

STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

Bruce A. Van Note

November 13, 2024

Subject: Construction of a Hybrid Ferry

State WIN: 024605.10 Location: Lincolnville **Amendment No. 3**

Dear Sir/Ms.:

Make the following changes to the bid documents

The following pages are to be **REMOVED** from the existing book and then **REPLACED** with the corresponding attached revised pages:

| REMOVE | and REPLACE with | Dated |
|--------|-------------------------|---------|
| page | page | |
| 44 | 44 | 11/8/24 |
| 64 | 64 | 11/8/24 |
| 73 | 73 | 11/8/24 |
| 79 | 79 | 11/8/24 |
| 97 | 97 | 11/8/24 |
| 98 | 98 | 11/8/24 |
| 99 | 99 | 11/8/24 |
| 107 | 107 | 11/8/24 |
| 125 | 125 | 11/8/24 |

The following sheets are to be **REMOVED** from the existing plan set and then **REPLACED** with the corresponding attached revised sheets:

| REMOVE | and REPLACE with | Dated |
|---------|------------------|---------|
| sheet | sheet | |
| A1-1-GA | A1-1-GA | 8/28/24 |
| A1-2-GA | A1-2-GA | 8/28/24 |
| A1-3-GA | A1-3-GA | 8/28/24 |
| A11-2 | A11-2 | 8/28/24 |
| A12-1 | A12-1 | 8/28/24 |
| A3 | A3 | 8/28/24 |
| A4-1 | A4-1 | 8/28/24 |
| A4-2 | A4-2 | 8/28/24 |
| A7-1 | A7-1 | 8/28/24 |
| A7-2 | A7-2 | 8/28/24 |
| M5 | M5 | 8/28/24 |
| M9-2 | M9-2 | 8/28/24 |
| M9-3 | M9-3 | 8/28/24 |
| P1-1 | P1-1 | 8/28/24 |
| P1-2 | P1-2 | 8/28/24 |
| P3-1 | P3-1 | 8/28/24 |
| P3-2 | P3-2 | 8/28/24 |
| P5-1 | P5-1 | 8/28/24 |

| P5-2 | P5-2 | 8/28/24 |
|------|------|---------|
| P6-2 | P6-2 | 8/28/24 |
| P7-2 | P7-2 | 8/28/24 |
| P8 | P8 | 8/28/24 |
| S5-1 | S5-1 | 8/28/24 |
| S5-2 | S5-2 | 8/28/24 |
| S5-3 | S5-3 | 8/28/24 |
| S7-2 | S7-2 | 8/28/24 |
| T1 | Т3 | 8/28/24 |

Consider these changes and information prior to submitting your bid on December 18, 2024.

Sincerely,

George M. A. Macdougall P.E.

Contracts & Specifications Engineer

Lyon Wachagell

- Two (2) masts shall support radar antennas on the Pilothouse top.
- Two (2) 1-1/2" SCH 40, 4'-6" high bow pennant staffs shall be located on the Main Deck bulwark cap at FR 3.5 & FR 98.5. Each is to be fitted with hardware and halyards to accommodate a "Steering Pennant". Locate pennant staff on the starboard side forward and port side aft. Mount flag halyard cleats near staff easily accessible by crew.
- A mast located on the 02-deck, starboard FR72 shall be fitted with hardware and halyards to accommodate the ensign.
- Two (2) stern/anchor light masts shall be located on the Main Deck bulwark cap at FR 3.5 & FR 98.5 in accordance with Contract DWG D372-A8. Locate mast on the port side forward and starboard side aft.
- Two (2) navigation light masts shall be located on the 02 deck in accordance with Contract DWG D372-A8. Locate mast on the Starboard side above the forward cabin bulkhead (near FR 31) and above the aft cabin bulkhead (near FR 71) both centered at 8'-4" off centerline. The aft navigation light mast will have a chain to prevent passenger access with a crew only sign as indicated on the drawing D372-A1 General Arrangements.
- A mast located on the pilothouse top, port side, shall support satellite compass.

191.1 FIXED BALLAST

The CONTR shall provide and install fixed heeling ballast in the hold, on starboard side, between FR36-FR40 and also FR62-FR66, on a raised steel flat (Ref: D372-S3). Ballast shall consist of 20 long tons of lead ingot fixed in place by concrete. Ballast shall be secured to steel flat using steel reinforcing bars welded in place before concrete is poured. Final ballast quantity will be determined by DESIGN AGENT prior to installation.

331.1.11 JUNCTION BOXES

All junction boxes shall be accessible as per 46 CFR 56.4.2.

