

HEAVY METAL

THE HARD DAYS AND NIGHTS OF
THE SHIPYARD WORKERS WHO
BUILD AMERICA'S SUPERCARRIERS

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An Imprint of HarperCollins Publishers

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FIRST EDITION

Designed by Bonni Leon-Berman

Library of Congress Cataloging-in-Publication Data has been applied for.

ISBN 978-0-06-299625-1

22 23 24 25 26 LSC 10 9 8 7 6 5 4 3 2 1

ABBREVIATIONS GLOSSARY

1MC—1 Main Circuit, shipwide public address system	IAM—International Association of Machinists
A1B (reactor)—aircraft carrier platform, first core design, Bechtel	ICAN—Integrated Communications and Advanced Networks
A4W (reactor)—aircraft carrier platform, fourth core design, Westinghouse	iDS—Integrated Digital Shipbuilding
AAG—advanced arresting gear	LCS—littoral combat ship
AFL-CIO—American Federation of Labor and Congress of Industrial Organizations	LL—liberal leave
AWE—advanced weapons elevator	LPD—landing platform dock
CAG—Crisis Action Group	NAACP—National Association for the Advancement of Colored People
CDC—Centers for Disease Control and Prevention	NLRB—National Labor Relations Board
CHENG—chief engineer	NR—Naval Reactors
CNO—chief of naval operations	OSHA—Occupational Safety and Health Administration
CO—commanding officer	PCU—precommission unit
CVN—carrier vessel, nuclear	PPE—personal protective equipment
CVNX—carrier vessel, nuclear, unnamed new class	PSA—Peninsula Shipbuilders Association
DBR—dual-band radar	PSA—post-shakedown availability
DDG—destroyer designated, guided missile	SASC—Senate Armed Services Committee
EASR—Enterprise Air Surveillance Radar	SSBN—submersible ship, ballistic missile, nuclear
EEOC—Equal Employment Opportunity Commission	SSN—submersible ship, nuclear
EMALS—electromagnetic aircraft launch system	STD—short-term disability
GAO—Government Accountability Office	USWA—United Steelworkers of America
HASC—House Armed Services Committee	X—Newport News Shipbuilding trades designation
	XO—executive officer

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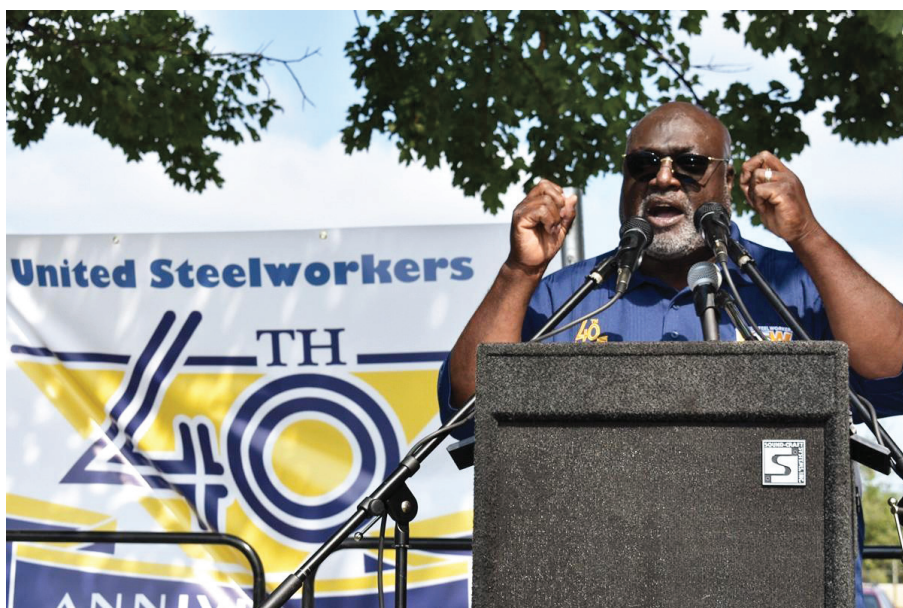
Newport News Shipbuilding dominates the city and the region.



While Newport News Shipbuilding has become increasingly reliant on computer-aided construction processes, the yard still depends on its experienced labor to build the nation's massive carriers.



Steelworkers at Newport News Shipbuilding depend more on tablets as the yard moves into digital operations to adapt to manufacturing and ship-construction technology to meet navy schedules and funding constraints.



While his members built the carrier *John F. Kennedy* during a deadly pandemic, Newport News Shipbuilding Steelworkers Local 8888 president Charles Spivey oversaw one of the union's most successful membership drives.



Tasked by shipyard executives to find a whole new way of constructing the carrier *Kennedy*, Mike Butler pushed his team to complete larger sections of the ship earlier in the building process, saving time, money, and manpower.



Captain Todd Marzano—call sign Cherry—sought advice and guidance as the new carrier *Kennedy*'s first commanding officer from the retired admiral Buddy Yates, the first commanding officer of the first US Navy carrier USS *John F. Kennedy*.



