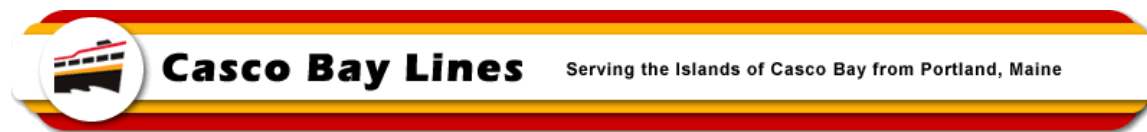


MEMO



TO: File

FROM: Paul D. Pottle, Director of Projects

DATE: June 3, 2024

SUBJECT: Construction Progress-Photos for MV Battery Steele at Senesco - # 8

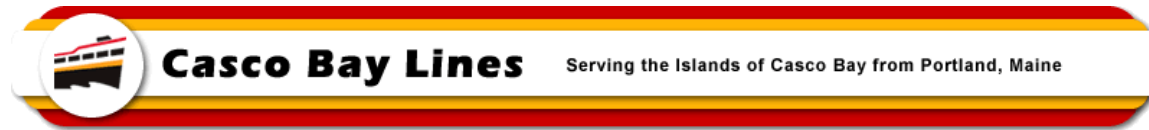
This report covers construction at the Senesco Shipyard for the months of April 2024 and May 2024. The shipyard continues to make steady progress, but some work items have not advanced as expected. The majority of the superstructure is in place with some minor welding remaining to be done. The last Module (#12, Pilot House Structure) was fabricated and installed on the rest of the vessel structure during this period. There has been more focus on fabricating and installing the various piping section and systems throughout the vessel as well as fabricating and installing equipment foundational framing in preparation of installing the equipment as soon as additional welding, painting and insulation gets completed. Staff continued to join in on remote testing and inspection of the electrical switch gear and panels that will support the operation of the vessel. Work still continues on developing various submissions for the Coast Guard and approvals to those submissions continue to come in. Inspections by the US Coast Guard are ongoing, with no major issues identified as of this writing. The Coast Guard is on site one to two times per week inspecting work completed since their last visit and signs off on work that meets the standards.

As mentioned in the last report, the work associated with the electrical systems for this hybrid vessel is complex and this has made making the appropriate working drawing for submission and to support construction to be slightly delayed. The delivery of the vessel has been pushed out to the end of 2024, and CBL staff has met with the shipyard staff to review the various activities that need to be done and what is a realistic schedule for the shipyard to be able to deliver the vessel. Because everyone wants to ensure that the system is set-up and installed properly to provide safe and reliable service when employed on the Peaks Island route, they are checking and re-checking various drawings and testing protocols. This is taking longer than expected due to this being a new system for US shipyards and Senesco is currently reviewing the work efforts necessary and the available resources to develop a final schedule that accounts for this. Any changes to the delivery date will be updated in future reports.

The following is a brief overview of the work done from April 1st, 2024 to May 31st 2024:

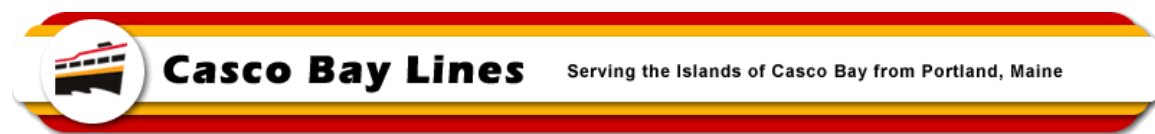
- Crowley Engineering continues to work on plan development for both US Coast Guard submission and for the shipyard to follow for actually building the vessel. Other sub-contractors are also making submissions for various finishes and fixtures throughout the vessel. Most of these are not required to go to the Marine Safety Center of the US Coast Guard, but they will be shared with the local Coast Guard inspection team for them to check on conformance with approved submissions.
- ABB (propulsion provider) is working on their documents for submission to the US Coast Guard and continues to advance the development and delivery of key pieces of equipment and the operating systems.
- Senesco continued with piping fabrication and has been installing various piping systems on the vessel.

MEMO



- Continued to construct various equipment foundation frames and install them on the vessel.
- Continued with various final welds throughout the vessel and getting Coast Guard sign-off.
- Fabricated and installed deck drains throughout the vessel.
- Continued installing insulation studs (pins) throughout the vessel.
- Finished final welding on Pilot House structure, cut out window opening, and moved module to the vessel and installed the Pilot House on the 02 deck.
- Constructed and painted the mast structure. Will outfit for lighting, radar and antennas and prep to install on Pilot House.
- Senesco had a focus on constructing and installing various outfitting features, now that the main vessel structure is in good shape.
- Four ABB Transformers were delivered in April.
- Fabricated and installed handrails for the stairways throughout the vessel.
- Fabricated and installed the name and hailing port on both ends of the vessel.
- Finished installing bulwark side gates.
- Constructed the anchor pocket for the vessel.
- Fabricated and installed much of the potable water piping throughout the vessel.
- Started fabrication and installation of bilge and stern tube cooling piping system.
- Started work on fabrication and installation of exhaust trunk piping. Placed the muffler's into the vessel.
- Fabricating and installing bilge piping throughout the vessel.
- Had insulation delivered for the vessel.
- Continued with limited painting throughout the vessel. Some areas get skipped where there is additional welding that needs to take place so that the paint system does not get compromised and welded areas remain suitable for welding activities.
- ABB in conjunction with the shipyard and the engineering support teams (both construction and design) continue to prepare the final electrical package for submission to the Marine Safety Center of the US Coast Guard. There has been considerable coordination between all the parties to ensure that everything is appropriately evaluated, sized and in compliance with the various regulations that will govern this ferry. Much of this covers the electrical switchgear, wiring (type, gauge and length), energy storage system (batteries), cooling systems for the equipment and the demand it places on the electrical loads and keel coolers, fire suppression and fighting for the batteries and other electrical systems and a number of other items that make up the overall propulsion system. This all needs to be very precise to account for weight as well as placement and the impacts if any on the stability of the vessel. Everything that is done has an impact on another component or system of the vessel. Since every ferry and ferry route is different, there is no simple shelf system that can be identified and just installed. Everything is done to meet the unique characteristics of this ferry and the route that it runs on.