331.1.12 LIGHTING SPARES

The CONTR shall provide spares for lighting fixtures as follows:

- (6) LED down-light fixture "cans"
- (6) LED down-light trim pieces
- (12) LED down-light lamps (one case)
- (6) LED panels
- (2) LED 24" linear unit light
- (2) Explosion Proof LED battery room light
- (4) Pathway lights

332.0 ELECTRICAL SYSTEM TESTS

- Insulation resistance (megger) test all power distribution cables, insulated motor and generator windings in accordance with the applicable requirements of the CFR.
- Visually inspect motor alignment with driven load (in instances where the load is not close-coupled).
- Manually operate all circuit breakers, disconnect switches, mode selectors, and pushbuttons to demonstrate correct operation.
- Bump test to verify that motors operate in the correct direction of rotation.
- Demonstrate correct system operation in all modes.
- Electrical fault detection testing throughout the vessel to identify sources of galvanic leakage.
- Pre-commissioning, commissioning, dock, harbor and sea trials tests as directed by ABB

Documentation of these activities shall be submitted to MaineDOT.

- (1 each) INDUSTRIAL SCIENTIFIC Multi-Gas Detector: Ventis MX4, Rechargeable Lithium, MFR. Model VKVSP4-K11211 or approved equal
- (6 each) 3765PL Right Angle Light: Pelican light or approved equal
- (4 each) 2010PL SabreLite Pelican flashlight
- (1 each) Coast Marine & Industrial Supply COMAR Ladder (USCG 160.117/1/0) -8ft length with shackles
- (2 each) Darley P-100 (NAVY P100) 2BE10YDN Part Number: 2BE10YDN P100 P-100 NSN: 4320-01-387-2869, w/ Pump Type: 2BE10YD (Note: Rope Start), w/ Standard volute orientation, w/ exhaust primer, w/ Loss of Prime Protection System, w/ (2) 10' suction hoses, w/ Discharge Thread Adapters (1) Size 1-1/2" NH x 1-1/2" NPT (1) Size 2-1/2" NH x 2-1/2" NPT, w/ Suction Thread Adapters, with Screen (1) Size 2-1/2" NH x 3" NPT (1) Size 3" NH x 3" NPT, w/ Master Drain, w/ Mounted Panel and Roll Cage

436.1.1 PFD STORAGE

PFD storage for a full complement of passengers, plus 15%, plus crew PFD's (294 total) shall be provided. Interior Passenger PFD storage shall be in lockers in the port and starboard cabins. Exterior Passenger PFD storage shall be in Libra OL Series GRP, or approved equal, white lockers with hinged doors located in accordance with DWG D372-A1.

Crew PFDs shall be located in Pilothouse, Crew Break Room, and EOS appropriate to crew complement.

CONTR shall include PFD donning instruction placard on PFD storage lockers.

437.1 ENGINE ORDER TELEGRAPH

The CONTR shall provide and install an engine order telegraph (EOT) system with interface panels located in the Pilothouse console at each end of the vessel and the EOS console as indicated in the ABB scope documents. The telegraph for each drivetrain shall be fully compatible with the requirements of 46 CFR 113.35. Each panel shall incorporate two (2) separate telegraphs; one (1) for each propulsion drive train. The telegraph for each drivetrain shall allow the captain to transmit orders for both ahead and astern propulsion commands. The EOS panel shall also provide indication of the vessel direction such that the operator can identify the direction of thrust based on joystick movements. The EOT panels shall be flush mounted and shall feature pushbutton style interface and local audible and visual signals.

439.1 CCTV

The CONTR shall provide and install a CCTV system consisting of control equipment and display monitor in pilothouse with additional display monitor in EOS. Monitors shall be HD 22 Inch Thin LED Monitor with HDMI VGA Built in Speaker Compatible with CCTV Security

sealed mylar covering, fastened and with seams and edges taped in accordance with the manufacturer's recommendations. Insulated spaces exposed to weather and insulated stairtower bulkheads shall also be sheathed in a 16 gauge stainless steel sheet metal to protect fire insulation from damage and weather. Additional mounting structure in overhead or on effected bulkheads may be required to support sheet metal over insulation. Insulated spaces in hold where joiner is not present shall be sheathed in perforated aluminum facing in addition to the mylar. Metal sheathing shall be overlapped or joined per manufacturers' recommendations and painted in accordance with coatings schedule. Insulation materials shall be USCG type approved "noncombustible material" under 46 CFR 164.006, 164.007, 164.008, 164.009, 164.107, 164.108, & 164.109 for the intended use and shall be 100% free of asbestos-containing materials. The CONTR shall provide insulation arrangement and details and proof of USCG certification of materials selected to MaineDOT for review prior to start of installation.

CONTR shall take the insulation thickness into account when installing piping, cable trays, and other systems along a bulkhead or deck to be insulated. Sufficient clearance must be maintained from the insulated surface to allow installation without compression of or gaps in the material. CONTR is responsible for repair, replacement and redress of any insulation components damaged during the course of production activities.