James “Hondo” Geurts, the assistant secretary of the navy responsible for acquisitions, oversaw the navy’s work on *Kennedy* and spearheaded the agreement to buy the next two carriers in a single deal, guaranteeing work at the yard for another two decades and securing tens of thousands of steelworker jobs.



Rear Admiral Michael Manazir, call sign Nasty, grew annoyed and frustrated with frequent requests for additional funding to pay for new systems designed for the USS *Gerald R. Ford*. The cost overruns on *Ford* forced the yard to promise to cut the manpower needed to build the next carrier, the *Kennedy*, by nearly a fifth.

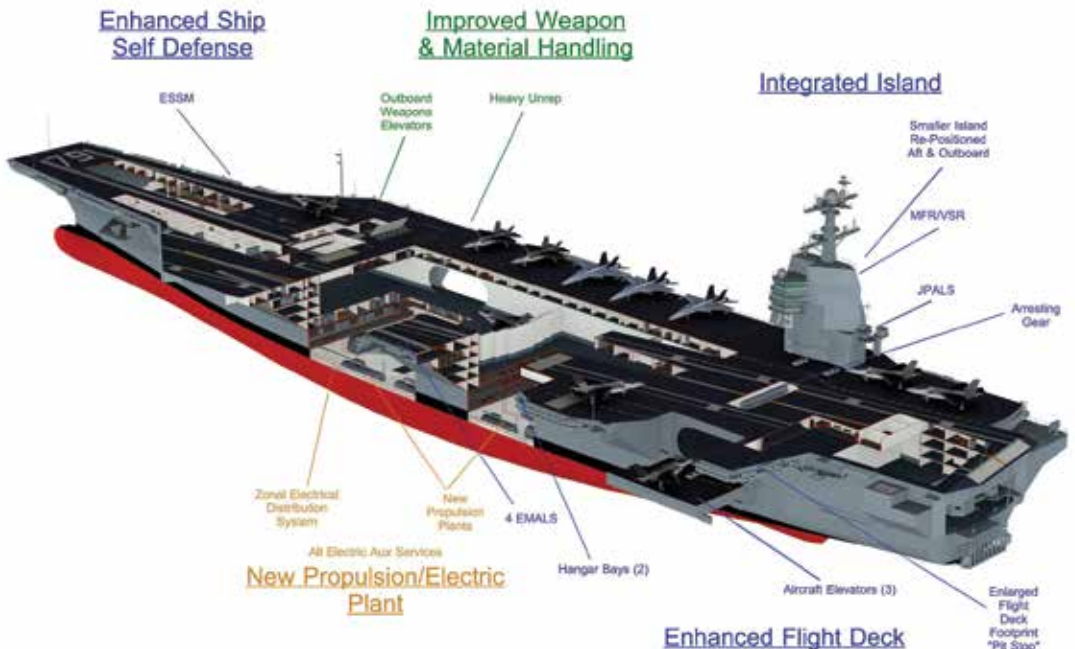


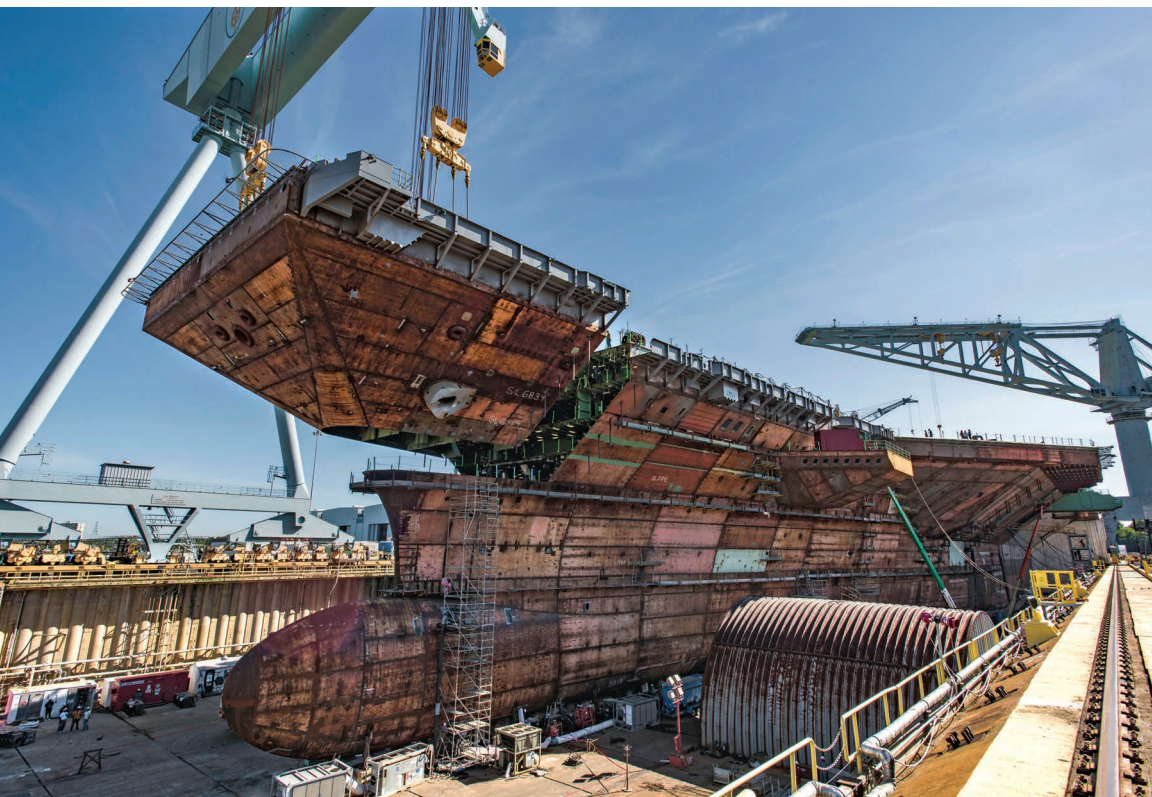
Michael Petters rose from being a US naval submarine officer to be the CEO of the US Navy's largest shipbuilding company, constructing the nation's entire fleet of nuclear-powered aircraft carriers.



