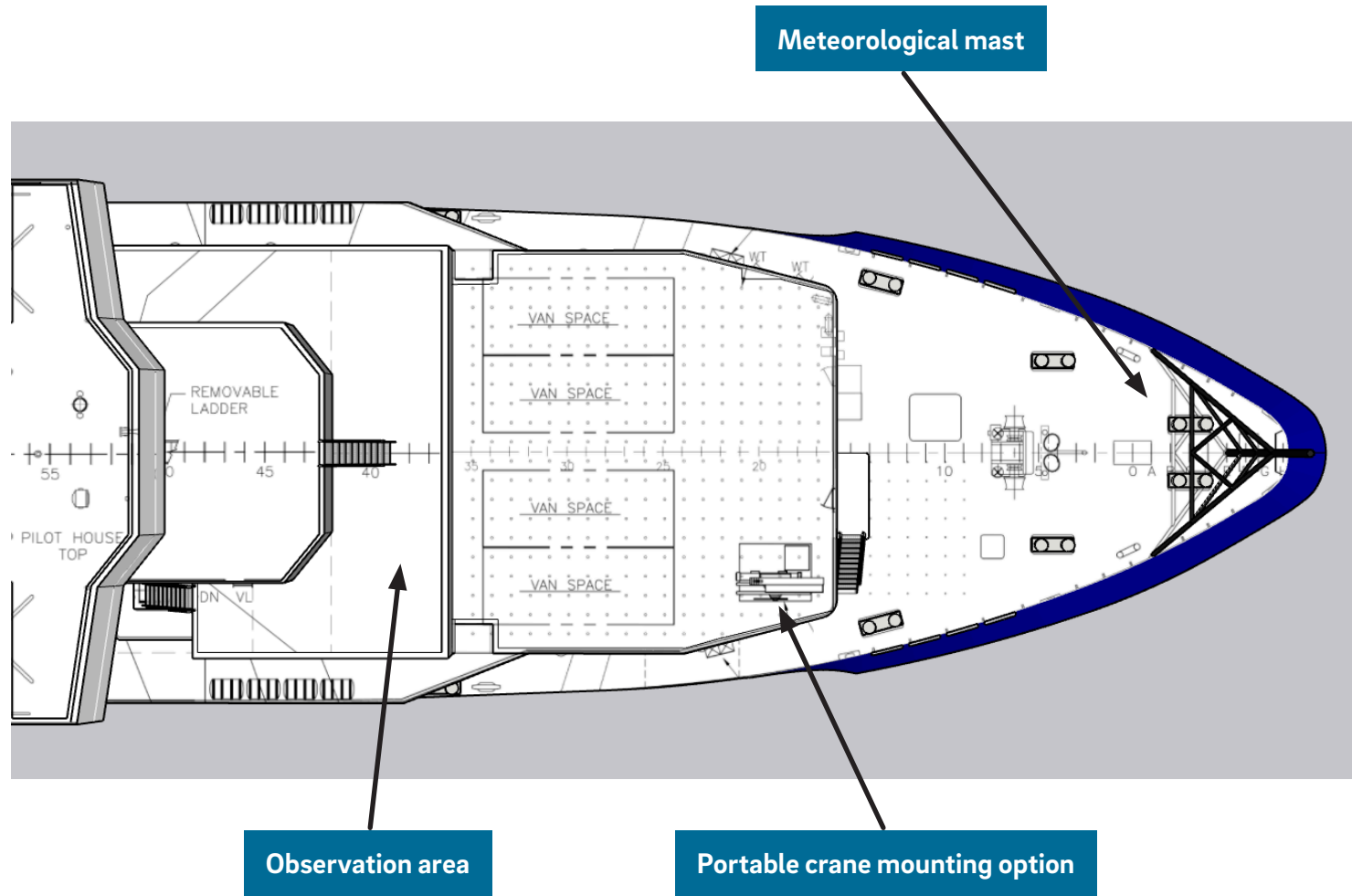
FANTAIL PORT PERSPECTIVE VIEW



FANTAIL STARBOARD PERSPECTIVE VIEW

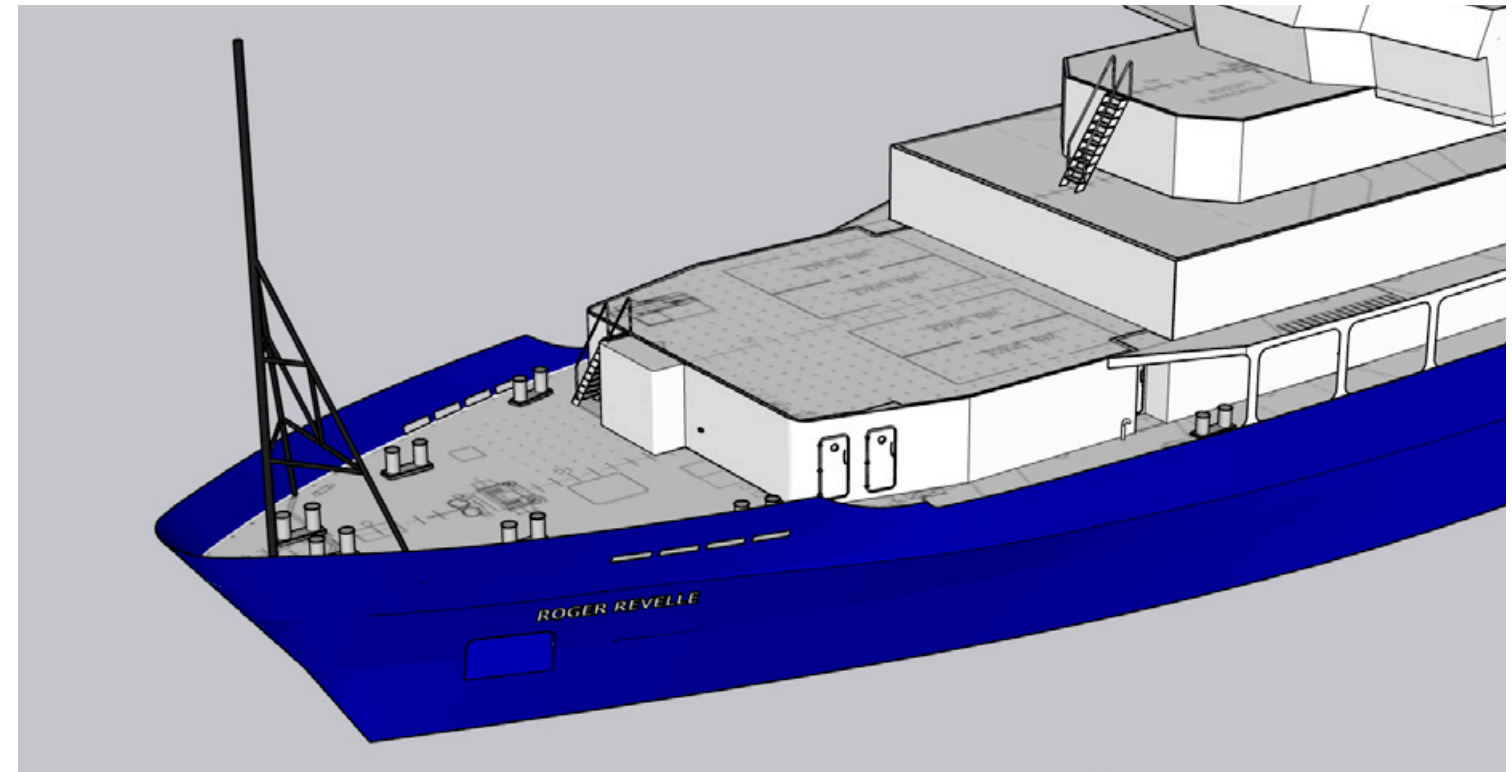


FORE DECK OVERHEAD VIEW

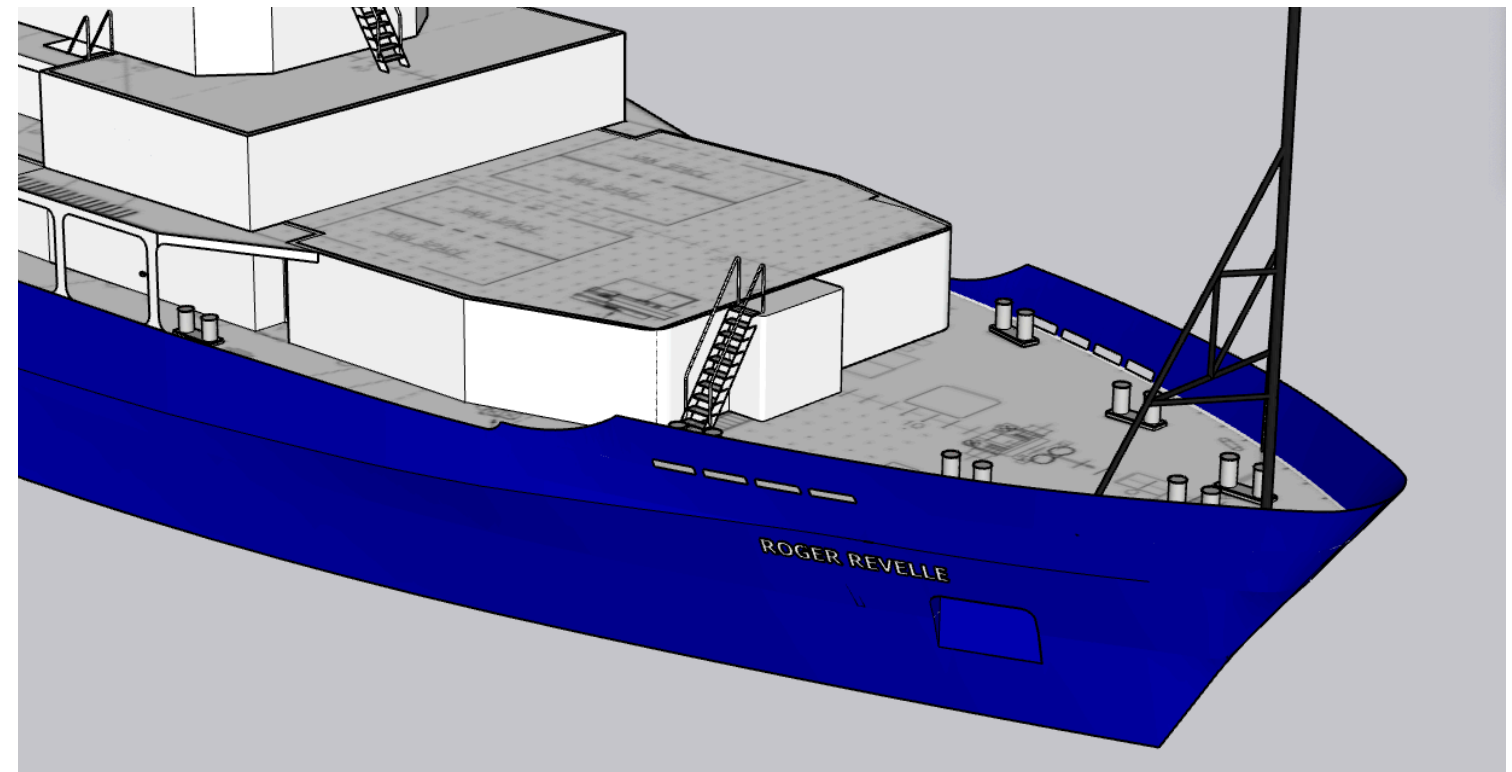


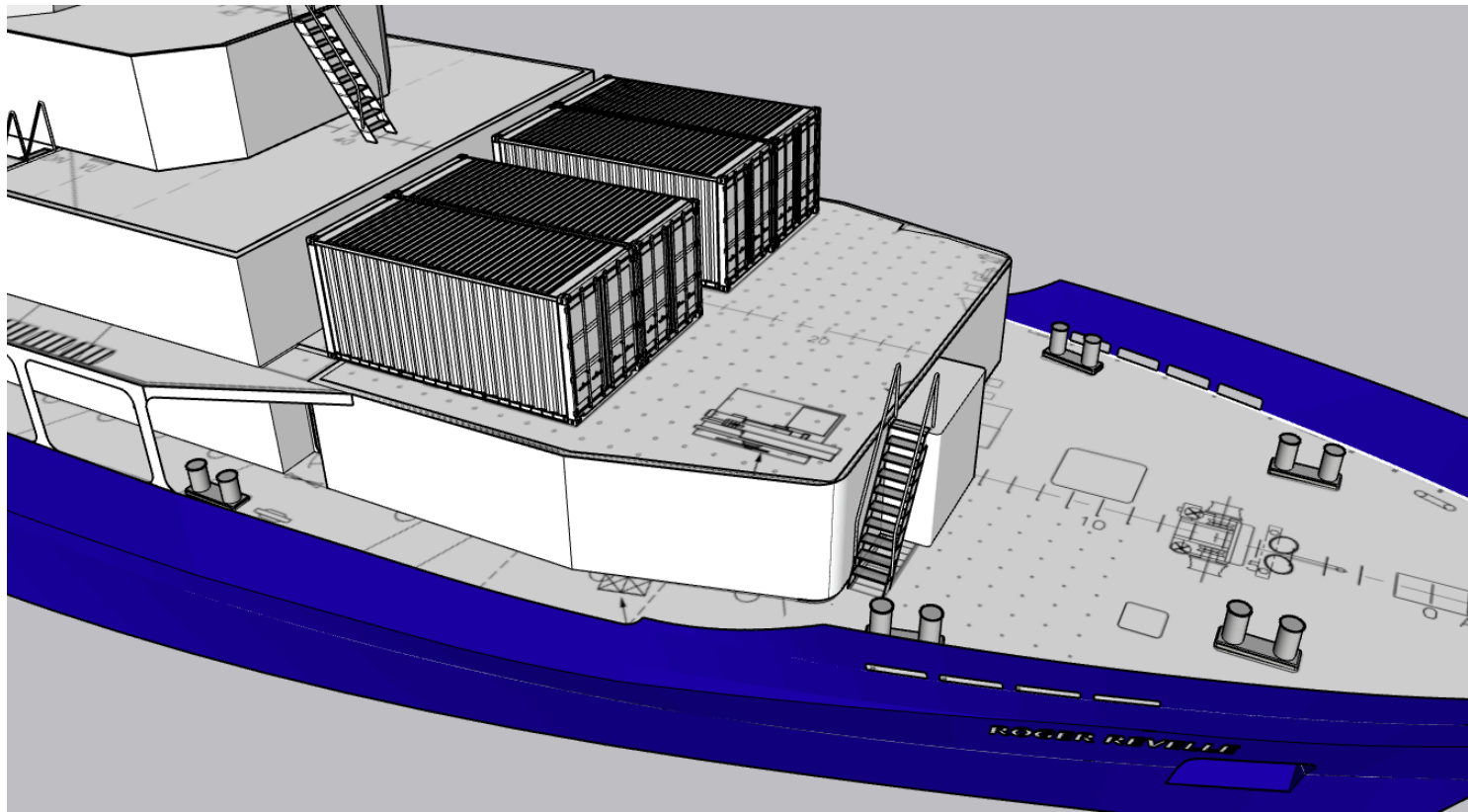
- Meteorological mast
- Optical experiment deck
- Marine mammal observation deck

FORE DECK PORT PERSPECTIVE VIEW



FORE DECK STARBOARD PERSPECTIVE VIEW





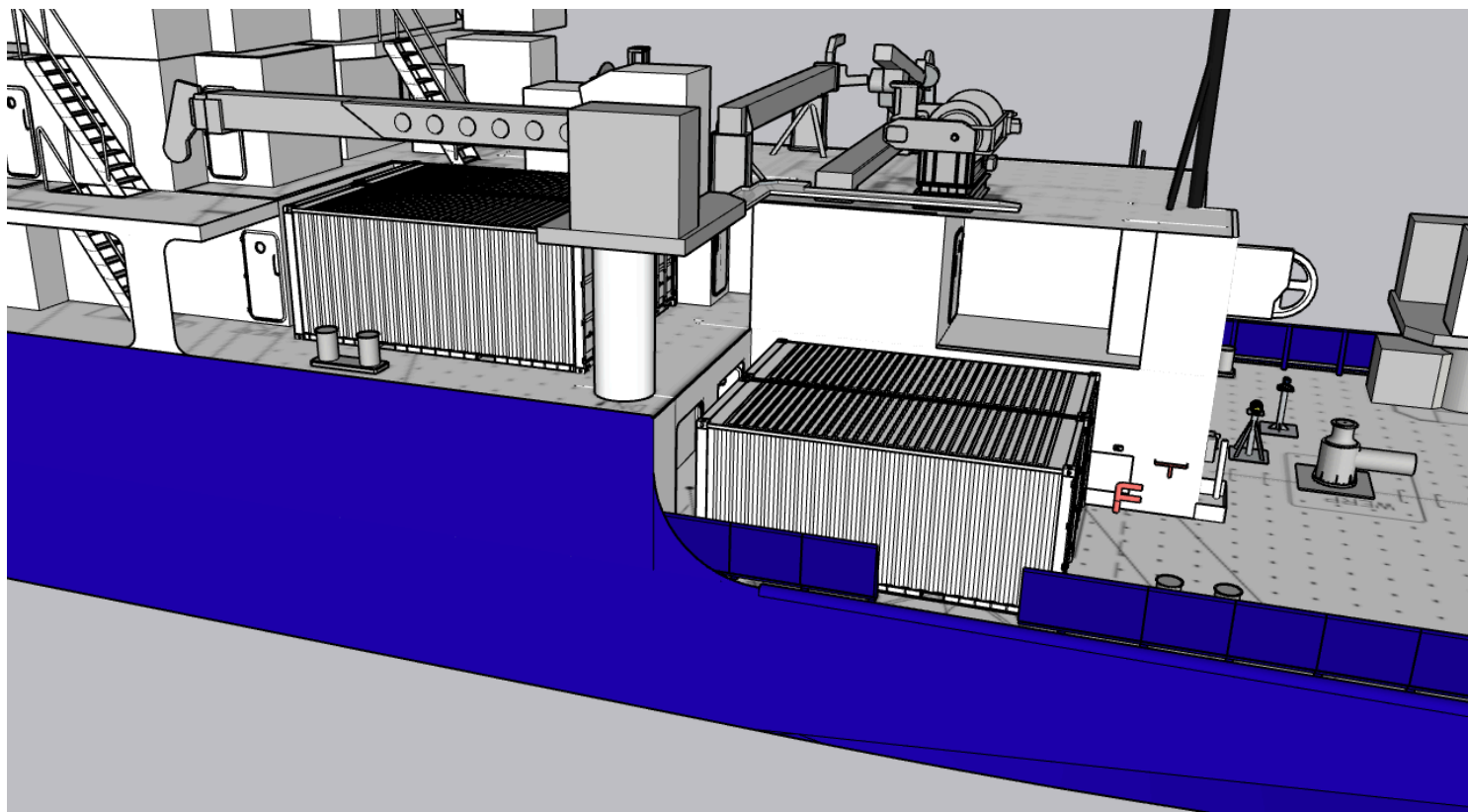
CONTAINER PLACEMENTS

The ship can accommodate 20' standard shipping containers. Custom van sizes would need adapter plates to be secured to the deck.

Scientific laboratory vans, such as those in the UNOLS Van Pools, fit on the same footprint as standard 20' shipping containers. When placed on the port main deck or