508.1.2 EXHAUST LAGGING & INSULATION

All insulation materials and installation details shall be in accordance with ASTM Volume 01.07 "Shipbuilding" Standard F683 except as detailed herein.

The generator engines and furnace exhaust systems shall be provided with high temperature, exhaust wrap, removable, sewn pads/blankets by GT Exhaust or approved equal (Ref: DWG D372-P1). Prepare surfaces by cleaning before applying insulation and follow manufacturer's recommendations. Provide and install aluminum sheet metal covering in way of access areas where the insulation will be subject to damage or personnel contact to the satisfaction of MaineDOT. The exhaust system shall be isolated from the hull with flexible stabilizers and raincap funnels. Exhaust isolation design and materials are to be provided by Soundown, or approved equal.

Battery room exhaust ducts exposed to weather on the 02 deck, shall be insulated and faced with white mylar covering with seams fastened and taped.

508.1.3 UPTAKE & INTAKE SOUND INSULATION

In addition to specified structural fire protection insulation, all uptake bulkheads shall be insulated with 1" Johns Manville Incombustible Hullboard with perforated glass cloth, or approved equal from the deck cutout to the engine room to 12" above the 01 deck plate. All insulation materials shall conform to requirements set forth in 46 CFR 164.009 or 164.109. The insulation material shall be fastened with seams and edges taped in accordance with the manufacturer's recommendations.

The CONTR shall provide (40) sets of 3/8" Grade 80 tie down chain assemblies 15' long with 3/8" hooks at each end and (40) ratchet type 3/8" chain binders. Storage for the assemblies shall be provided on steel flat bar or angle in the starboard deck locker mounted to the bulkhead to the approval of MaineDOT.

581.1 GROUND TACKLE

The CONTR shall provide and install an anchoring system consisting of the following components in accordance with DWG D372-M4:

- A bulwark anchor "pocket" main deck starboard FR10
- Anchor 750# Baldt workboat type or approved equal
- Chain 32 ft. of 1" Grade 1 stud link, galvanized, stowed in FR28-FR16 Void Compartment
- Chain rode tray 48"x30" starboard side hull void space
- Line 235 ft., 1-1/2" inch Samson Ultra Blue 12 plaited rope or approved equal
- Anchor release lever mechanism (DWG D372-M4)
- Hawse pipe starboard side as far outboard as possible to avoid vehicle impact
- Anchor rode retrieval drum, Schoellhorn-Albrecht 5" rope circumference hawser reel deck mount model SHR-5-24-24-AL, or approved equal starboard side hull void space as far outboard as possible to avoid vehicle impact
- (1 set) Shackles, swivel, thimbles, required and to the approval of the MaineDOT

Anchor stowage materials shall be 316 stainless steel.

582.1 MOORING SYSTEM

The CONTR shall provide and install, as appropriate, the following equipment:

582.1.1 LINES

(6) 50-foot (including eye splice) poly-Dacron dock lines, 1-1/4 inch diameter (18,750# avg. tensile strength), each with a 30-inch eye splice in one end.

582.1.2 KEVELS (CLEATS)

The CONTR shall provide and install mooring cleats and bulwark fairlead chocks to adequately moor the vessel for bow and stern loading and for side to pier docking. The CONTR shall provide and install (14) 24" kevels in locations as shown on DWG D372-A12. There shall be kevels on each side, (7) port and (7) starboard. Each kevel shall have an associated fairlead chock (4" Schedule 80 hawse pipe) located to the approval of the MaineDOT to provide adequate line leads from the chock to the kevel.

The CONTR shall provide and install line hooks on the bulwarks in (5) places – P&S bow and stern to hang mooring lines on, Port FR12 for anchor chain. These shall be flat bars shaped to

accommodate the mooring lines – two hooks spaced appropriately at each of (14) mooring stations. Hooks and locations shall be to the approval of the MaineDOT.

582.1.3 BULWARK SERVICE GATES

The CONTR shall provide and install (6) bulwark service gates in accordance with the locations and details of DWG D372-A12. Padeyes are to be provided at each such that the portable COMAR ladder can be attached for use in the event of a water rescue.

582.2 PIPING SYSTEM TESTS

The Contractor shall complete hydrostatic leak tests of all fluid and air piping systems in accordance with regulatory requirements. Hydrostatic tests shall be completed prior to operational tests of pumps, piping, and valves, to prove the integrity of the piping and valves in the system. Perform hydrostatic tests before applying piping insulation. Test each system when complete in its entirety to 1.5 times the design operating pressure or otherwise noted. A predetermined test time period will be agreed upon with MaineDOT and USCG where applicable.