MEMO



4160 – Typical Side Loading Gate



4161 – Working Handrails on 01 to 02 deck Stairs
on Port Bow



4163 – View of Stern End w/Charger Socket Box
in Place (right side of picture)



4164 – Starboard Stern w/Charger Socket Box in
Place (left side of picture)

MEMO

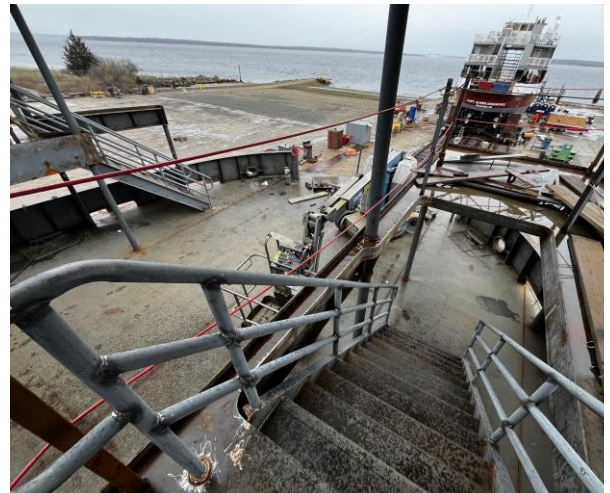


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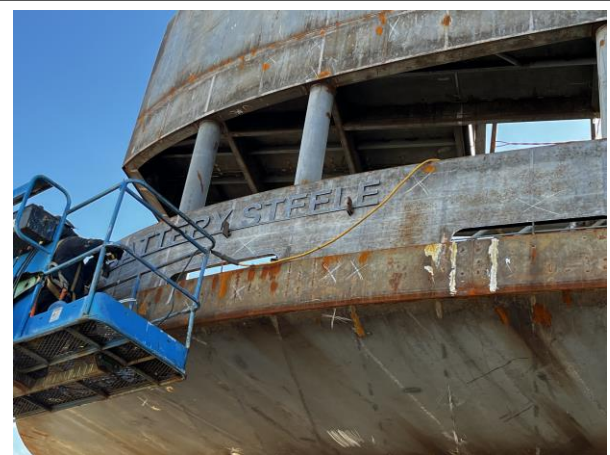
4174 – Typical Stair Handrail (Beam combed for proper clearance)



4175 – Starboard Bow Stairs from 01 to Main Deck

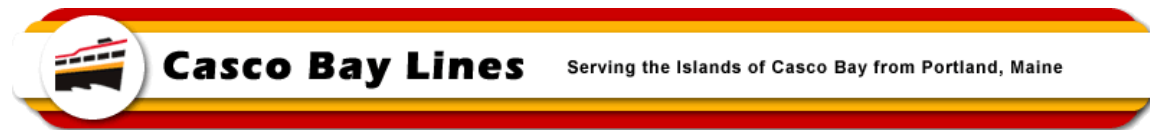


4212 – Adding Vessel Name Battery Steele to Vessel Starboard Stern Bulwark



4213 – Adding Vessel Name Battery Steele

MEMO



4214 – Potable Water Line in Engine Room



4228 – Overboard Bilge Piping in Void Space with Temporary Valve (check valve to be installed)



4216– Name and Hailing Port



4227– Name and Hailing Port Installed

MEMO



Casco Bay Lines

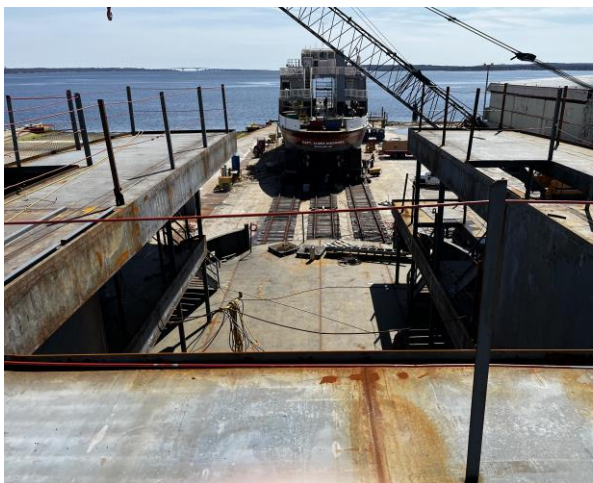
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4230 – Name and Hailing Port