fantail, vans can be supplied with power, fresh water, salt water, drainage, intercom communications, Internet, and data feeds.

Space For Four Containers On 02 Fore Deck

- Additional space for portable knuckle boom crane and science cargo forward of vans



Space For Two Containers On Port 01 Deck

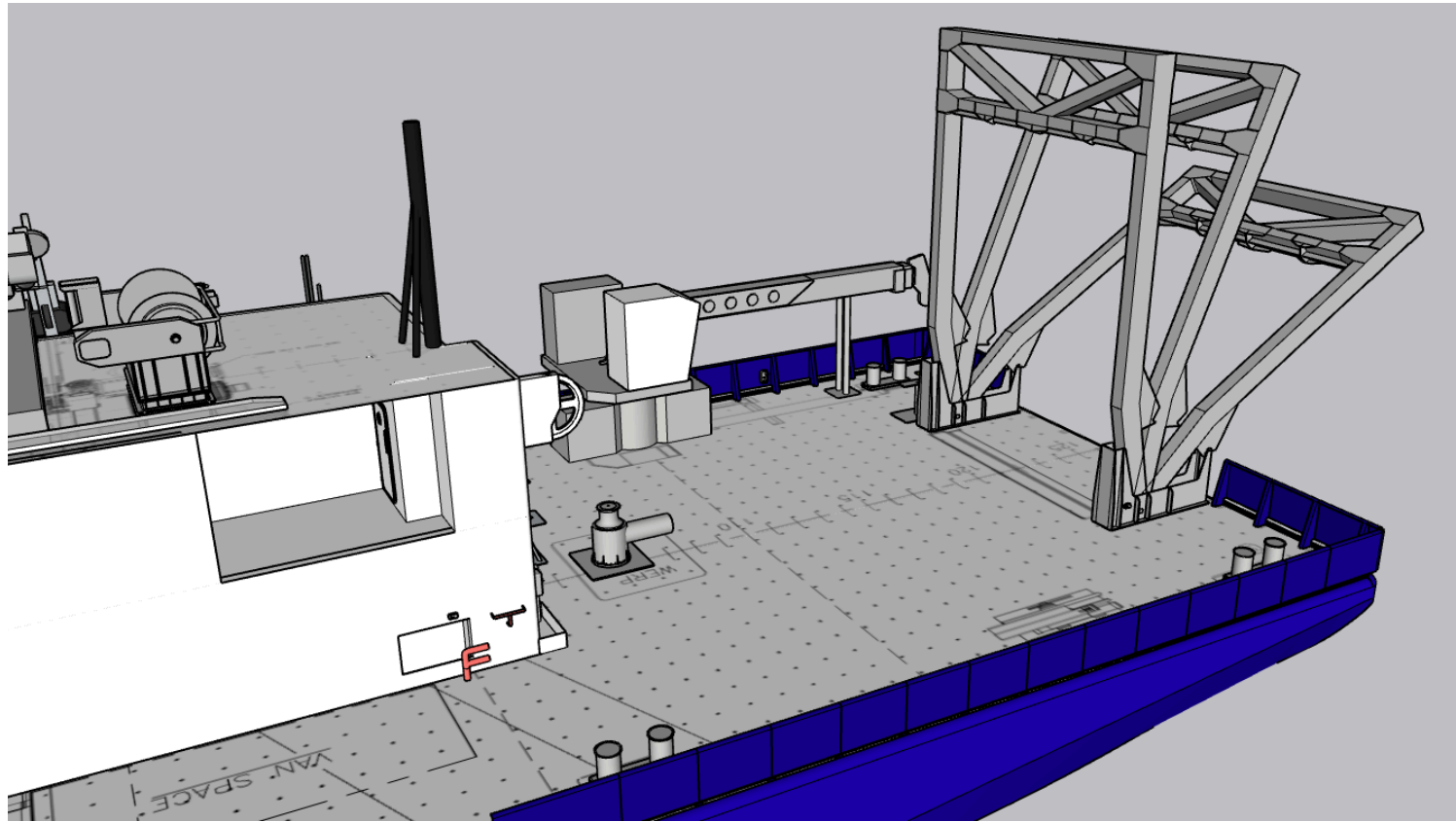
- Ship's work boat can be stacked on top of a van

Space For Two Containers On Port Main Deck

- Hydro lab access forward of vans
- Ship's work boat can be stacked on top of a van
- Inboard container doors are unable to be fully opened

Space For Two Containers On Fantail (not shown to left)

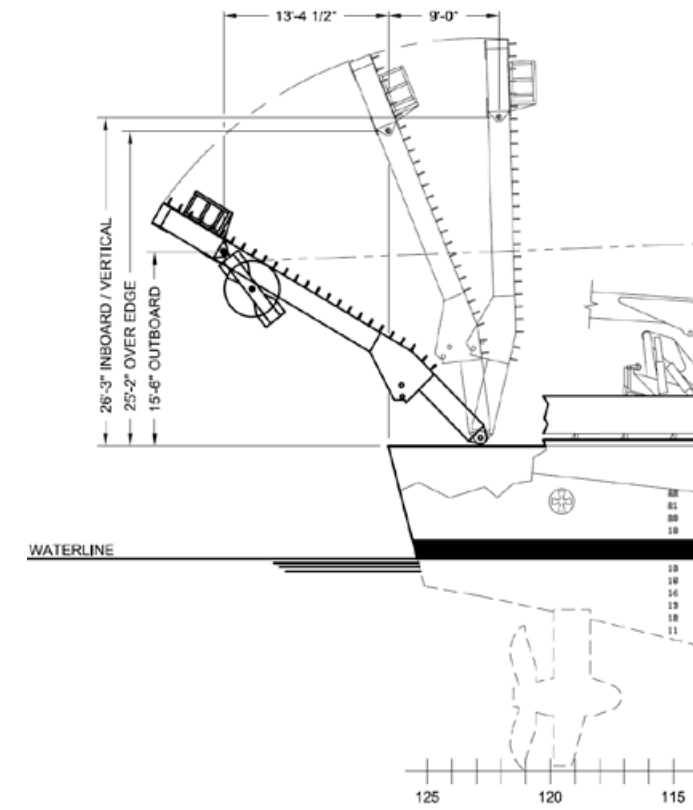
- Two sets of twist-lock securing plates that can be bolted to various locations on the main deck