Manually operate all valves from stop to stop to demonstrate free operation without binding. Remote valve operators (reach rods, hydraulically actuated quick closing devices, etc.) shall be tested to demonstrate proper operation. Demonstrate that all relief valves and pressure safety devices operate at their set pressure or provide current test certification. CONTR shall submit all pressure gauges with lab calibration test and certification stickers along with certifying documents. Valve identification tags shall be checked for accuracy. CONTR shall be responsible for documenting testing/verification and submitting to MaineDOT. Inspect all welds, screwed connections, and takedowns for leakage. Acceptance criteria shall be zero leakage.

Manually operate all ventilation system balancing dampers and fire dampers to demonstrate free operation without binding. Check ventilation system filters for proper installation and cleanliness prior to system operation. CONTR shall be responsible for documenting testing/verification and submitting to MaineDOT.

583.1 RESCUE BOAT & DAVIT

- 583.1.1: DAVIT: The CONTR shall provide and install a Coastal Marine Equipment, Inc. D50-14.75-11-24 (240V, 3-phase), or approved equal davit on the 02-Deck starboard side (Ref. D372-A1-2 and D372-M5). The CONTR shall note that the Coastal davit pedestal will not be provided with side gussets. The CONTR shall be responsible for fabricating and installing (8) gussets on the pedestal. Handing of davit as shown on plans. CONTR shall submit working drawings to MaineDOT prior to installation.
- 583.1.2: RESCUE BOAT: The CONTR shall provide and install a new Palfinger RSQ 450 Rescue Boat, or approved equal rescue boat with jockey seat, electric start, boat cover

- and motor cover, and (50) HP gasoline outboard motor. Vessel name and hailing port to be stenciled on rescue boat.
- 583.1.3: The CONTR shall provide and install a new rescue boat battery charger. The charger shall be a Pro SE, Sportsman Edition, or approved equal and shall be located in a position to be accessible to the rescue boat motor starting battery. Locate battery charger power to an appropriate source.
- 583.1.4: The CONTR shall provide and install aluminum cradle chocks, Scully Fabrication, or approved equal. The Scully cradle shall be ordered for the boat with the motor stored in a vertical position. CONTR to provide cleats on life raft cradle. Cradle is to be positioned such that the rescue boat bow is higher than the stern and will naturally drain itself.
- 583.1.5: Dedicated floodlights for prep and launch illumination shall be provided and installed in accordance with Section 331.1.9.2.
- 583.1.6: CONTR to provide a rescue boat gear locker Libra OL Series GRP or approved equal white locker with hinged door located in accordance with DWG D372-A1.
- 583.1.7: TESTS: The installation shall be fully operational in radius swing and clearances past the rails. The davit and boat shall be weight tested and operationally tested to the approval of the MaineDOT and the attending USCG OCMI.
- 583.1.8: The CONTR shall install a 3" SCH 160 stainless steel deck socket and (1) removeable 2" SCH 40 vertical pipe stanchion outboard of the rescue boat at FR 36. A course of yellow colored, rubber-coated ½" Grade 30 chain or removeable safety netting shall be attached to railings as stanchion as required by the OCMI.

584.0 VEHICLE GATES

The CONTR shall build and install a chain link and safety netting vehicle gate across the opening in the forward and aft deck bulwarks. CONTR shall submit working drawings to USCG and MaineDOT for approval prior to ordering. The gate shall be constructed of one course of yellow colored, rubber-coated ½" Grade 30 chain attached to (1) 2" SCH 40 vertical pipe stanchion on centerline as shown in DWG D372-A12. Netting shall attach to side bulwarks and vertical stanchion. Netting shall be US Netting or approved equal 2" black polyester webbing, 12,000 lb tensile strength, 2" wide perimeter strap, 4"x4" square mesh openings, (1) 3" ID D-Ring top center, (4) straps with sewn in SS Snap hooks and cam buckles on each strap 44" tall both sides. Net dimensions are 44" height x 13'-8" width not including straps and hardware. Stanchions mount in 3" SCH 160 stainless steel deck socket 6" minimum depth near FR1 and FR 101. An additional 3" SCH 160 stainless steel deck socket shall be provided at the bulwark starboard FR1.5 & FR100.5 for stowage of the vertical pipe stanchion during loading and unloading.

- 02-Deck: Crew head FR53
- 01-Deck Port: Cleaning Gear Locker FR48; Passenger Head FR53; Passenger Head FR57; PDF Locker FR69
- 01-Deck Starboard: PFD Locker FR33; Passenger Head FR46; Wheelchair Lift FR52; Cleaning Gear Locker FR55
- Hold Deck: Crew Head Port FR 36; Workshop Sliding Door FR36; Crew Break Room FR38;
- Engine Room Acoustic EOS FR44

All doors accessible to passengers shall be fitted with finger guard protectors at the hinges. Doors opening against bulkheads shall be fitted with rubber bumpers.