4231 – Name on Starboard Bow Bulwark

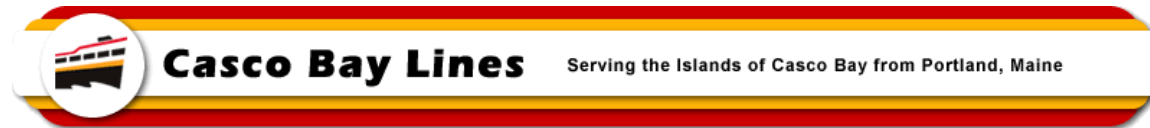


4235 – View Forward to Bow from 02 Deck



4236 – View Aft to Stern from 02 Deck

MEMO



4240 – Vessel Mast Structure Under Construction



4241 – Mast on Top of Mast Structure

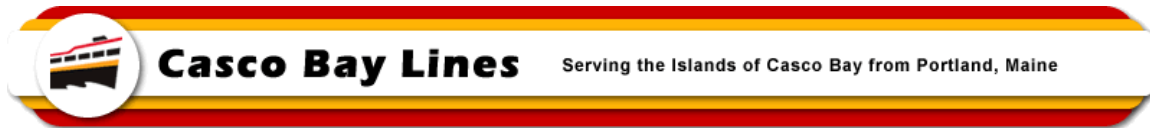


4288 – Foundation Assembly for Equipment



4289 – Drain Piping Around Pilot House

MEMO



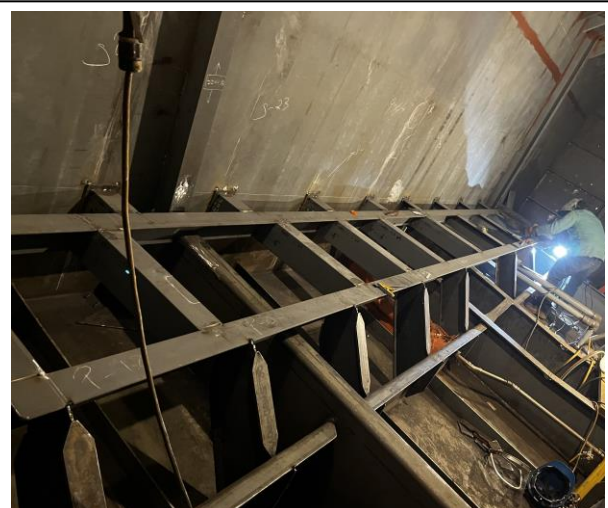
4290 – Drain Piping Around Pilot House



4292 – Work Being Done on Pilot House

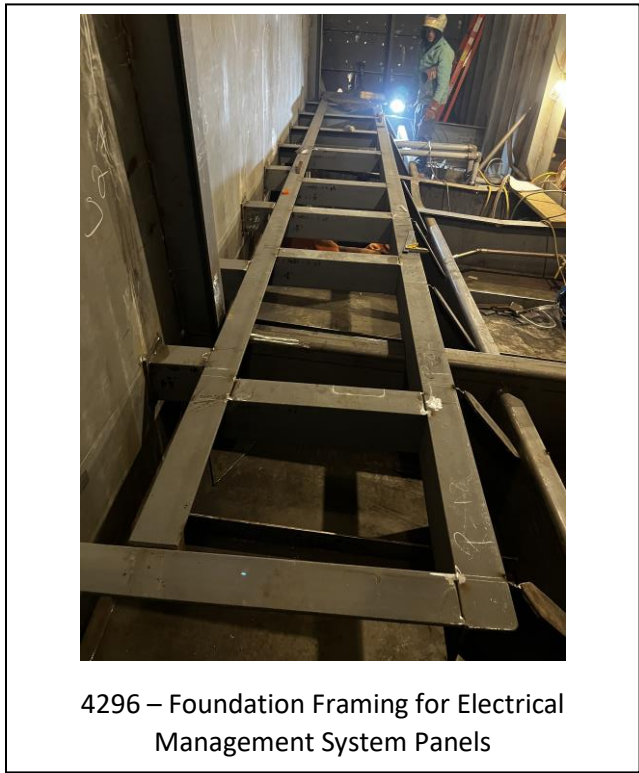
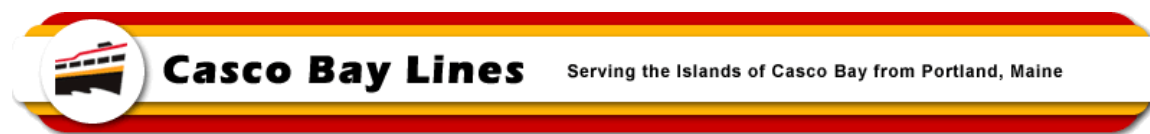