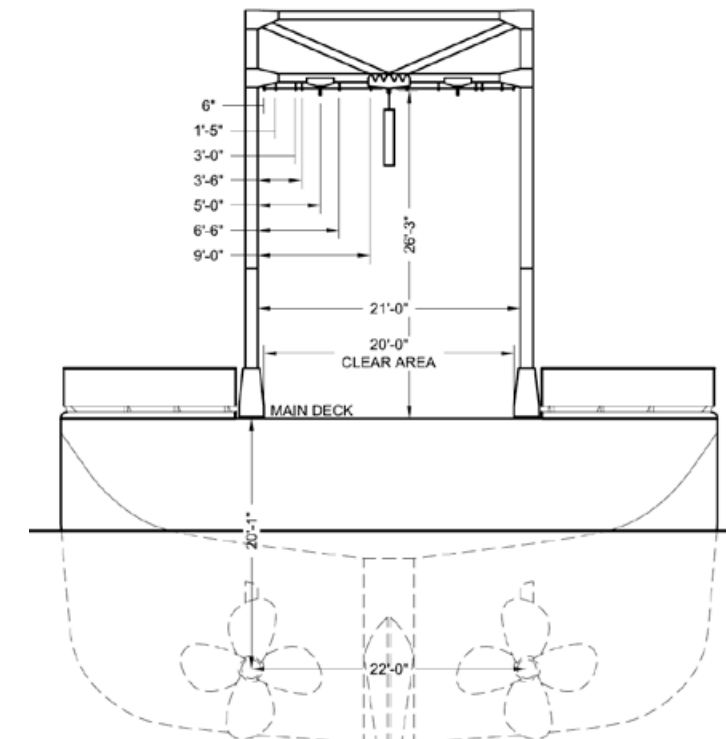
A-FRAME

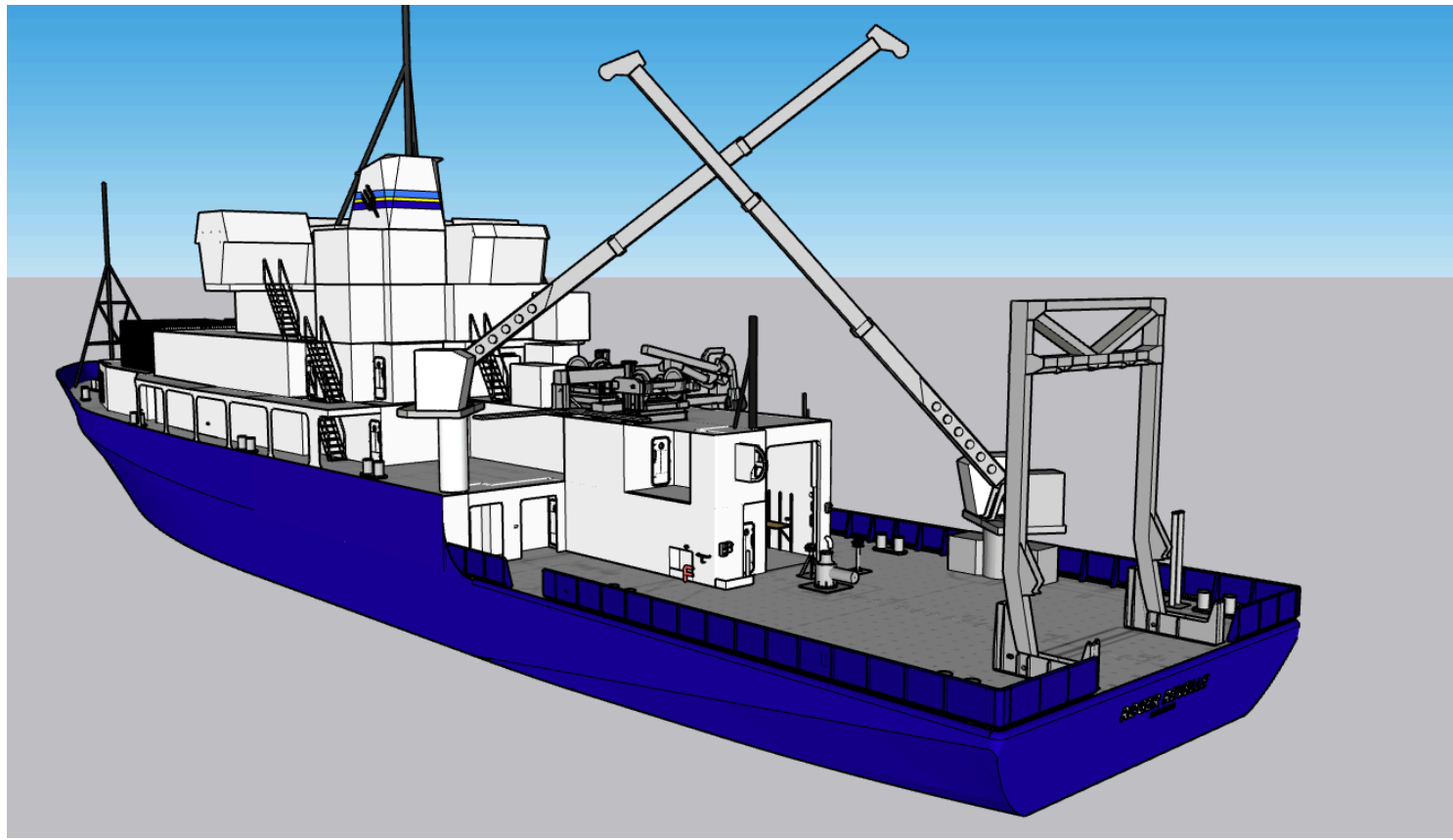
- Safe static working load of 21,500 lbs
- Three main padeyes for hanging blocks or chain (port, starboard, centerline)
- Multiple additional padeyes across width of frame
- Electric topping winch
- 9/16" trawl wire or 0.680 electromechanical wire fed from traction winch
 - 0.681 fibermechanical wire available

Section View



Profile View





SHIPBOARD CRANES

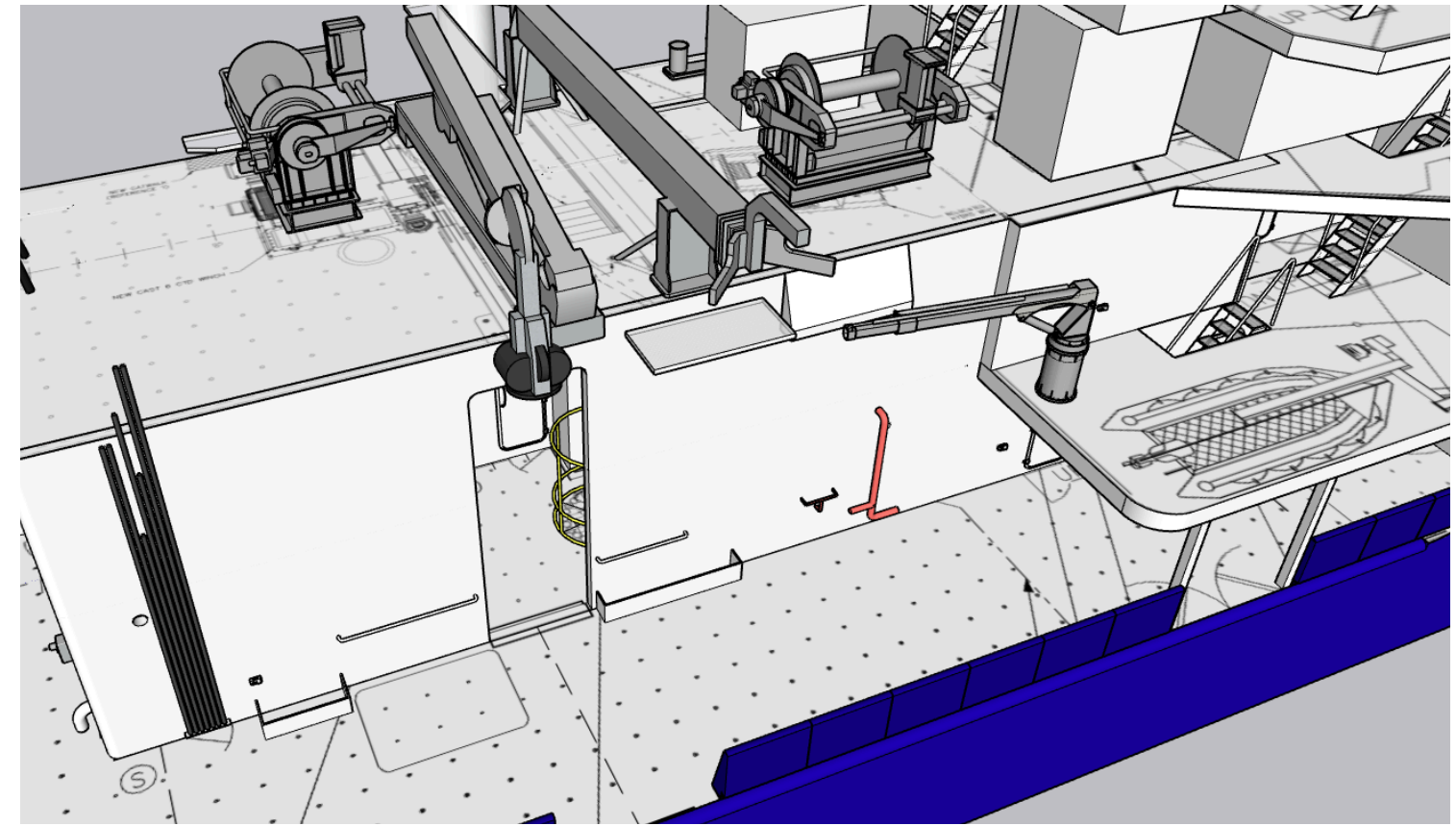
Two main fixed boom cranes, two portable cranes, and one starboard mounted fixed boom crane (see next page)

Main Cranes

- Able to load light 20' containers in port
- 65 ft reach

Portable Knuckle Boom Cranes (not shown)

- 2 available
- 46.25 ft reach
- Can be mounted on fantail or forward O2 deck
- 8800 lb safe working load retracted in port
- 4,400 lb safe working load retracted at sea
- 2,200 lb safe working load fully extended in port
- 1,100 lb safe working load fully extended at sea