611.1.3 ENGINE ROOM WATERTIGHT DOORS

CONTR shall provide and install Class I hinged, watertight door on forward engine room bulkhead FR 40 and aft engine room bulkhead FR62 (Ref: D372-A7). Doors shall be stainless steel, with clear opening dimensions of 66"x30". Doors shall be equipped with quick-acting wheel operation both sides. Doors shall have local and pilothouse audible and visual alarms for open status. Doors shall be by Cen-Tex or approved equal. Doors shall meet all U.S. Coast Guard requirements for subdivision bulkhead watertight door.

611.1.4 BATTERY ROOM FUMETIGHT DOORS

CONTR shall provide and install A-60 hinged, gas-tight door on aft port battery room bulkhead FR 48 and forward starboard battery room bulkhead FR54 (Ref: D372-A7). Doors shall be stainless steel, with clear opening dimensions of 78" x 28". Doors shall be equipped with grab handle on both sides. Doors shall have local and pilothouse audible and visual alarms for open status. Doors shall be Staco A60WE-2 or approved equal. Gas-tight door shall have continuous gasket where it contacts the door frame and 2 individually activated dogs to maintain gas tight integrity.

612.1 RAILS & STANCHIONS

612.1.1 EXTERIOR RAILINGS

The CONTR shall provide and install welded steel pipe handrails and stanchions to meet 46 CFR requirements (Ref: D372-S12). Handrails shall be provided and installed around all perimeters of the 02 weather deck areas including 02-Deck inboard/forward/aft of the IBA storage racks, rapid charging receptacle, and rescue boat storage/launch area. These pipe handrails shall be fitted with welded tabs and bolt-on stainless screen sections (See Section 612.1.2 below). CONTR shall provide and install (2) removable stanchions, 30" high, 1 1/2" schedule 40 pipe,

The STARBOARD side passenger head shall be ADA accessible and comply with ADAAG guidelines in all respects. Toilet transfer grab bars (Bobrick or approved equal) shall be installed in compliance with the ADAAG July 2013 requirements. The installation of the toilet shall adhere to ADAAG height and positioning dimensions. Hand dryers, vanity arrangement, lighting switches, mirror, etc. shall comply with ADAAG Guidelines.

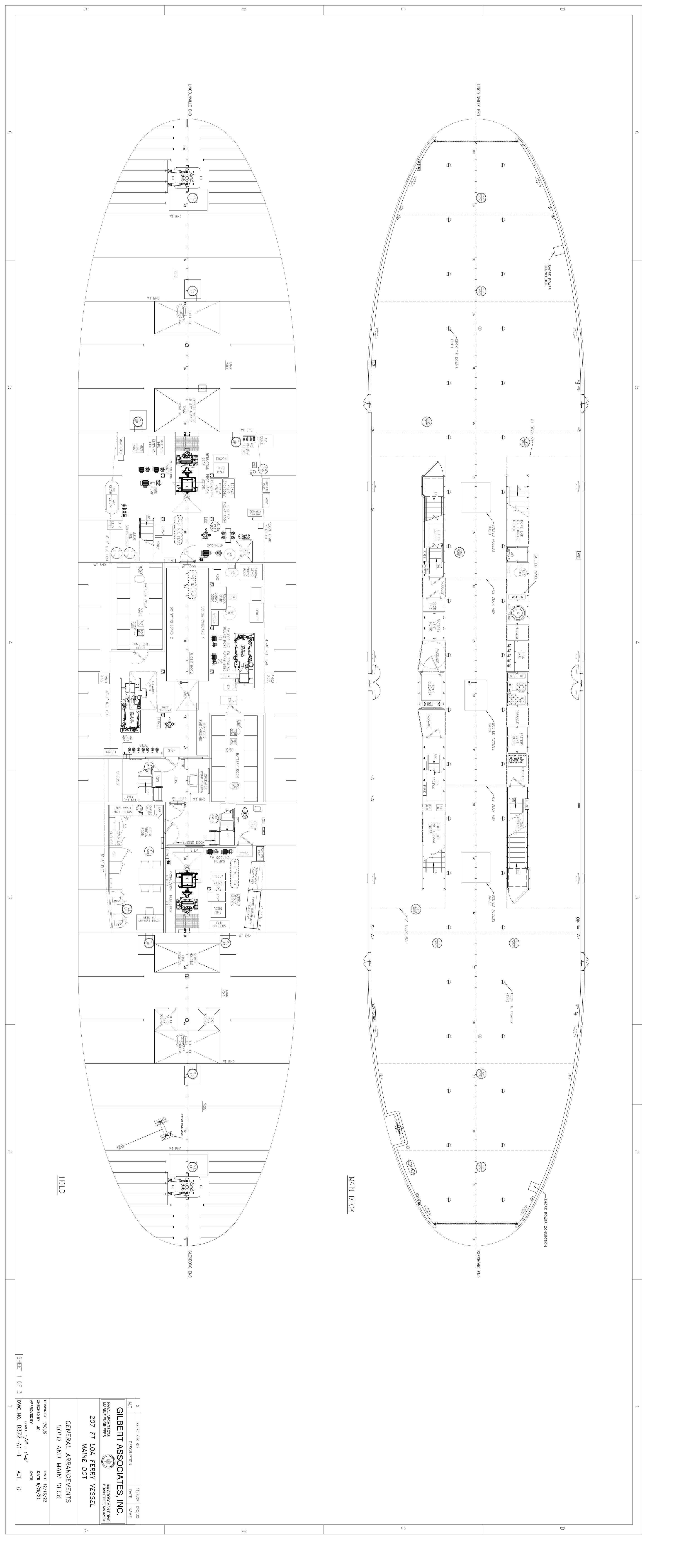
645.1 PASSENGER, CREW, & PILOTHOUSE SPACES