4293 – First Coat of Paint on Starboard Side

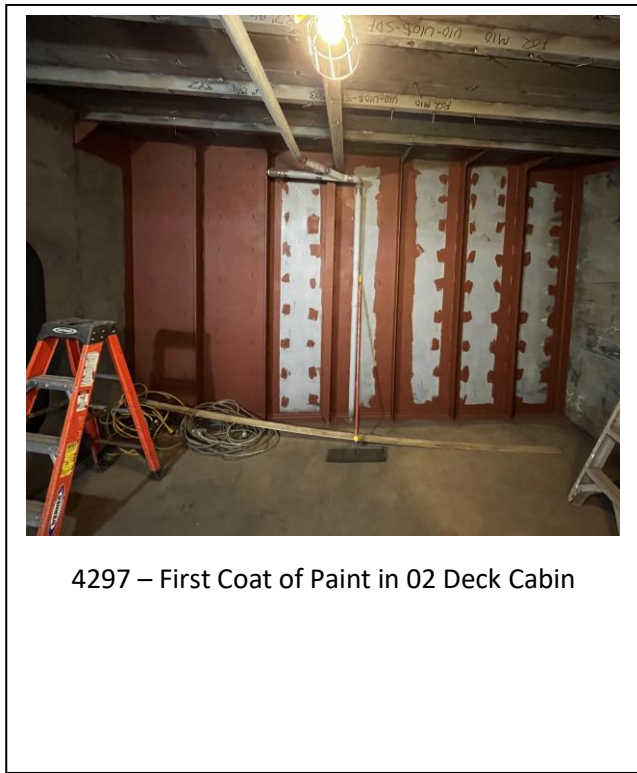


4295 – Foundation Framing for Electrical Management System Panels

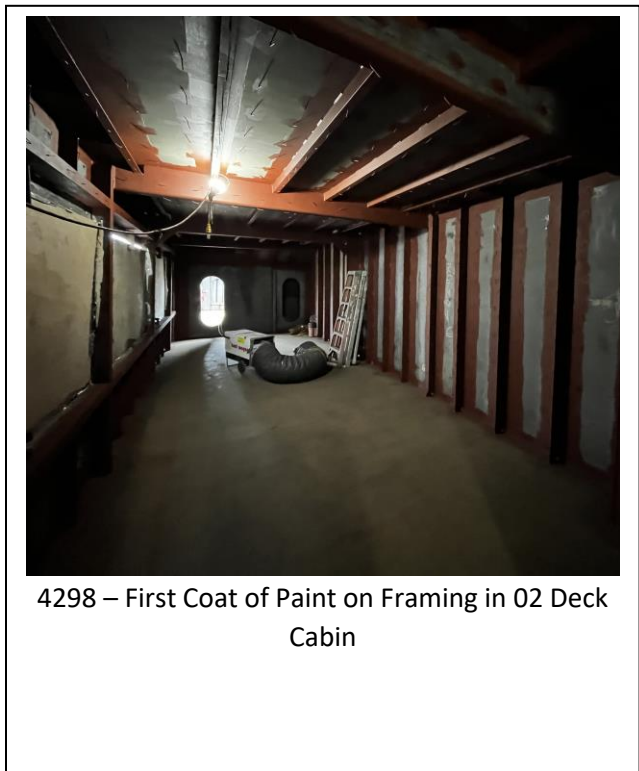
MEMO



4296 – Foundation Framing for Electrical Management System Panels



4297 – First Coat of Paint in 02 Deck Cabin

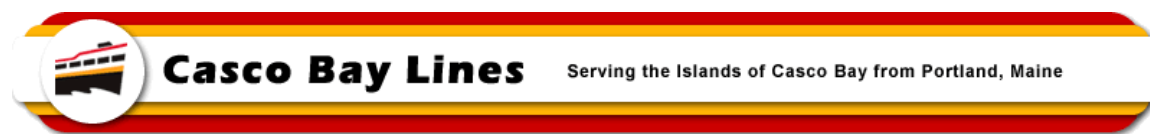


4298 – First Coat of Paint on Framing in 02 Deck Cabin



4309 – Exhaust Brackets for the Muffler

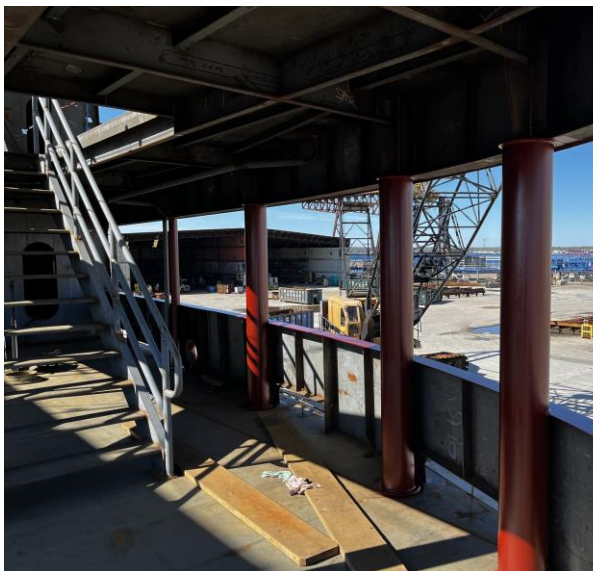
MEMO



4310 – Framing Piece for Equipment Foundation



4311 – Framing Piece for Equipment Foundation

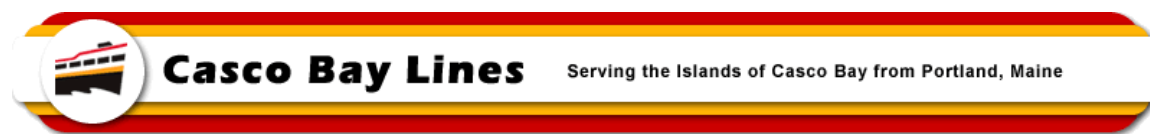


4317 – Paint on Stanchions Starboard Stern Main Deck



4318 – Misc Plate Pieces for Pilot House Ladder

MEMO



4321 – First Coat Paint on Port Side



4347 – Potable Water Spicket – Main Deck

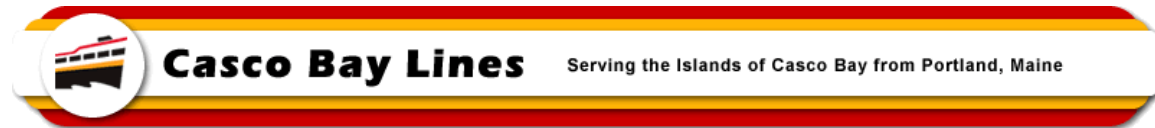


4348 – Potable Water Piping



4349 – Auxiliary Transformer Foundation Frame

MEMO



4351 – Pilot House w/Windows Cut Out



4353 – Pilot House w/Elevator Enclosure and Ladder Access to Mast/Roof



4354 – Pilot House w/Elevator Enclosure



4361 – Boxes of Insulation

MEMO



4362 – Components for Framing Pieces



4368 – Components for Framing Pieces

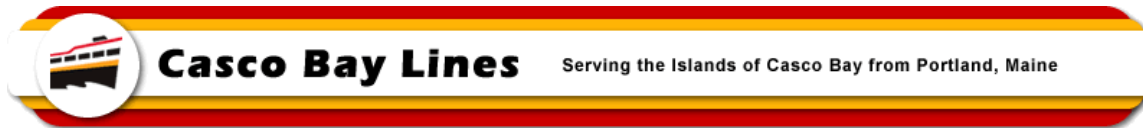


4370 – Potable Water Piping in 02 Bathroom with Bulkhead Penetrations



4371 – Bilge Piping and Foundation Framing