STARBOARD SIDE HANDLERS

CTD Handler

- Automated CTD launch and recovery system
- 0.322 electromechanical wire

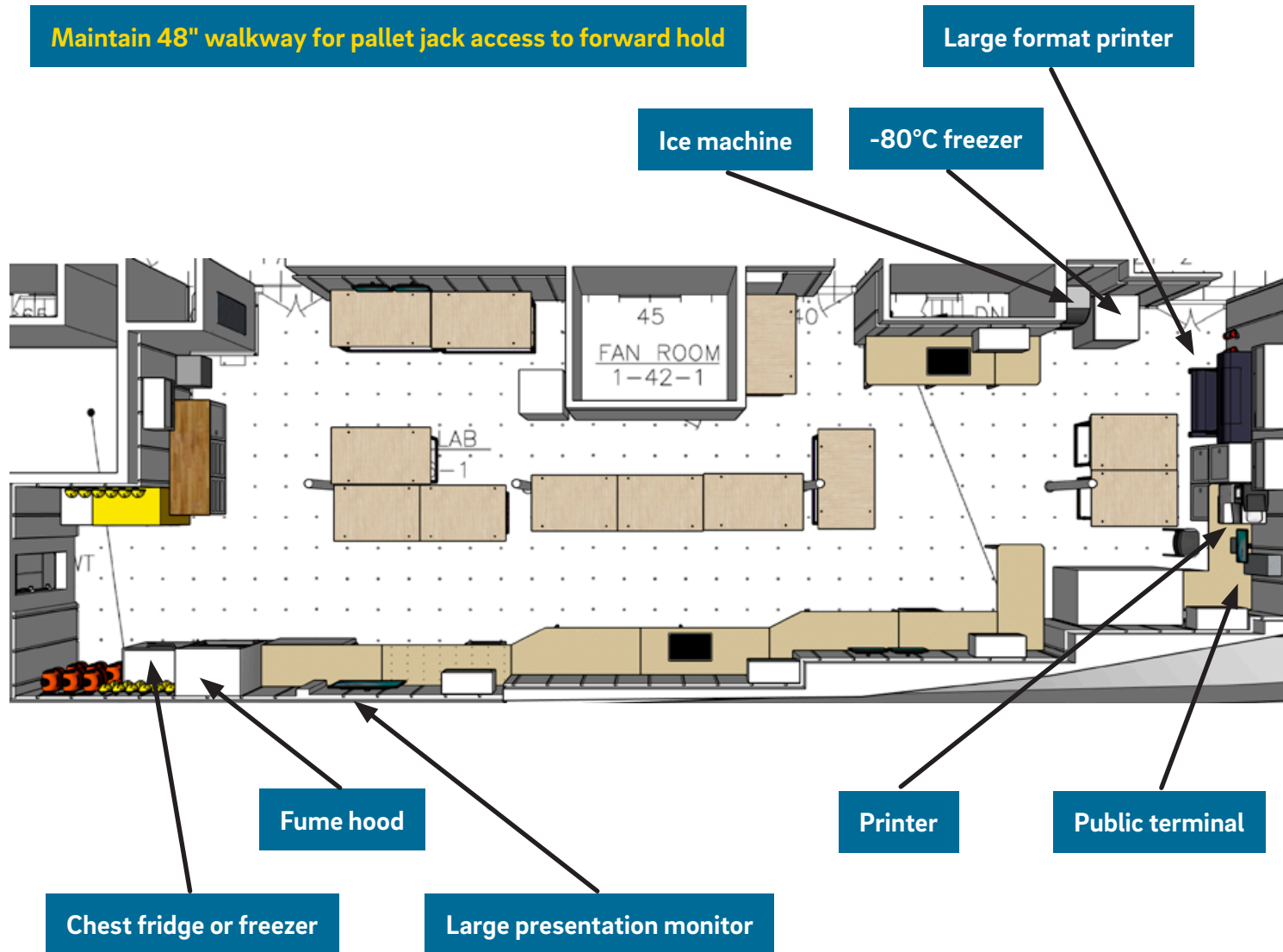
Squirt Boom

- Various block attachment points
- 0.322 electromechanical wire

"Blue" Crane

- Though formally painted blue, we still refer to it as such
- Wire or synthetic whips available
- 27.5 ft reach
- 17.5 ft reach over the water
- 2,650 lb safe working load in port
- 1,325 lb safe working load at sea

MAIN LAB OVERHEAD VIEW



- 3 sets of nesting tables (configurable for 3-12 tables)
- 1 fume hood with chemical storage cabinet
- 2 sinks
- Uncontaminated seawater hookup at inboard sink (1/2" barbs)
- Public computer terminal

- -80°C freezer (-60 to -80°C; 3 cu/ft)
- Chest refrigerator or freezer (14.8 cu/ft)
- Science-use-only ice machine
- Large presentation monitor
- 5 KVM monitors
- Laser printer and large format plotter