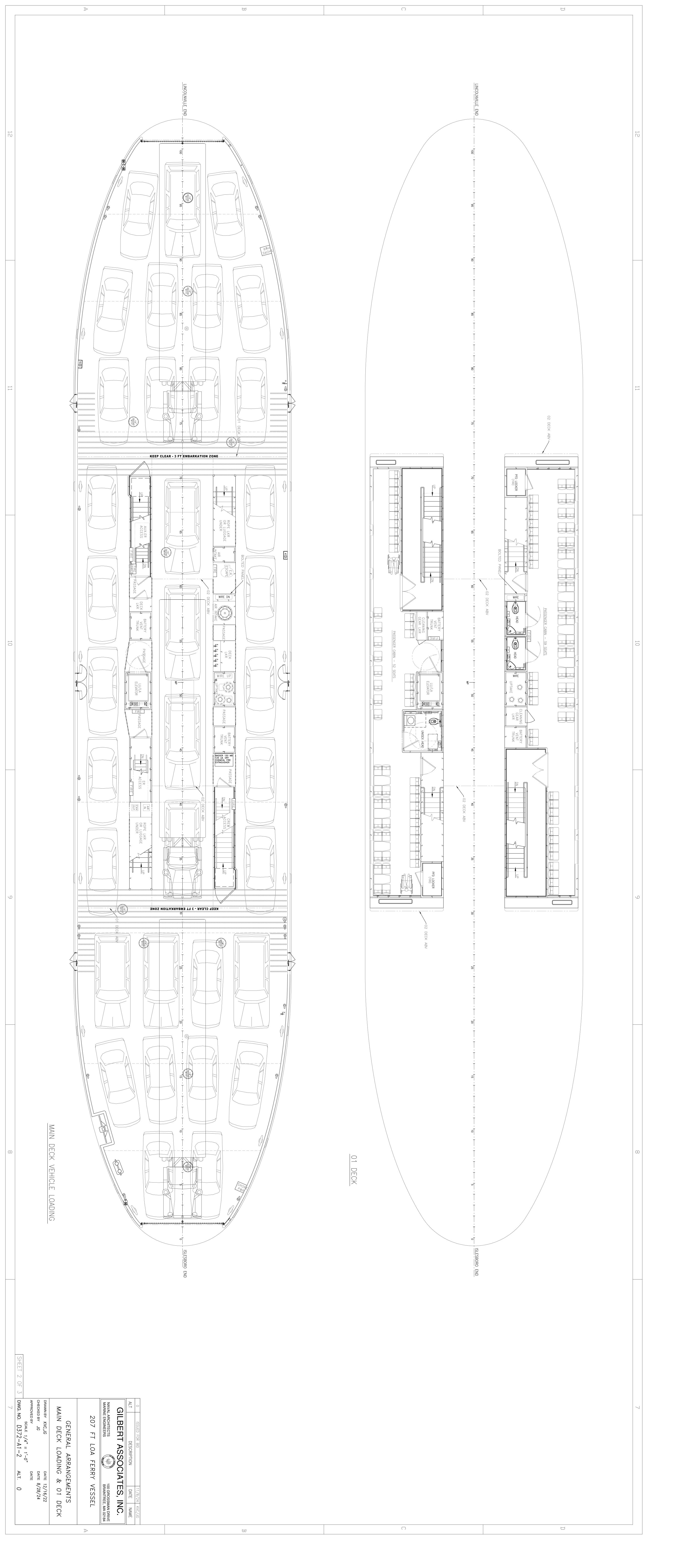
645.1.1 GENERAL

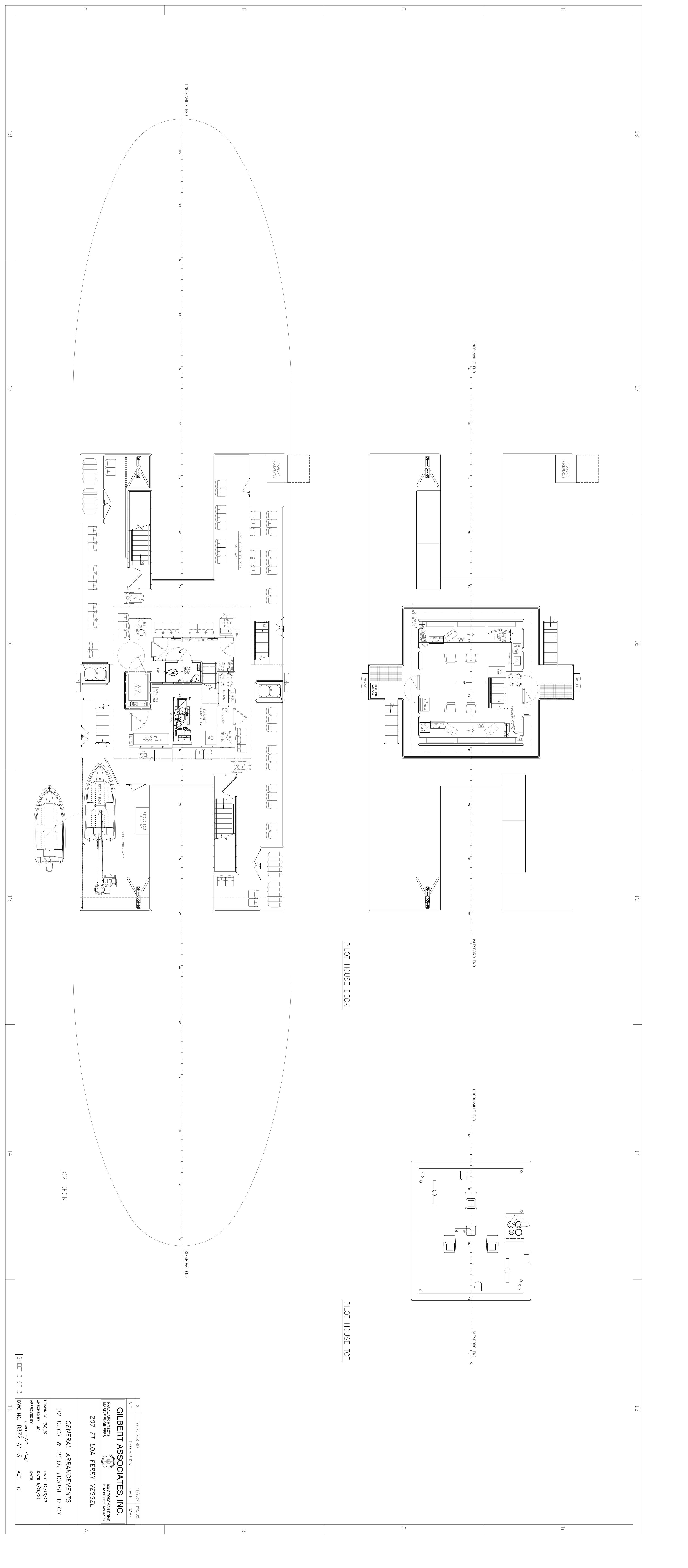
The 01-Deck P/S Passenger Cabins; Crew and Passenger Heads; Pilothouse; Interior Passageways; P/S 02-Deck Stair Trunks; Crew Break Room (including common passageways, locker and snack prep area) shall be finished to a commercial standard with drop ceilings, finished lined side and ends joiner bulkheads from the deck to overhead drop ceiling, painted broadcast flake per Section 634 Coatings and epoxy clear top coat, lighting, and marine grade furnishings. Heads shall be fitted with stainless bulkhead linings. A USCG-approved type bulkhead and lining system shall be used. Final finishes shall be reviewed and approved by MaineDOT. CONTR shall be responsible for providing and installing sound insulation and isolation treatment as necessary to assure that acceptable decibel levels are maintained in all crew and passenger spaces. Joiner system is to be by Rigidized Metals Corp., Ayres aluminum honeycomb panels, or approved equal. All joiner system components shall be incombustible. Note that air supply and exhaust fans are present in the overhead of the Crew Break Room. CONTR is to ensure that selected drop ceiling installation is capable of acoustical insulation from fan noise such that a 65 dB noise level can be achieved in the space in accordance with NVIC 12-82 Enclosure 6. Drop Ceilings in crew break room will observe minimum 7'-3" clear height above flat which will require CONTR to position HVAC equipment as close to deck beams as practical. Exhaust duct (8x6) in crew break room can be routed above counter tops and refrigerator in a soffit to fit under transverse girder. Note that air supply and exhaust fans are present in the overhead of each passenger cabin. CONTR is to ensure that selected drop ceiling installation is capable of acoustical insulation from fan noise such that a 60 dB noise level can be achieved in the space in accordance with NVIC 12-82 Enclosure 6. Drop Ceilings in passenger cabins will observe minimum 7'-3" clear height above 01 deck. This will require CONTR to position HVAC equipment as far inboard as practical and ensure fans and preheaters fit between frames to accommodate flange diameters.