The pressure to make operational the weapons elevators on the nation's new carriers, including the *Kennedy*, was so great that Navy Secretary Richard Spencer told President Donald Trump to fire him if he failed to do so.

Below: The *Kennedy* is a Ford-class carrier, which features twenty-three new technologies over the previous class of US Navy carriers, making the ship more lethal, effective—and challenging to build.





The yard builds carriers from the bottom up and from the middle out, fitting into place large sections of the ship called superlifts.



President Barack Obama visited the yard to promote his defense budgets. His presidency would highlight divisions in the region and the yard workforce.



President Donald Trump visited Newport News Shipbuilding and promised to support a big carrier-driven fleet—even though his administration was planning to make cuts in the numbers of the giant warships. His presidency further eroded relationships in the yard workforce.



Newport News Shipbuilding steelworkers watch the yard's Big Blue gantry crane mate the bow of the aircraft carrier *John F. Kennedy* with the rest of the carrier hull, marking one of the later milestones in the warship's construction.



From his perch in the operator's seat of the giant gantry crane Big Blue—the largest in the hemisphere—Charlie Holloway lifts ship sections the size of buildings weighing hundreds of tons.



Steelworkers attach *Kennedy's* giant propellers just before launching the ship—a task fraught with risk.



Steelworkers, sailors, and others involved in the building of *Kennedy* check below the hull before the dry dock is flooded and the ship is launched.



Lee Murphy came from a family of shipbuilders. After more than three decades working at the yard, he oversaw the pierside final assembly platen work for the carrier *Kennedy*. Shortly before retiring, he gave the final order for Big Blue to lift the ship's island.



Big Blue prepares to set carrier *Kennedy*'s island on the ship deck, marking another major milestone in the vessel's construction.



Before Big Blue lowered *Kennedy*'s island to its deck, navy and shipyard officials placed coins and other important mementos on that mark, to embed them into the ship permanently.



The “plank owners”—the first sailors assigned to the carrier *Kennedy* while it was still being built—gather behind commanding officer Captain Todd Marzano while he cuts the ribbon for the first building at the yard designated as the land base for the new ship.



The US Navy needed *Kennedy* shipbuilders from the yard on the USS *Gerald R. Ford* while the *Ford* operated at sea to fix problem-plagued elevators and other systems on the operational carrier. The yard workers used that experience when they returned to the *Kennedy*.



Admiral John Richardson touted the capabilities of *Ford*, *Kennedy*, and other new carriers, but refused to allow the media access to at-sea *Ford* operations to highlight the carrier's accomplishments and offset negative publicity about the ship.



Newport News Shipbuilding president Jennifer Boykin shows Caroline Kennedy the sweet spot to smash the champagne bottle for the carrier *John F. Kennedy*. It was not the first such moment for either.



After Covid cases started in Newport News Shipbuilding, the yard started taking steps to protect the workforce, mandating masks, social distancing, and temperature checks at the gates. The pandemic wreaked havoc with shipyard shifts, supply chains, and shipbuilding schedules.



To prove the *Ford*, *Kennedy*, and later carriers are combat ready, even with their new systems, the *Ford* underwent shock trials in the summer of 2021, during which the US Navy exploded underwater charges with the force of 3.9 magnitude earthquakes.



It takes about ten hours to flood the dry dock with 160 million gallons of James River water—enough to fill 242 Olympic-size swimming pools.



Featuring a new radar suite, the *John F. Kennedy* will be the first newly constructed aircraft carrier built to accommodate the US Navy's stealthy F-35C Joint Strike Fighters.