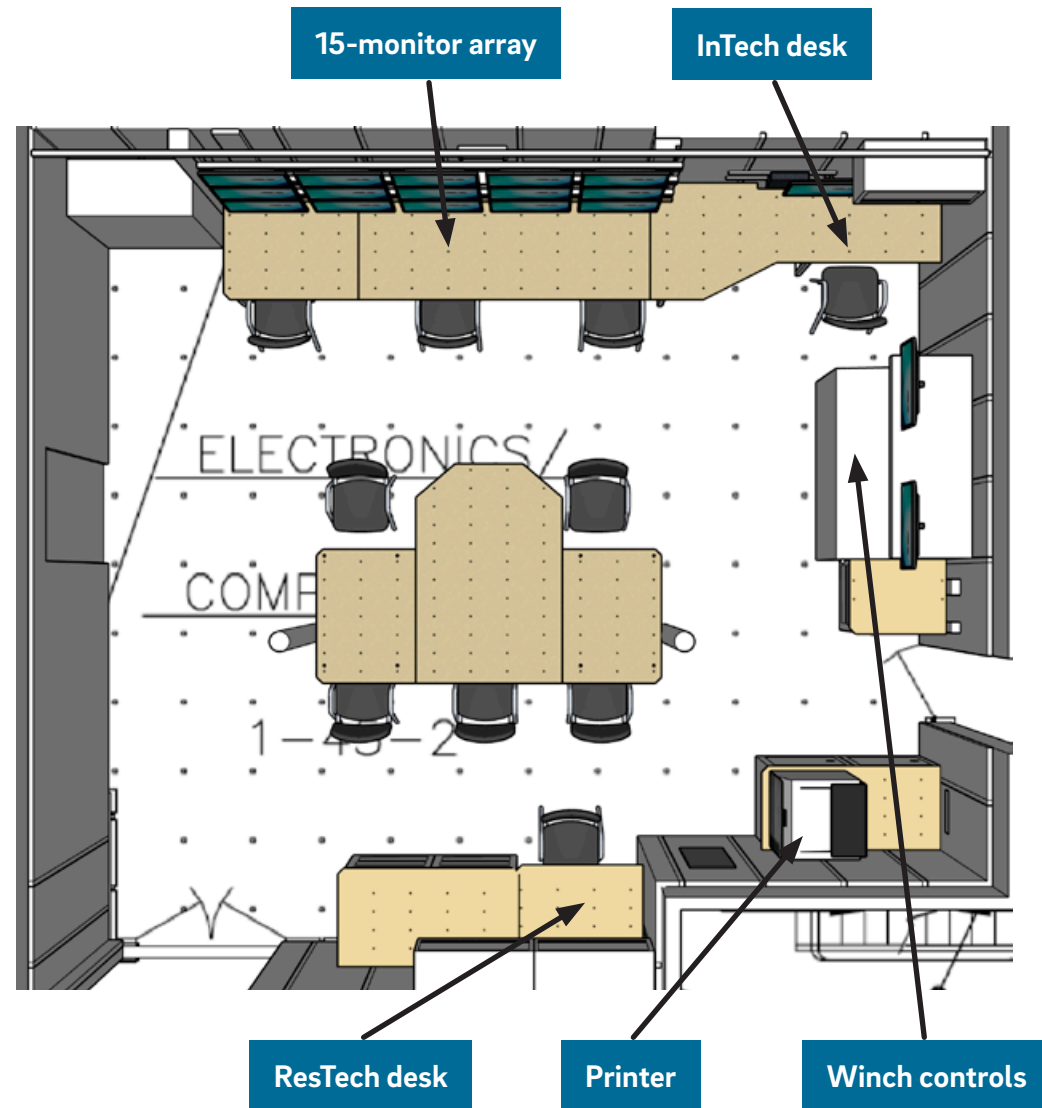
MAIN LAB PORT PERSPECTIVE VIEW



MAIN LAB STARBOARD PERSPECTIVE VIEW

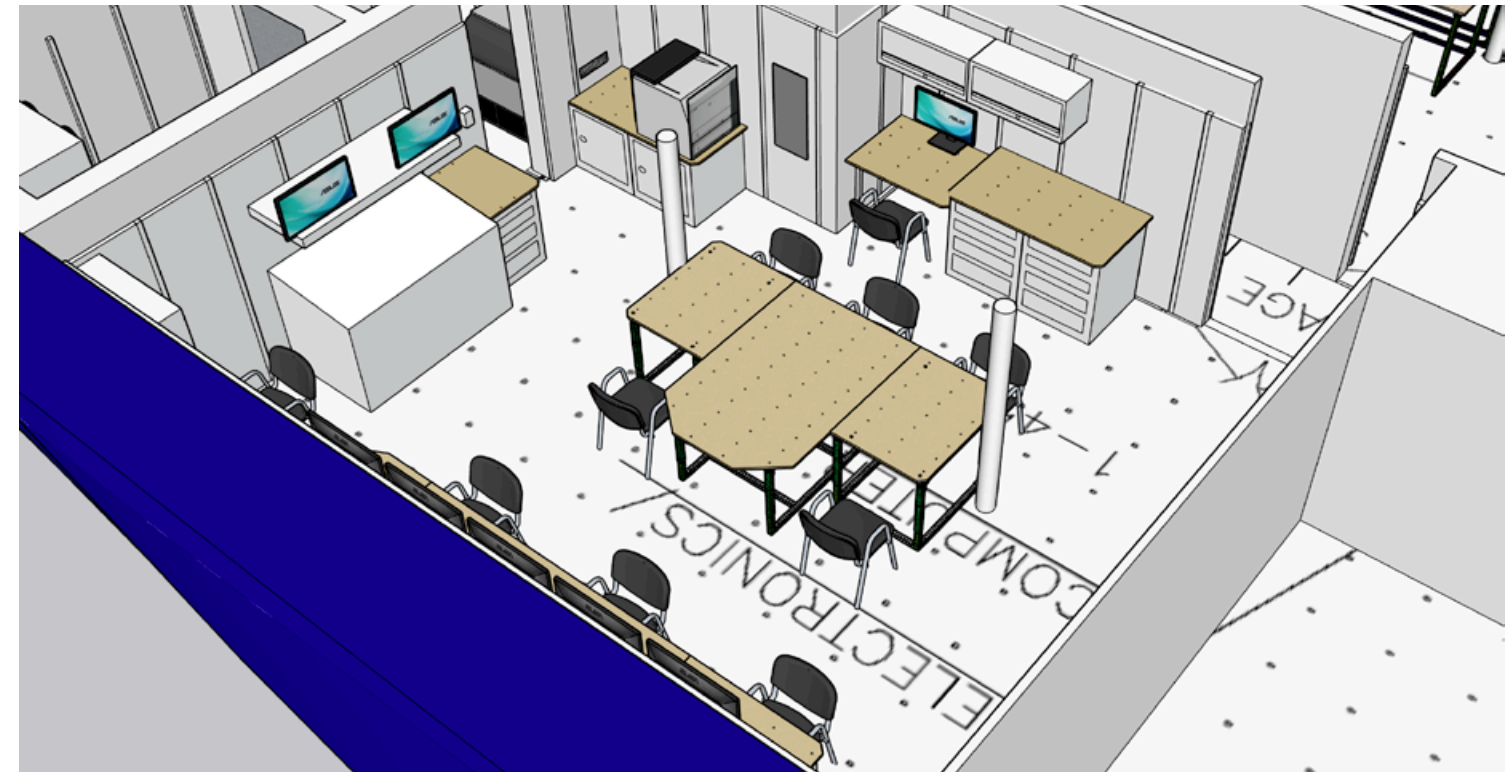


COMPUTER LAB OVERHEAD VIEW

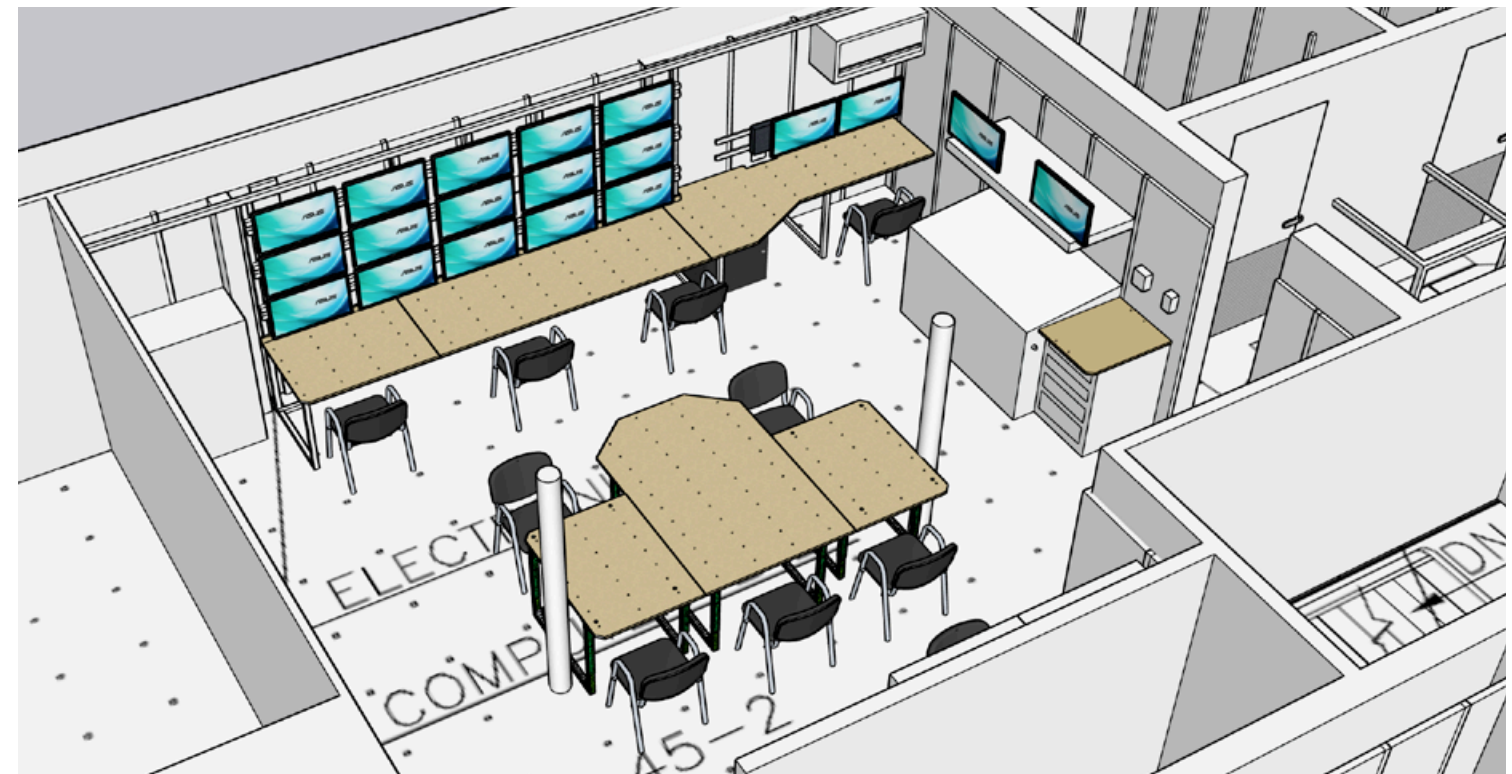


- Nesting and height adjustable island table
- 15-monitor KVM display
- Laser printer
- Winch control station

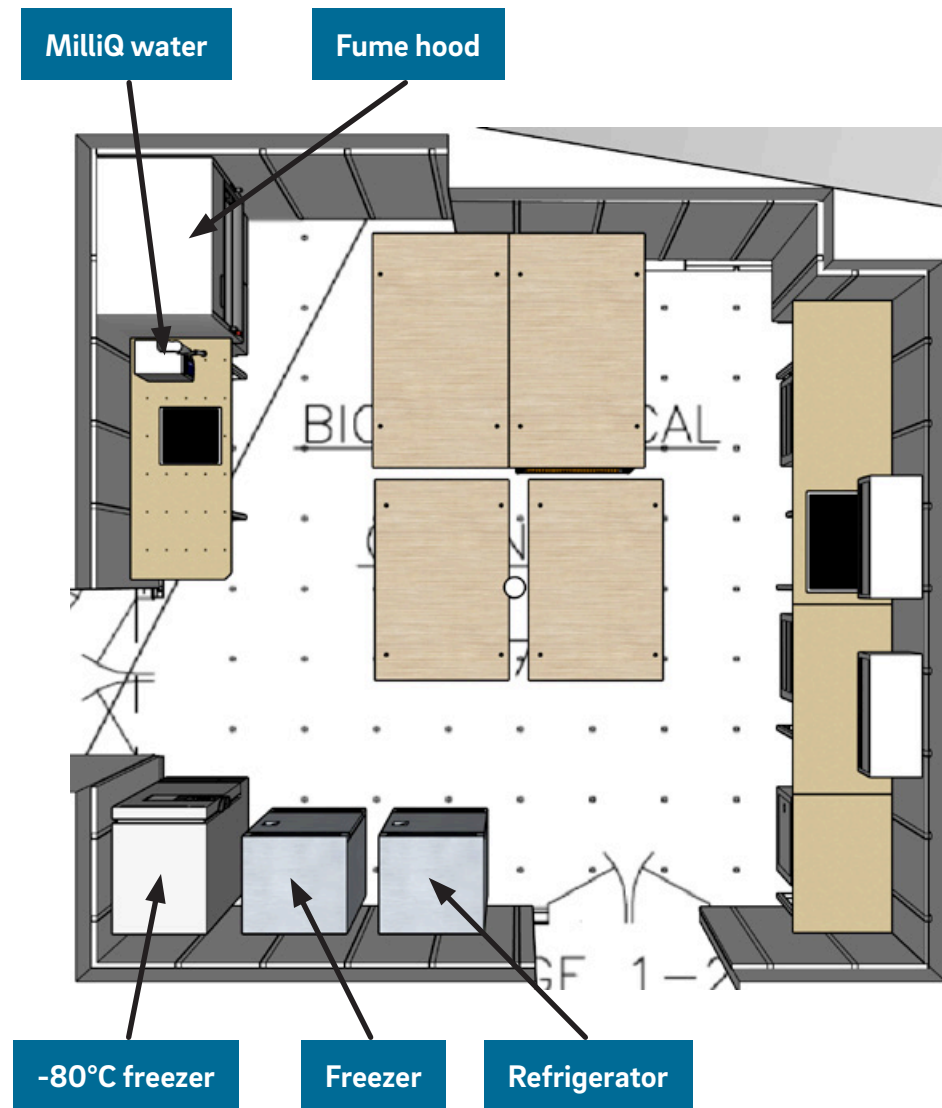
COMPUTER LAB PORT PERSPECTIVE VIEW



COMPUTER LAB STARBOARD PERSPECTIVE VIEW

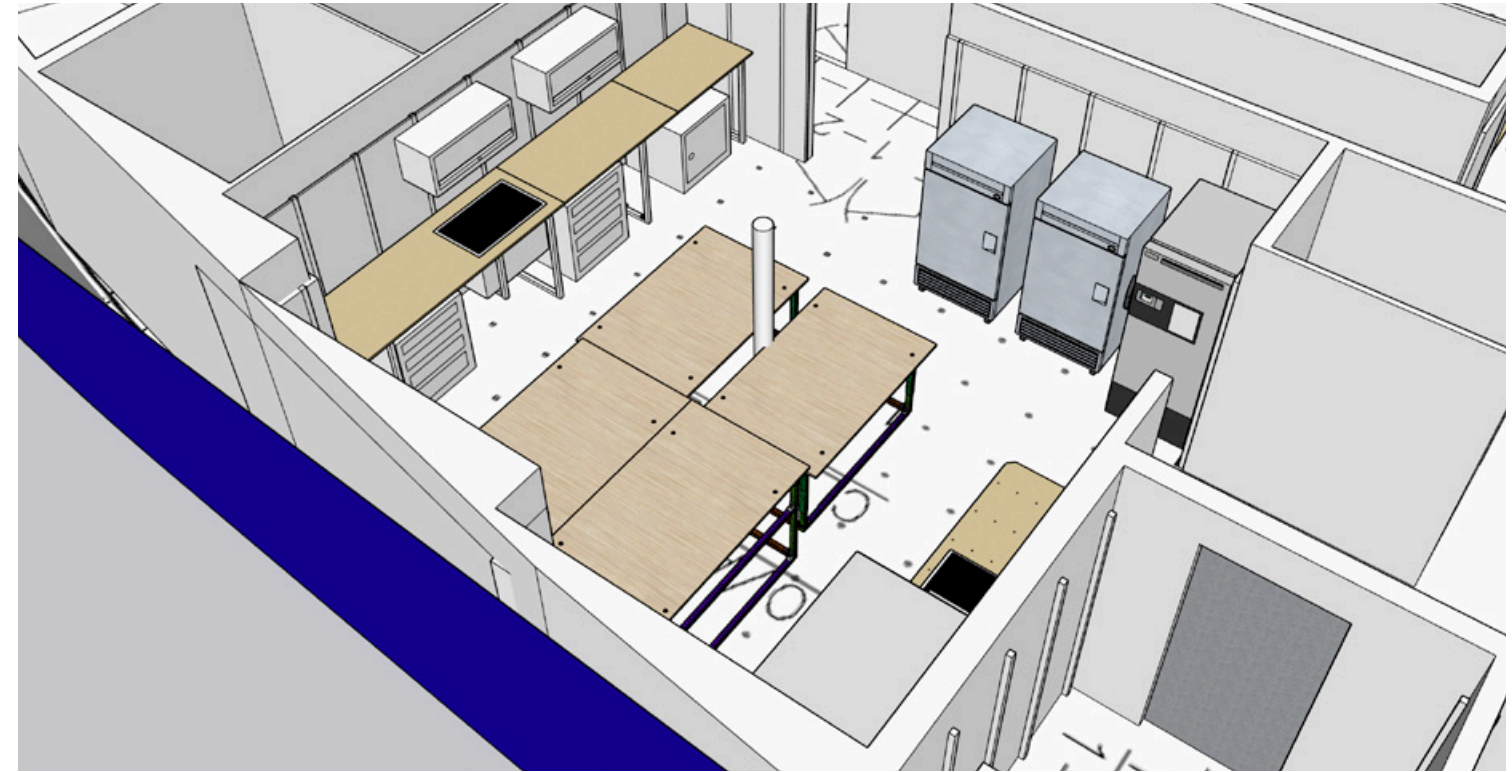


ANALYTICAL LAB OVERHEAD VIEW

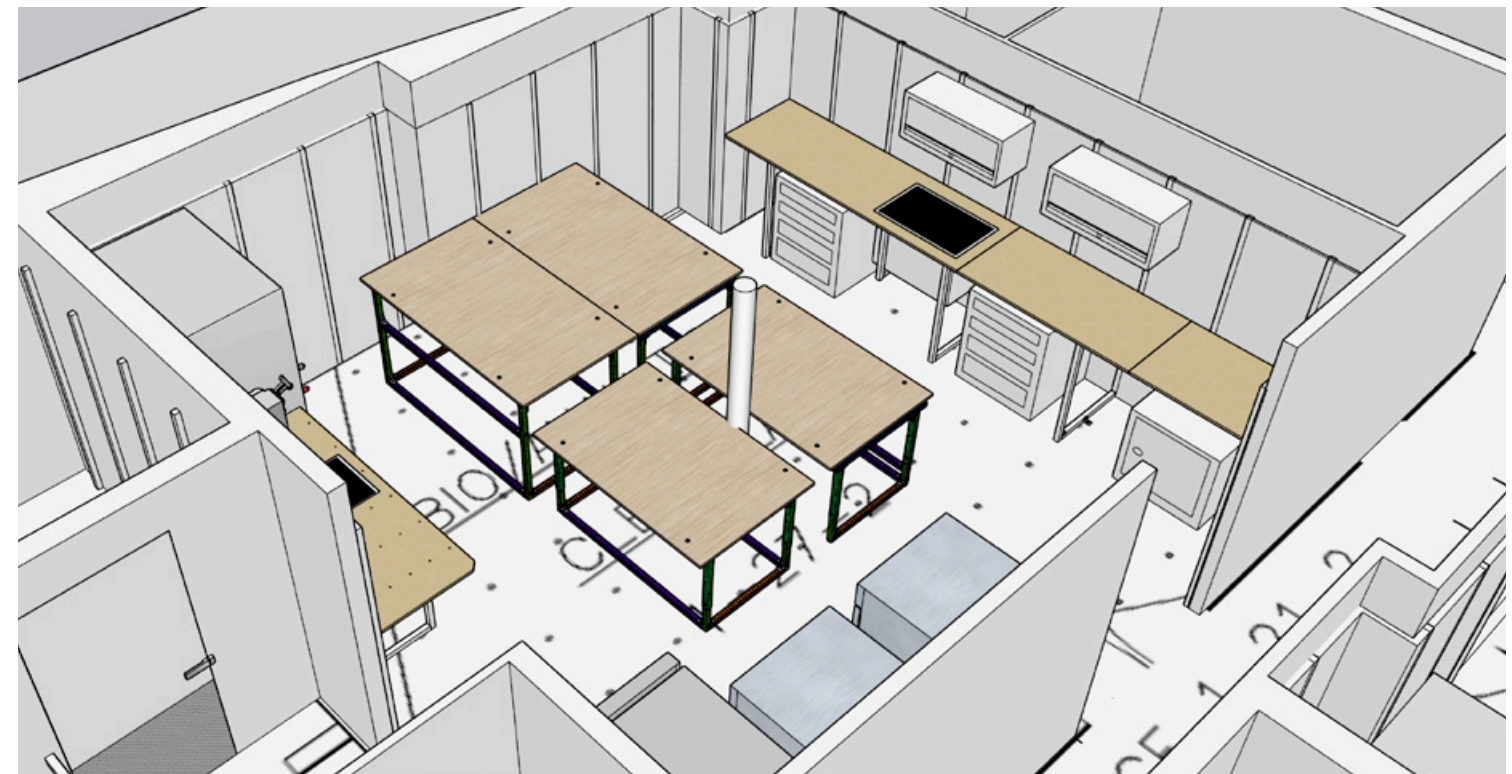


- 1 set of nesting tables (configurable for 1-4 tables)
- 1 fume hood with chemical storage cabinet
- 2 sinks
- MilliQ purified water
- -80°C freezer (-50 to -86°C; 360L)
- Freezer (-5 to 0°F; 10 cu/ft)
- Refrigerator (37 to 40°F; 10 cu/ft)