MEMO



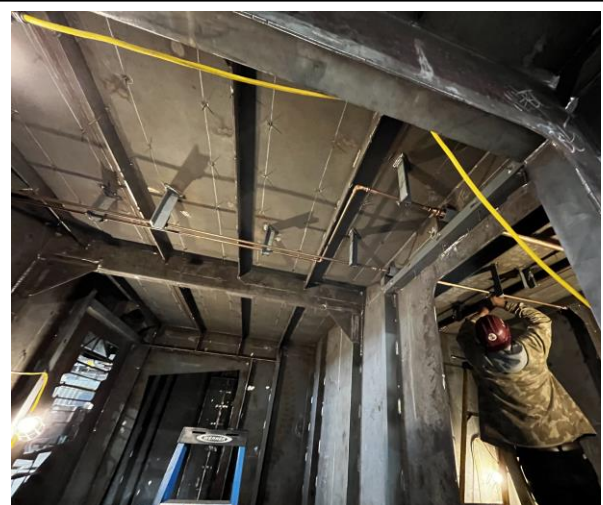
4377 – Super Structure Starboard Side – Next Paint Coat



4378 – Exhaust Piping Penetrations at Pilot House

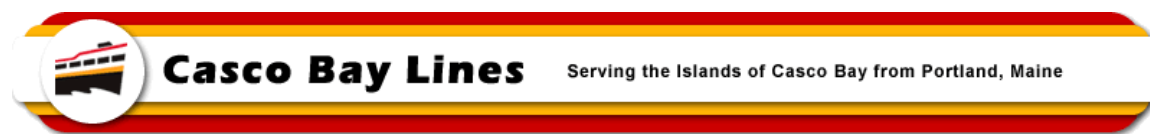


4379 – Exhaust Piping Penetrations at Pilot House



4380 – Work on Potable Piping Installation

MEMO



4382 – Cast Iron Exhaust Piping



4383 – Exhaust Piping Both SS and Cast Iron



4384 – Exhaust Piping Pieces for Installation



4386 – Fabricating Exhaust Piping Sections

MEMO



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4387 – Exhaust Piping Brackets for Support



4390 – Potable Piping Installed in a Bathroom

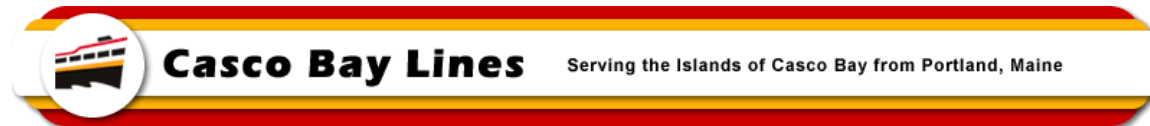


4391 – Bilge Piping under Equipment Foundation Framing



4392 – Potable Water Piping(left) and Propulsion Cooling Piping (right) w/Shutoff

MEMO



4397 – Potable Water Piping in Engine Room
(wrapped for protection during construction)



4398 – Potable Water Piping in Engine Room
(wrapped for protection during construction)

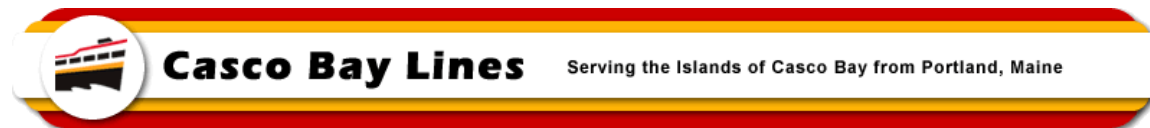


4399 – Mast Structure - Painted



4400– Mast Structure - Painted

MEMO



4412 – Strainer for Bilge Piping in Switchboard Room



4415 – Electric Propulsion Motor



4417 – Electric Propulsion Motor



4420 – Electric Propulsion Motor

MEMO



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4422 – Pilot House Being Transported to Vessel