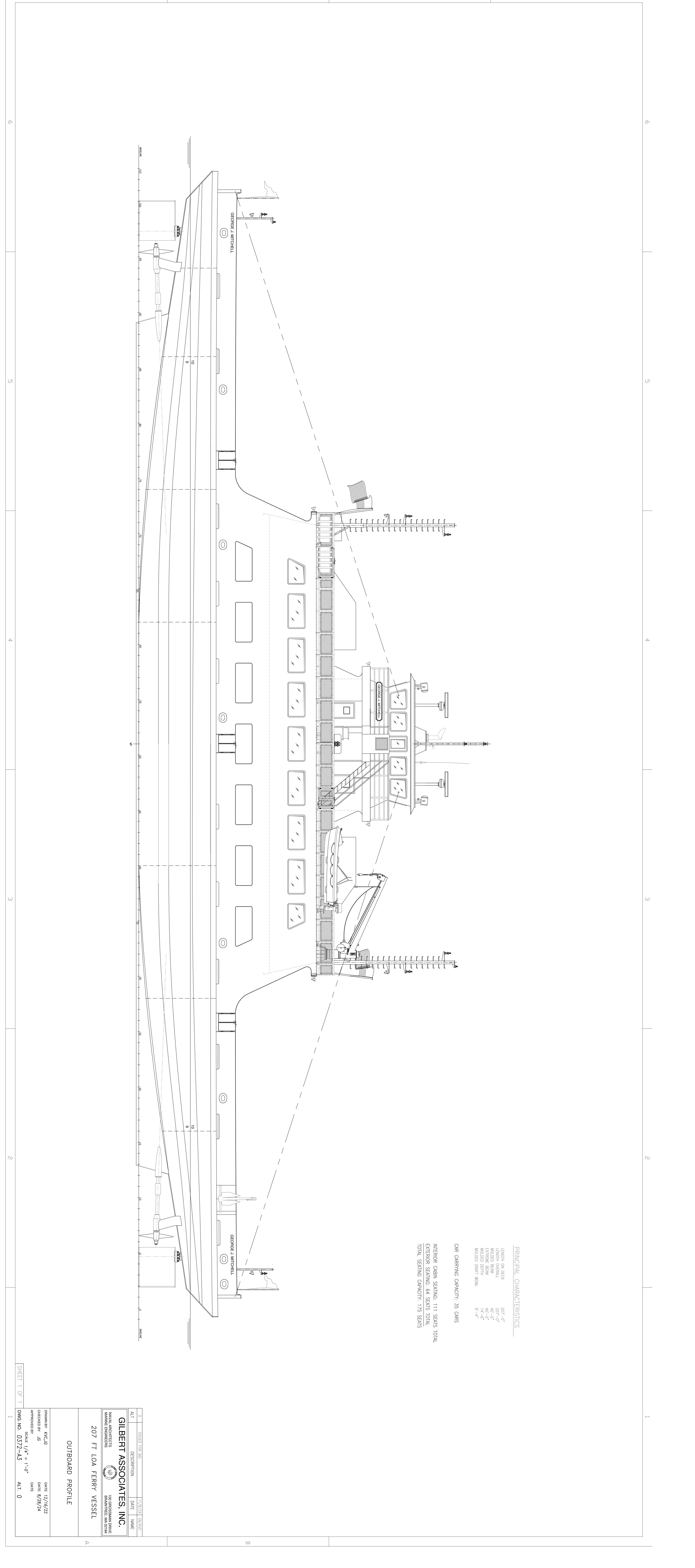
645.1.2 PILOTHOUSE

The Pilothouse shall be fitted with a forward and aft navigation consoles similar to the consoles on existing MaineDOT fleet vessels. There shall be a fixed helm chair on center and two portable lookout chairs, one starboard at each of the two consoles (4 total). One chart table shall be above the stair to the pilothouse as shown on Contract DWGs. Drawers for maps, charts and manuals shall be incorporated into a storage area of the pilothouse console elsewhere. Shelving for manuals to be binder depth at a minimum. File cabinet shall also be provided under console. CONTR shall supply and install a raised settee with folding step (at same height as fixed chairs); publication rack; a frame for required USCG documents; and all navigation, control, and alarm









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