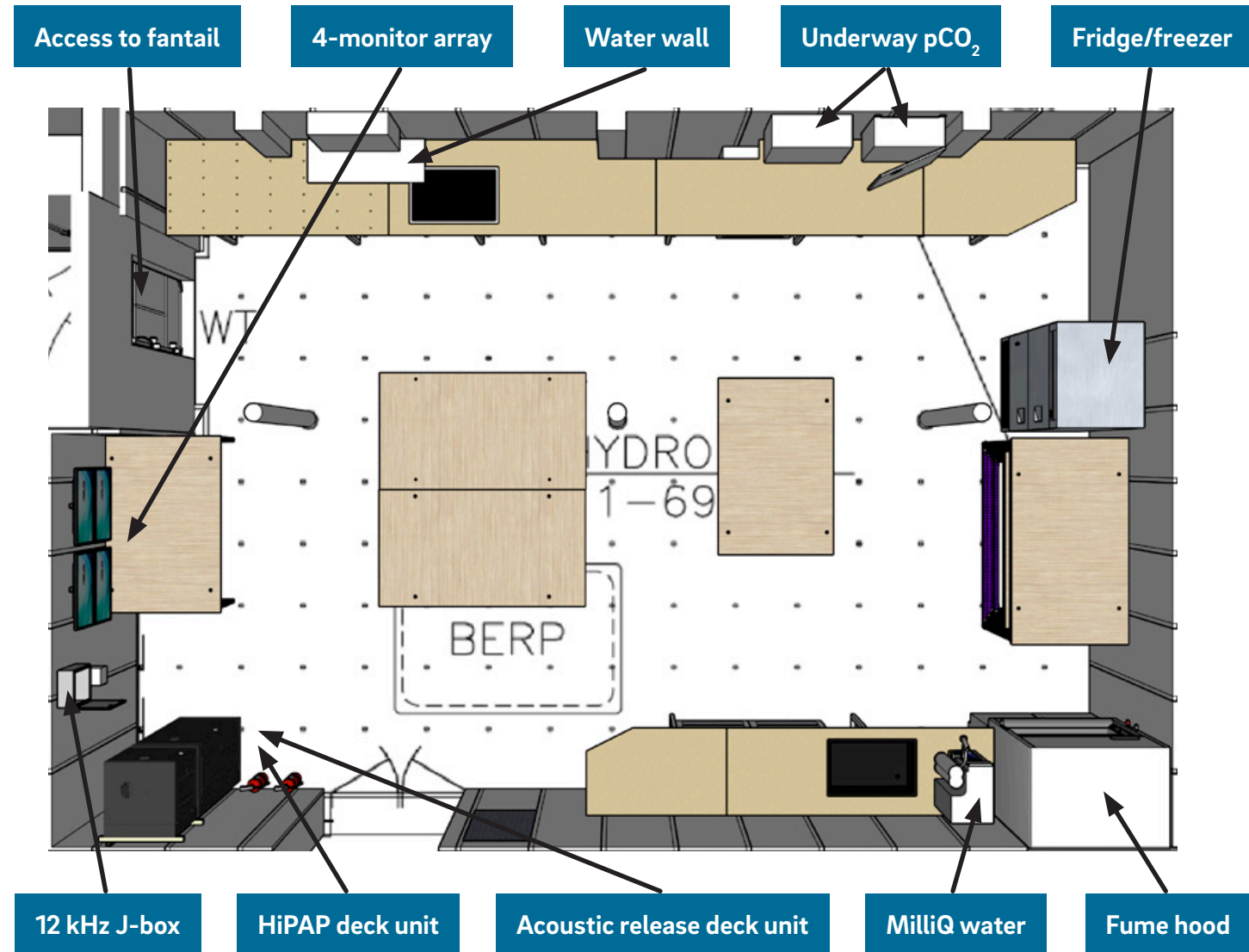
ANALYTICAL LAB PORT PERSPECTIVE VIEW



ANALYTICAL LAB STARBOARD PERSPECTIVE VIEW



HYDRO LAB OVERHEAD VIEW

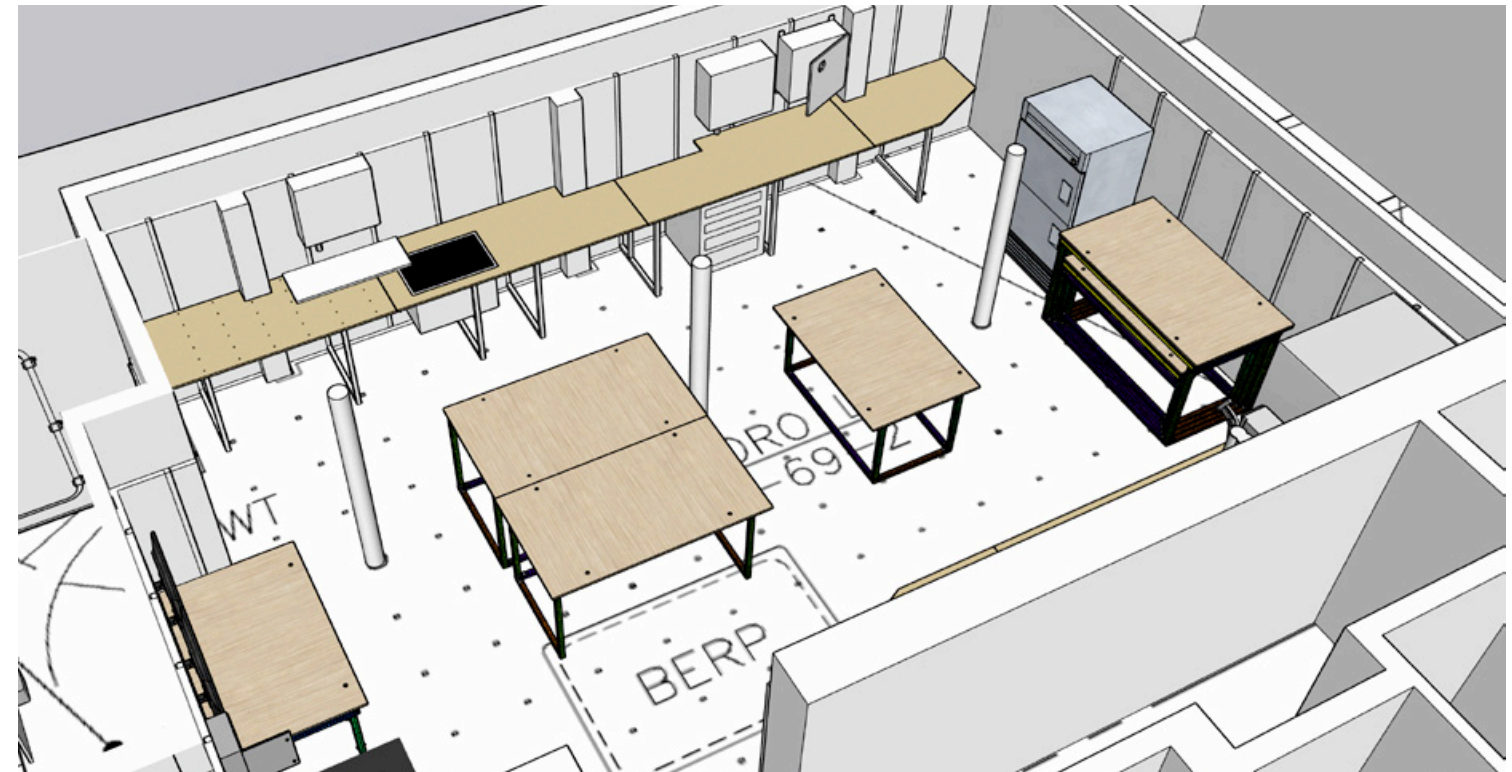


- 2 sets of nesting tables (configurable for 2-8 tables)
- 4-monitor KVM display
- 1 fume hood
- Water wall with TSG, transmissometer, dissolved oxygen, fluorometer, and de-bubbler
- MilliQ purified water
- HiPAP and acoustic release deck units
- 12 kHz transducer J-box
- 2 sinks with uncontaminated seawater hookups (1/2" barbs)
- Underway pCO₂ system
- Refrigerator (35 to 40°F; 6cu/ft) and freezer (-5 to 0°F; 3 cu/ft) combo