4426 – Pilot House in Place for Lifting



71128 – Setting Pilot House on Vessel



71226 - Setting Pilot House on Vessel

MEMO

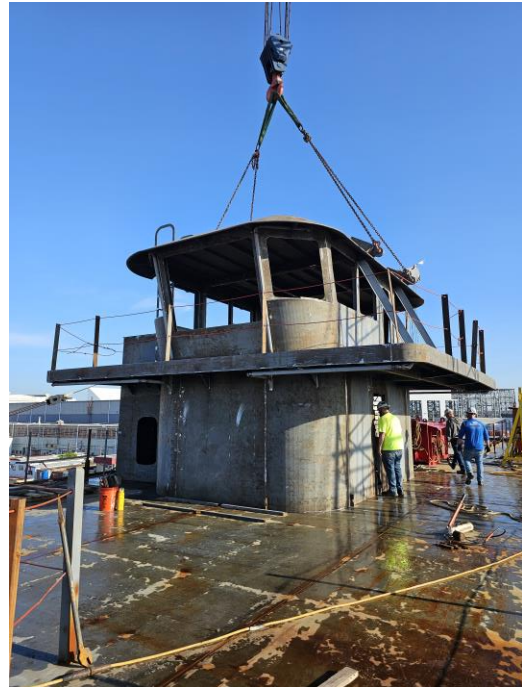


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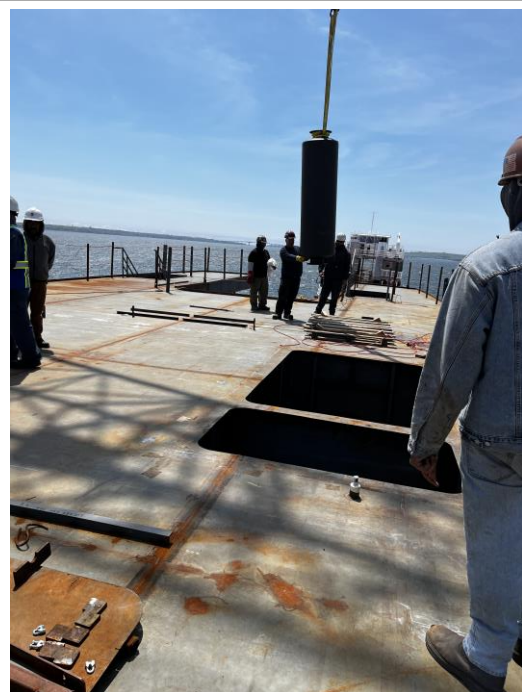
71903 – Pilot House Set in Position on 02 Deck



72013 – Pilot House Set in Position on 02 Deck

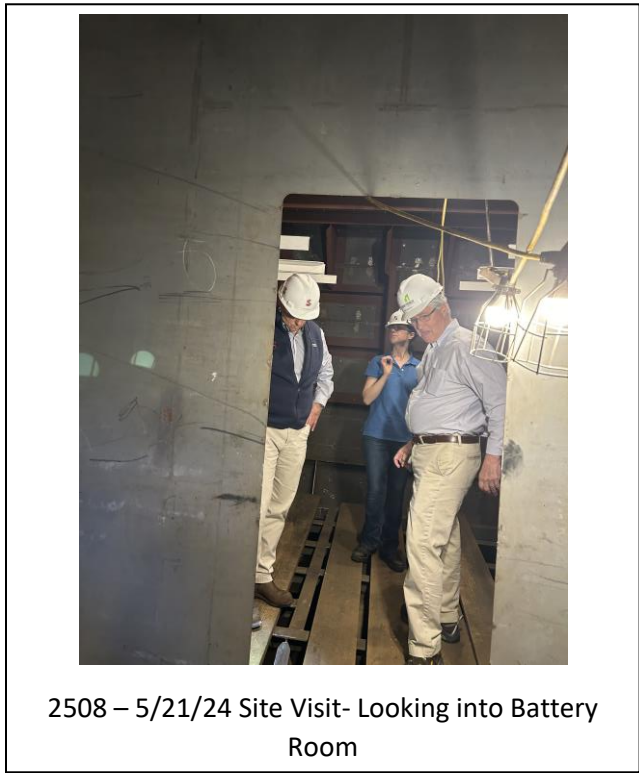


2526 – Exhaust Muffler being Placed in Vessel

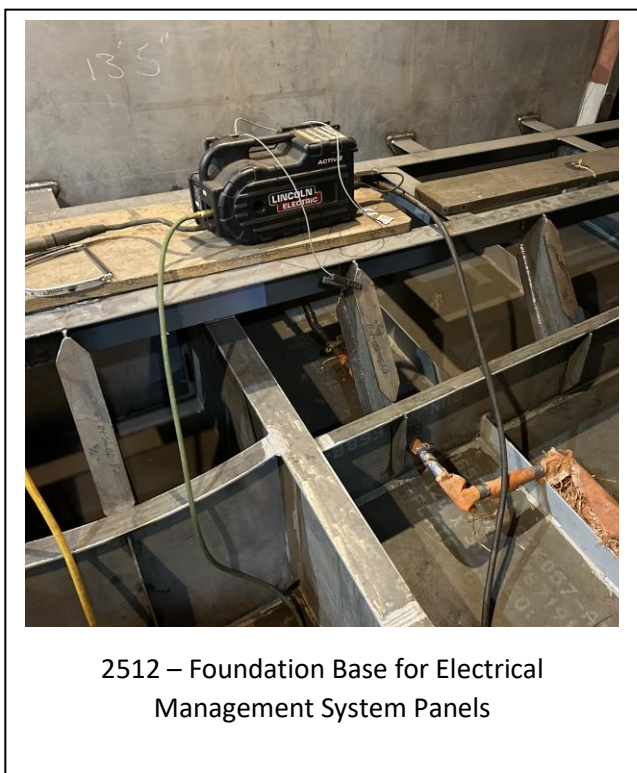


4432 – Exhaust Muffler being Placed in Vessel

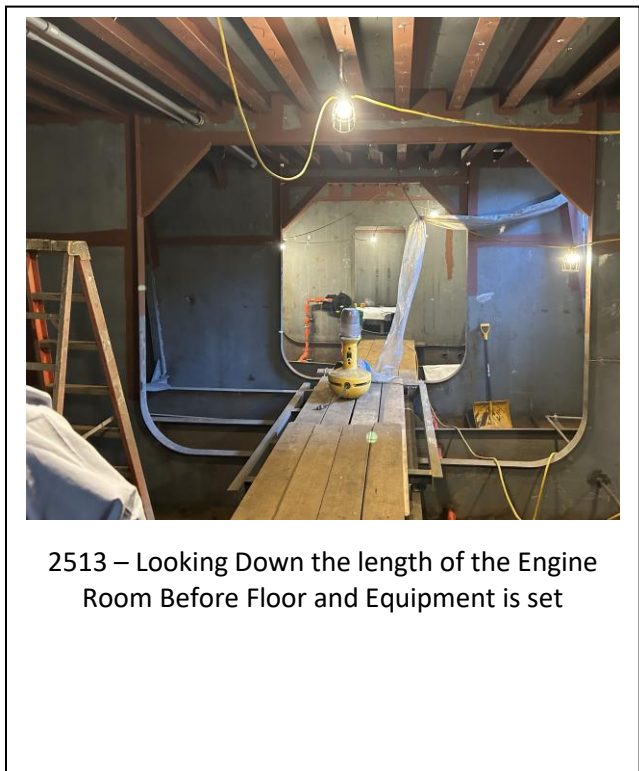
MEMO



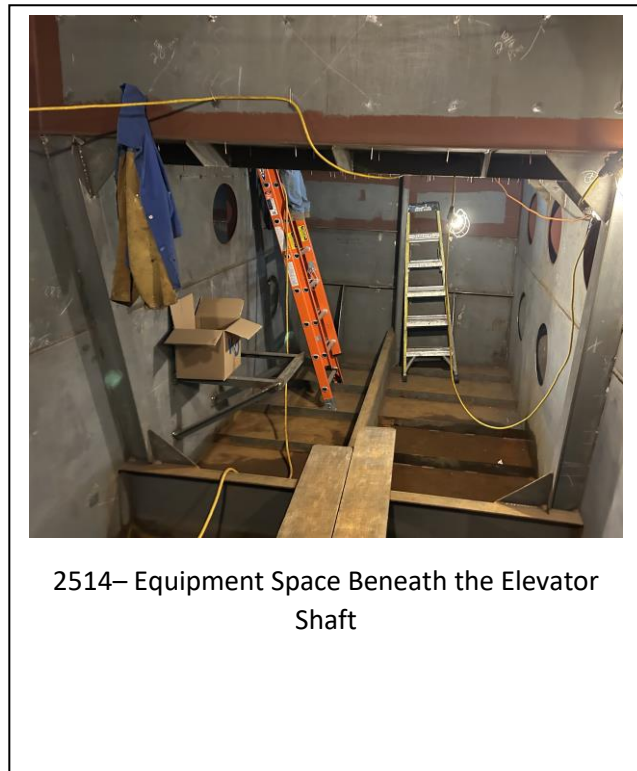
2508 – 5/21/24 Site Visit- Looking into Battery Room



2512 – Foundation Base for Electrical Management System Panels

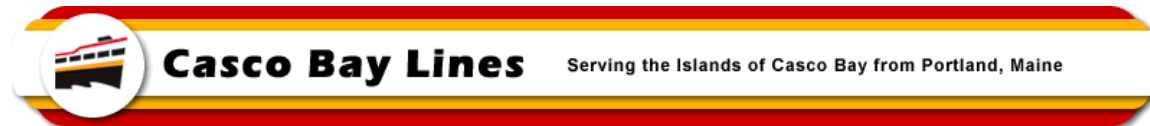


2513 – Looking Down the length of the Engine Room Before Floor and Equipment is set



2514– Equipment Space Beneath the Elevator Shaft

MEMO



2516 – Starboard Cabin on Main Deck



2517 – Access Opening for Equipment Drop to Engine Room



2519 – Elevator Pit at Main Deck



2522 – Starboard Bow Stairs and Cabin Openings
(doorways are not cut in yet)