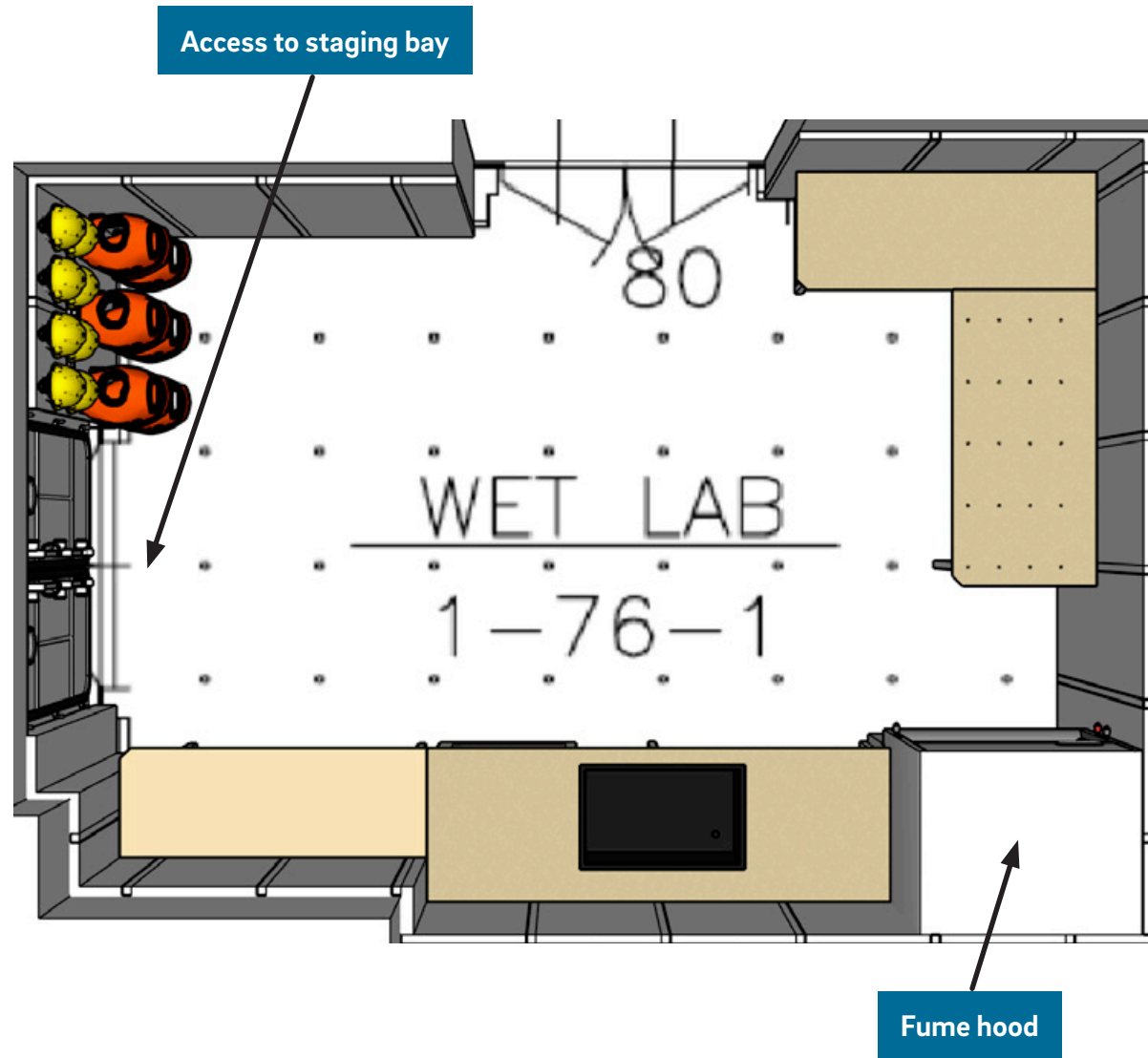
HYDRO LAB PORT PERSPECTIVE VIEW



HYDRO LAB STARBOARD PERSPECTIVE VIEW

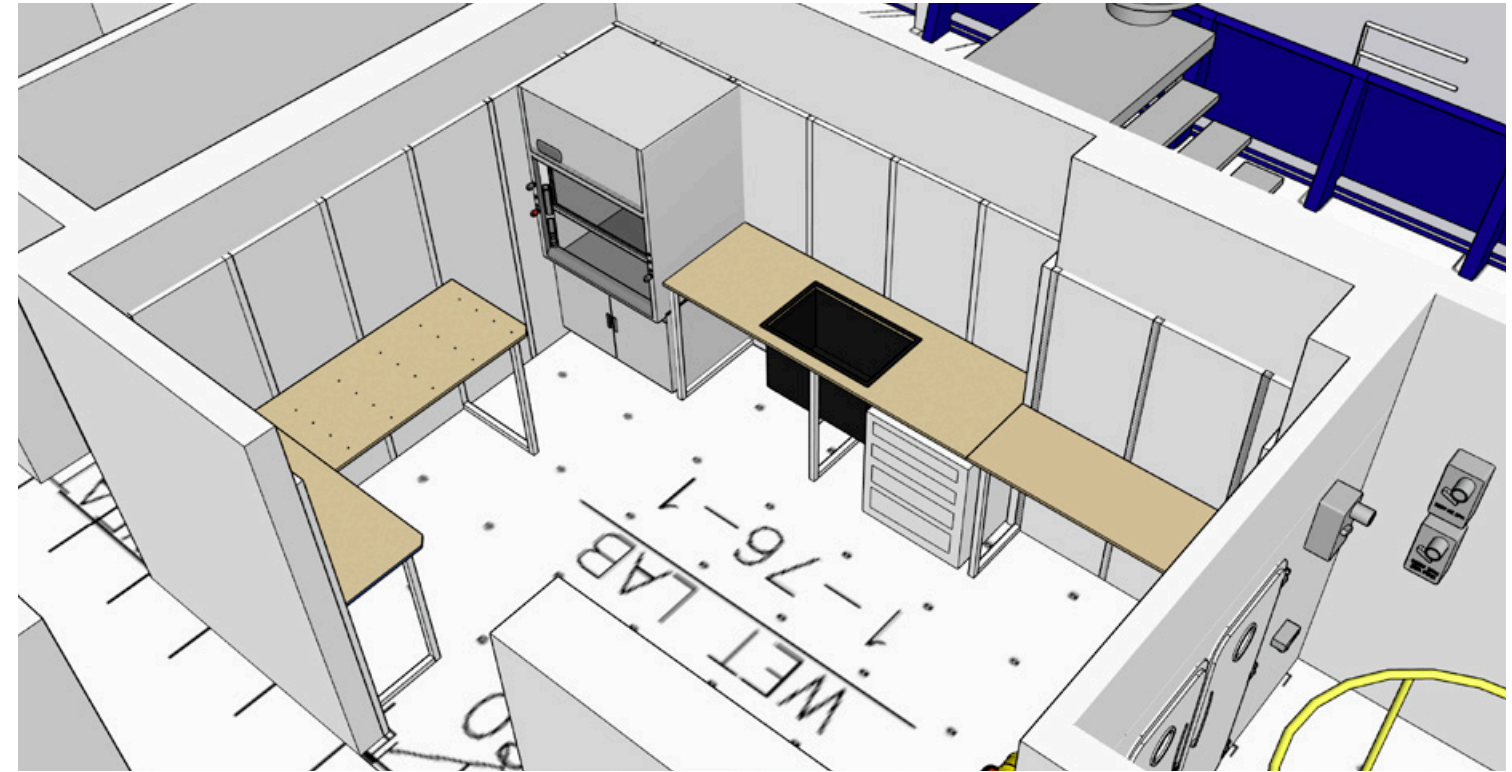


WET LAB OVERHEAD VIEW

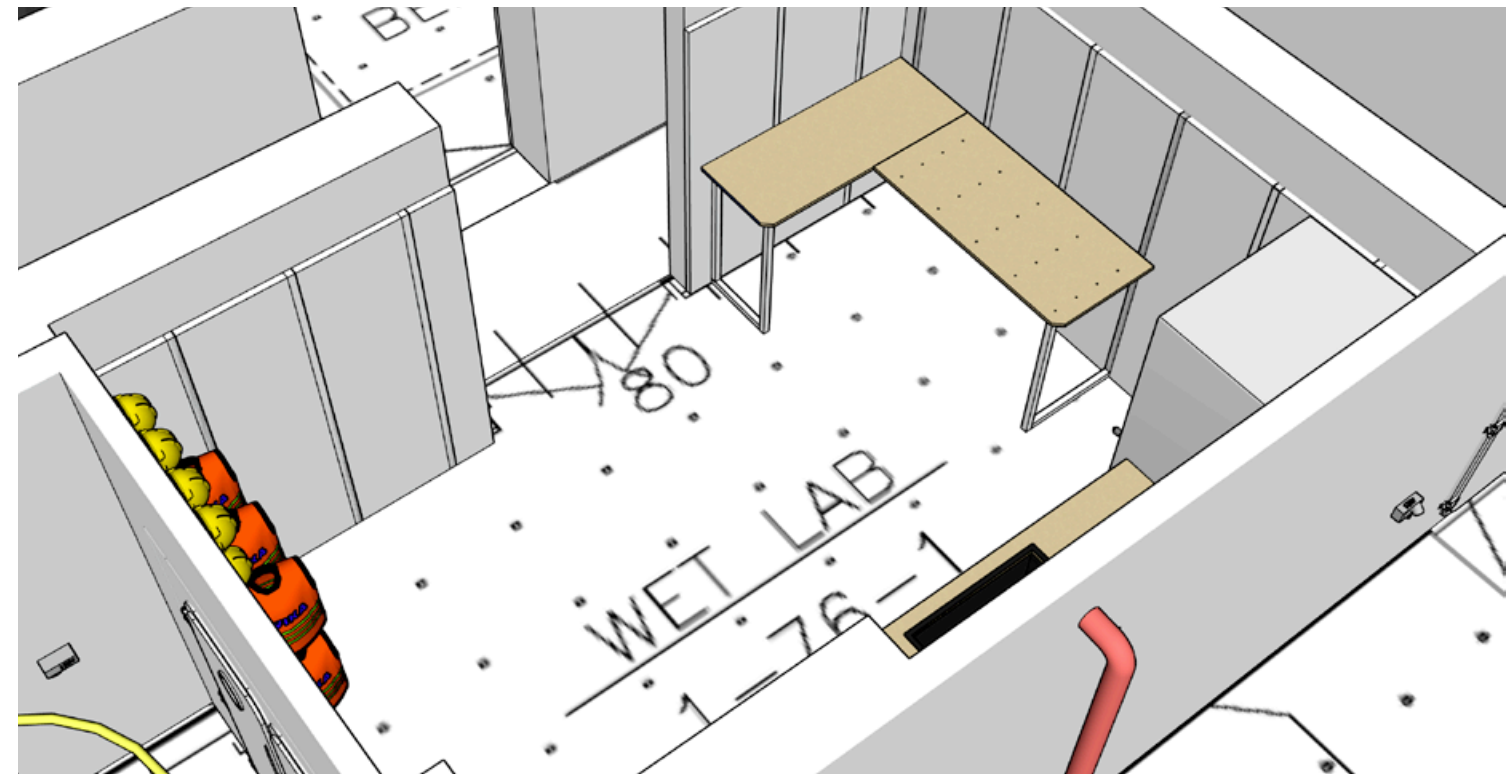


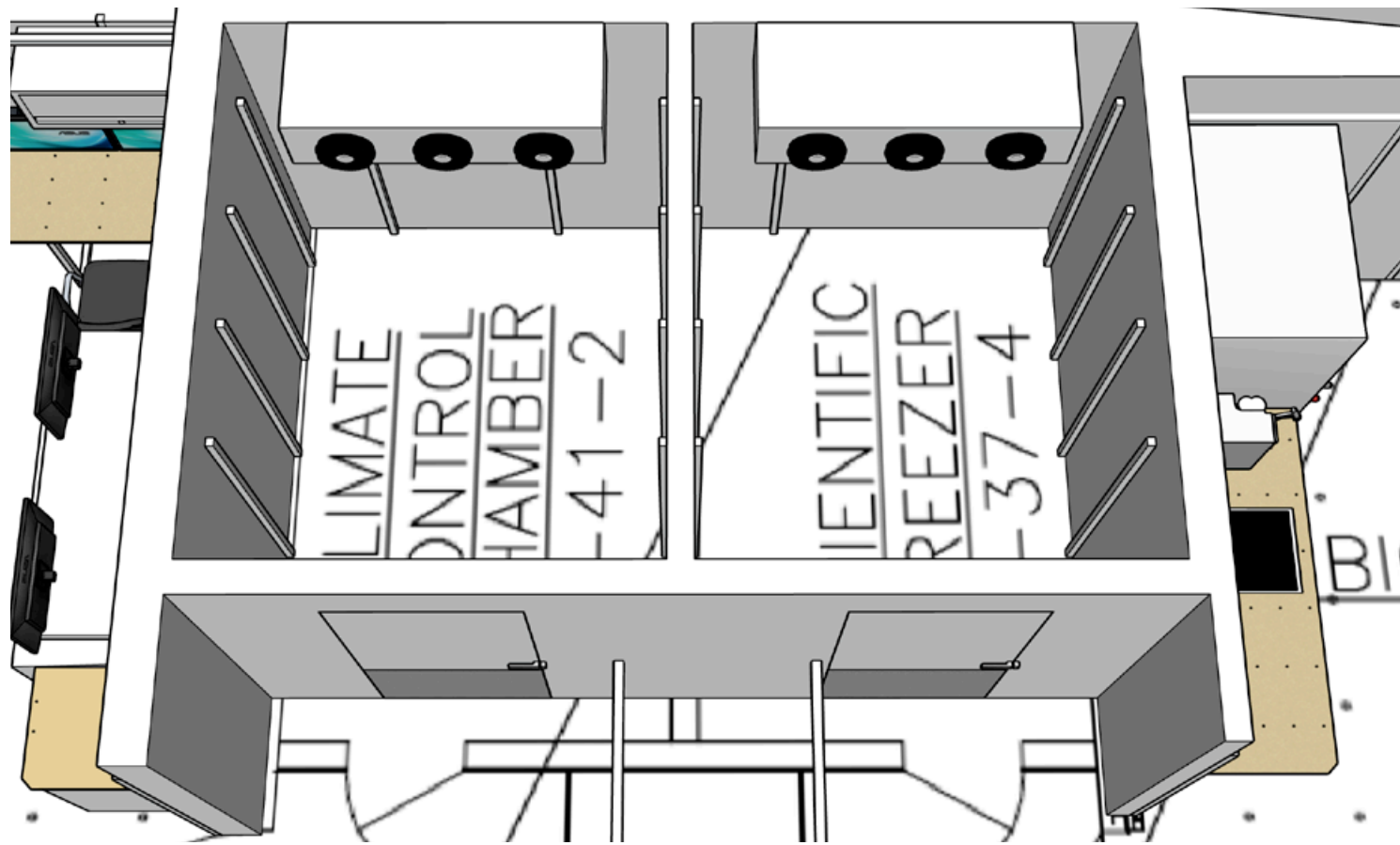
- 1 fume hood
- 1 sink with uncontaminated seawater hookup (1/2" barbs)