MEMO



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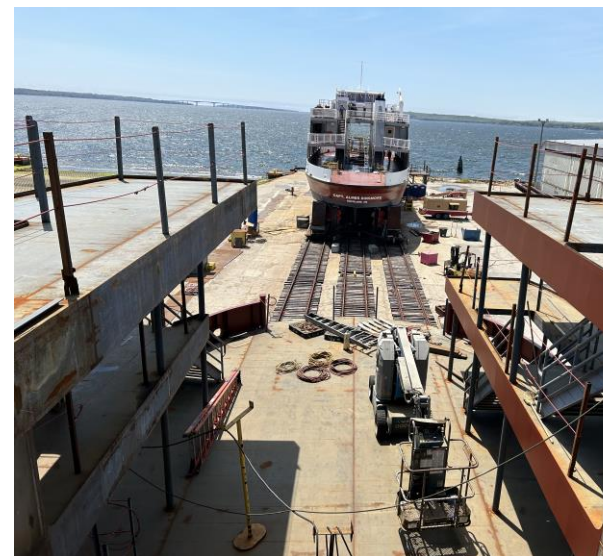
2528 – Looking Down Port Cabin on 01 Deck



2530 – Looking Across 02 Deck Before Pilot House was Set



2531 – Port Stern Stairs as Seen from 02 Deck



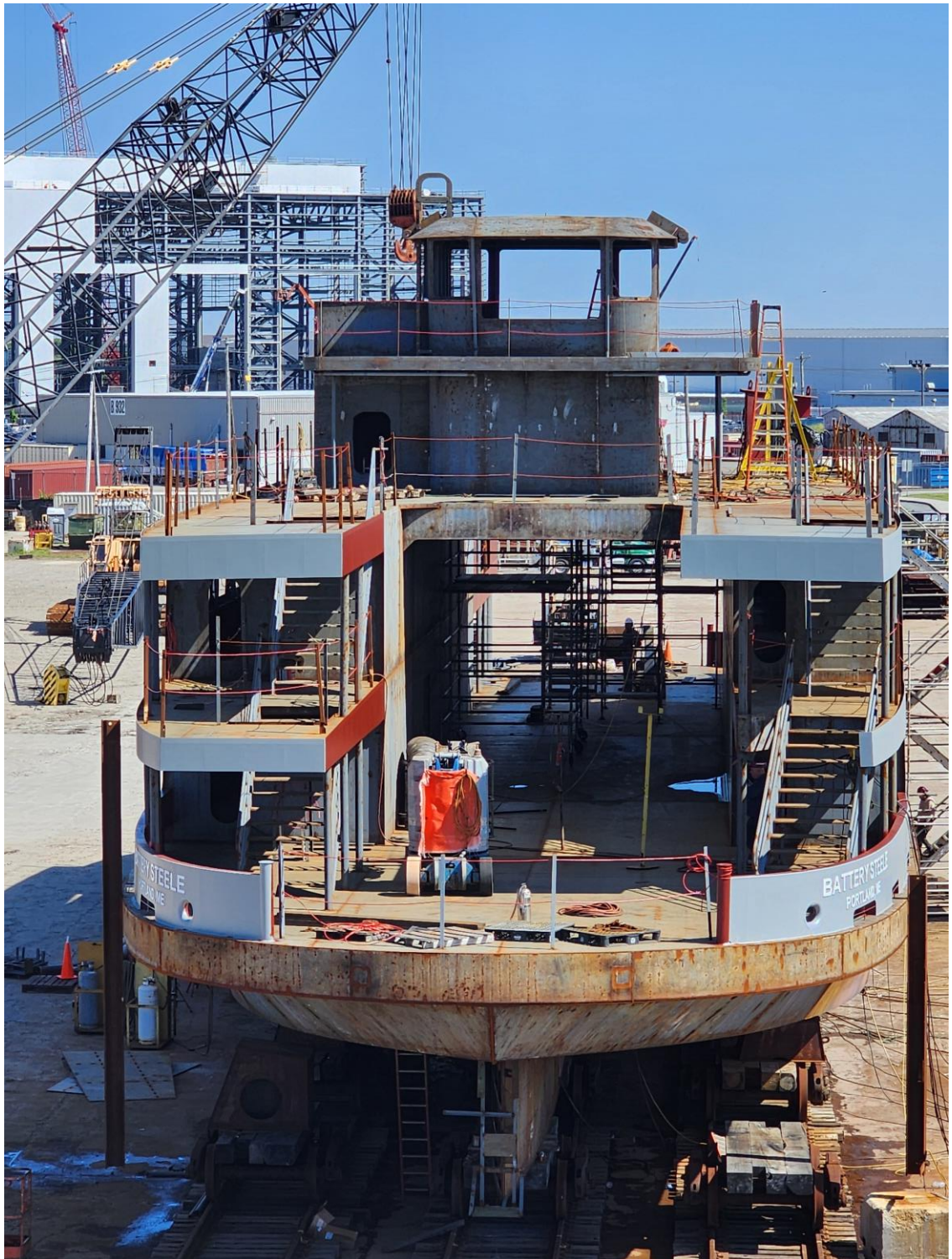
2533 – Looking From Pilot House Toward Bow
(MSF Vessel in Background)

MEMO



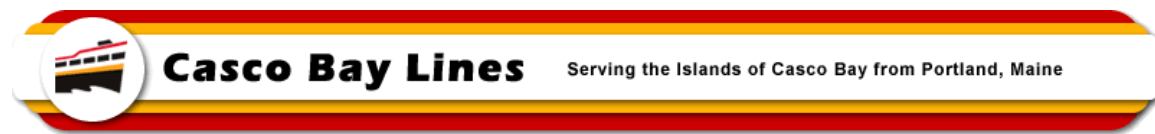
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95505 – Looking at Bow of Battery Steele with Pilot House in Place

MEMO



100534 – Port Side View of Battery Steele with Pilot House