WET LAB PORT PERSPECTIVE VIEW



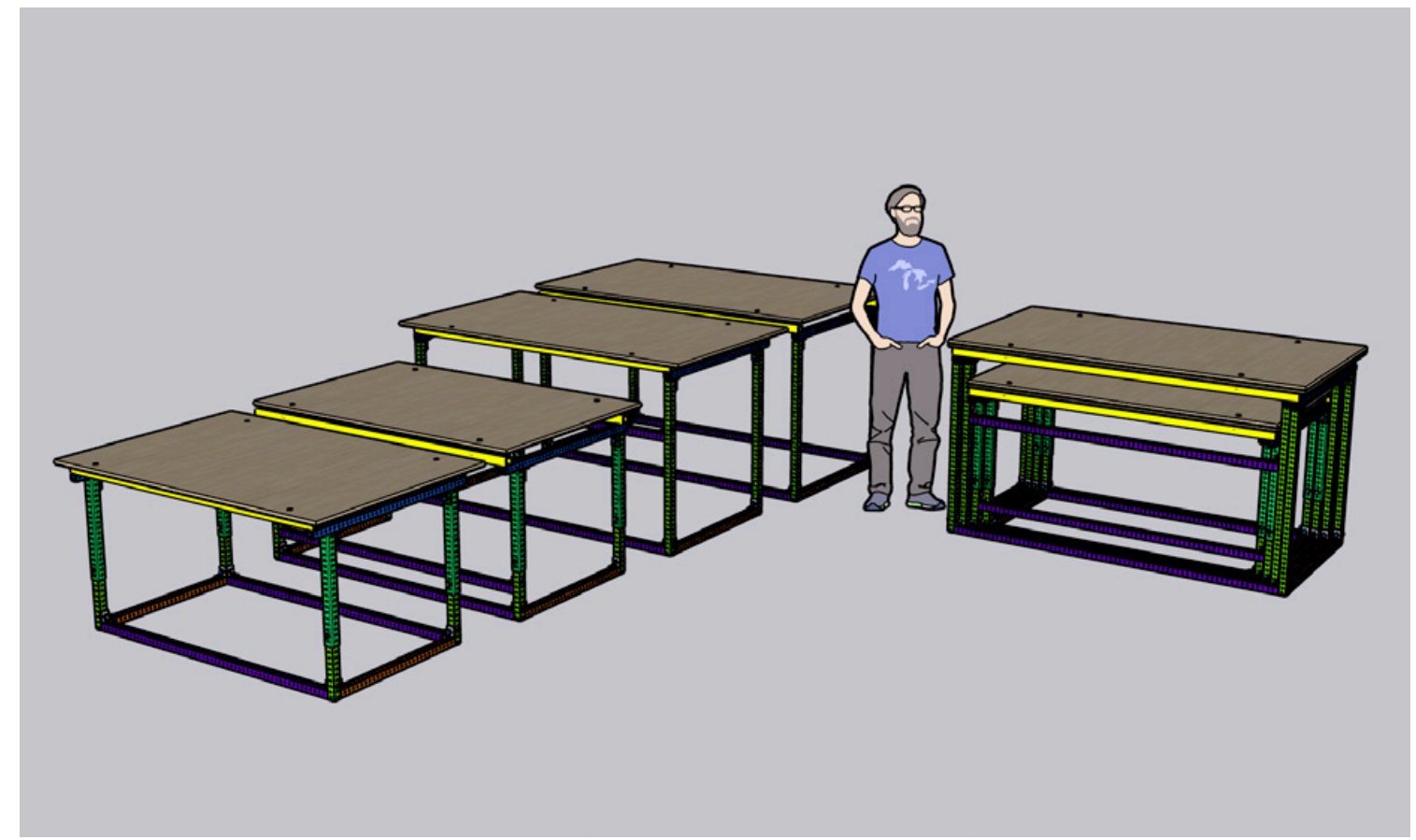
WET LAB STARBOARD PERSPECTIVE VIEW





CLIMATE CONTROLLED ROOMS

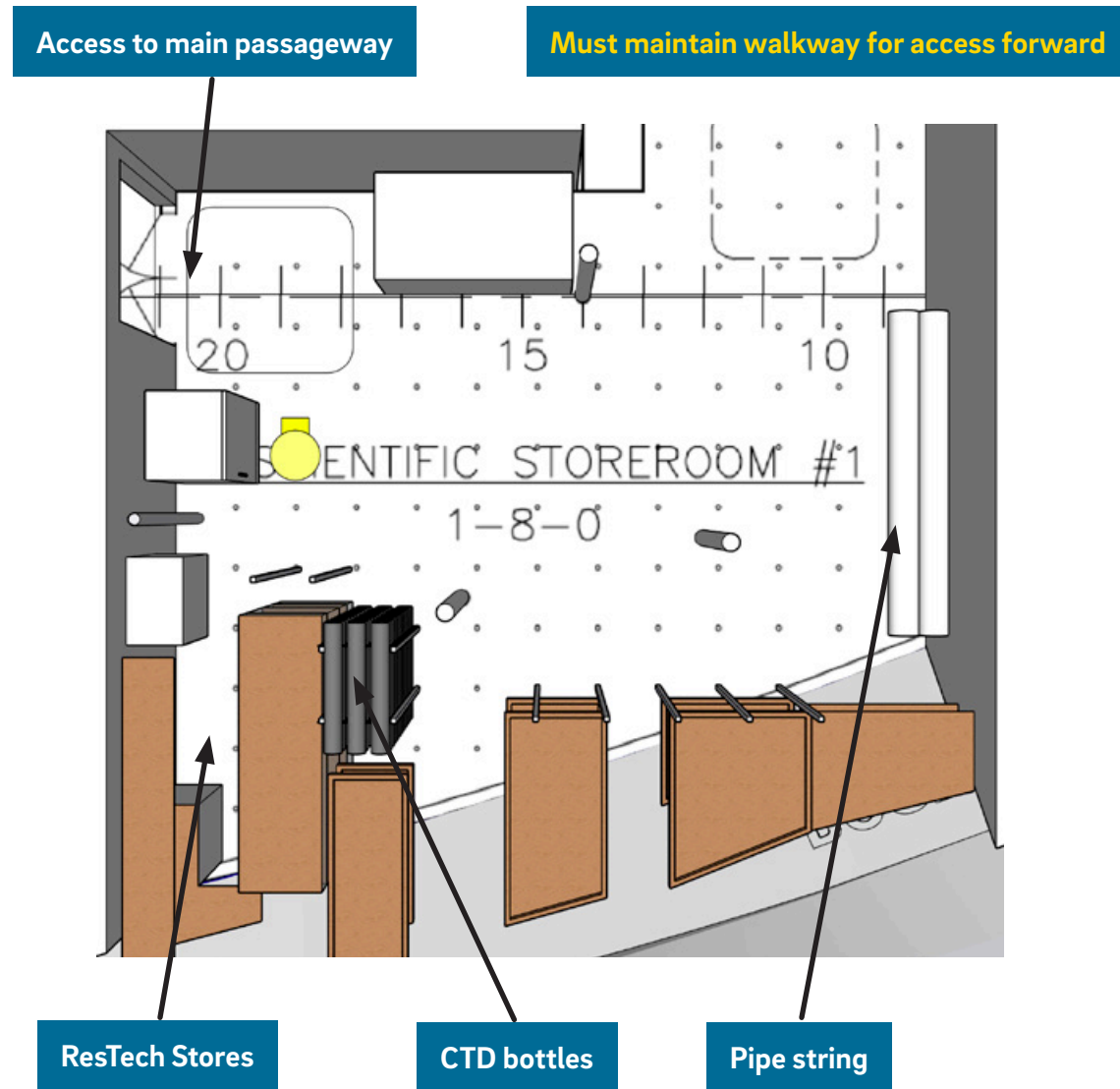
- 2 large walk-in climate control rooms
- Approximately 10'x7' each
- Temperatures can be set as low as -18°C
- Science-use-only ice machine in vestibule
- Unistrut frame on bulkheads



NESTING LAB BENCHES

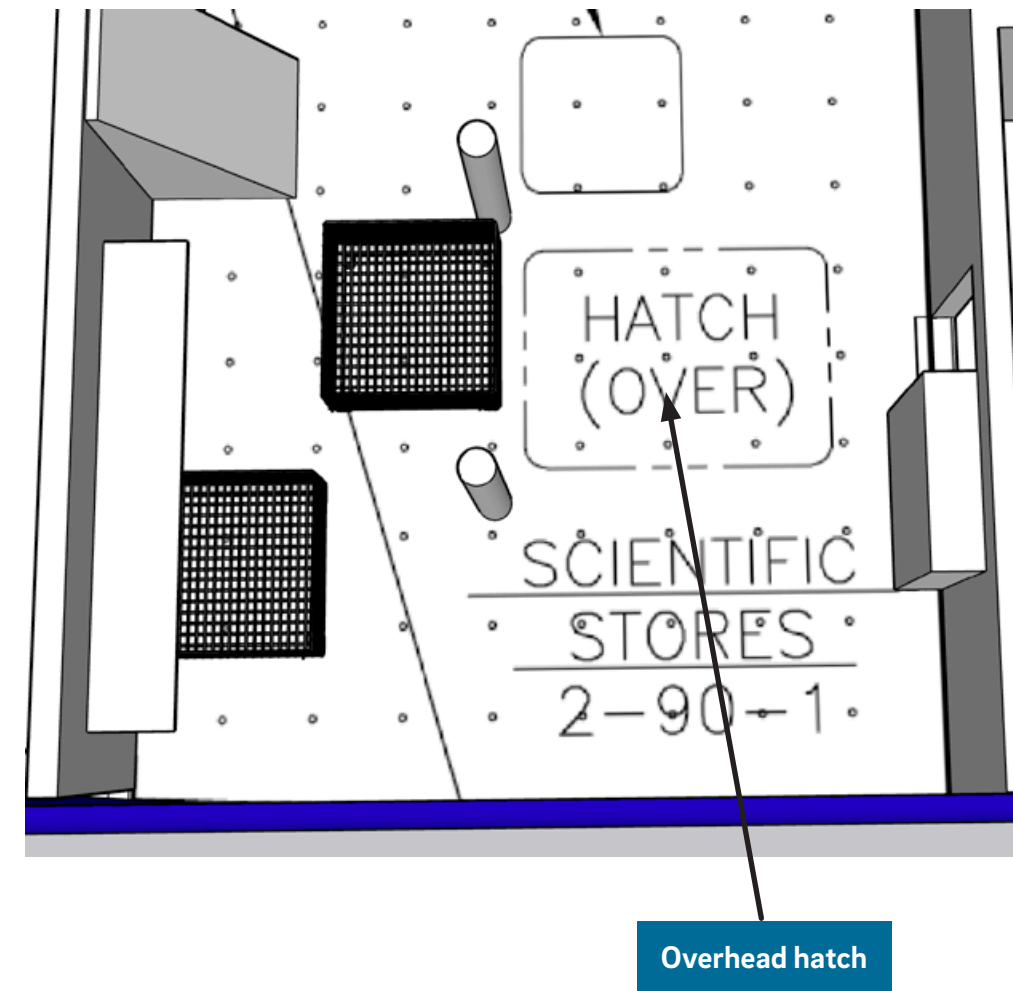
- Each set of 4 nesting tables can be nested to take up the space of just one bench
- 1 set is made up of 2 fixed height benches and 2 adjustable height desks
- Desks can be adjusted to any comfortable height and can be raised to match benches
- Benches are approximately 3'5" tall (same height as perimeter bench tops)
- Bench top area: 6'2"x3'6"
- Desk top area: 5'4.5"x3'6"

FORWARD SCIENCE HOLD OVERHEAD VIEW



- *Note* Storeroom has limited available space as instrumentation, CTD spares, deck hardware, scientific supplies etc. Utilize this area. Contact the ResTech group for information regarding your specific storage needs.
- Located on main deck forward of Main Lab
- Shelving on starboard side

AFT SCIENCE HOLD OVERHEAD VIEW



- *Note* Storeroom has limited available space as instrumentation, CTD spares, deck hardware, scientific supplies etc. utilize this area. Contact the ResTech group for information regarding your specific storage needs.
- Located on 1st platform with overhead hatch to main deck

MARCH 2024 UPDATE

PRODUCED AND EDITED BY ANDREW NASLUND

