

YARD LINES

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CVN 77 named the *Bush*

Former president tells shipbuilders: Build it Fast



Pictured above are three Northrop Grumman Newport News vice presidents pictured with former President George H.W. Bush and Bush's daughter Doro Bush Koch, who is the ship's sponsor. From the left to right are Scott Stabler, vice president of CVN 77; Doro Bush Koch; George H.W. Bush; Bob Gunter, senior vice president of the Aircraft Carrier Program; and John Shephard, senior vice president of Operations.

Northrop Grumman Newport News Vice President Scott Stabler proudly recalls December 9 when former United States President George Herbert Walker Bush told a crowd gathered at the Pentagon that he wants to fulfill two more ambitions in his lifetime. One directly relates to shipbuilders.

The 41st president revealed his hopes at a ceremony held to announce that the Navy's 10th *Nimitz*-class aircraft carrier, the CVN 77, would bear his name.

Bush said he wanted to do one more parachute jump, and to see the christening and commissioning of this carrier. He then asked the shipbuilders in the audience to identify themselves.

"We all raised our hands," recalls Stabler, who oversees the CVN 77 program. "He then asked us to build the ship fast because he is already 78 years old."

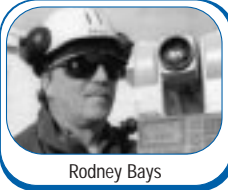
The carrier is to be christened in 2006 and commissioned by 2009.

"We have an aggressive schedule to begin with, but we'll do it," Stabler says. "Getting his personal challenge during the speech was pretty neat too."

In addition to Stabler, Northrop Grumman Newport News representatives were President Tom Schielvelbein; Irwin F. Edenzon, vice president, Business and Technology Development; Bob Gunter, senior vice president, Aircraft Carrier Program; John Shephard, senior vice president, Operations; and John Mazach, executive director of Business Development.

Stabler and others describe the name *USS George H.W. Bush* as appropriate. "They should give them their flowers while they are

alive," says Donald Terry, X76 production control. "He's well deserving of it."



Rodney Bays

Bush enlisted in the Navy in June 1942 and served active duty flying torpedo bombers from August 1942 until 1945. His positions later included serving as a U.S. House of Representatives member, U.S. Ambassador of the United

Nations, director of the Central Intelligence Agency and United States vice president.

"Bush was a veteran and actually served as a World War II aviator so that's fitting," X11 Rodney Bays says.



Herman Jones

Dwayne Haywood of Contracts and Pricing agreed, adding Bush's leadership during the Gulf War also makes it fitting.

Construction Superintendent Robert M. Hickman said it has significant meaning to him because of his connection by association with Bush through his shipbuilding career. Hickman recalled such events as when Barbara Bush became the sponsor of the *Houston* submarine that was launched in 1981 and when she became sponsor again for the carrier *George Washington* during her husband's presidency.



Susanne Leonard

To Burner Herman Jones, X18, "It's a great honor to be a part of history."

Susanne Leonard, deputy design manager, describes the naming ceremony as significant for the CVN 77 program.



Donald Terry

"It goes from a hull number to a dedication," she says. "It means the ship is moving forward. We are coming that much closer to the keel event."

That will happen this year.

"The whole process is about giving life to the ship," Stabler says, "and this is an important milestone to that process." ⚓

Milestones of

President praises great results, notes great challenges ahead

Shipyards President Tom Schielvelbein gathered with local media in December and described 2002 as a year filled with examples of what makes the shipyard a great company making great products with great people and great results.

Great Company

"We've been with Northrop Grumman a little over a year now and the transition from an independent company to a sector has been a very smooth one," Schielvelbein said. "We're very similar in culture. It's a very progressive company and we're working with other sectors on a variety of projects."

The 117-year-old shipyard, as of January, celebrated a one-year anniversary as part of Northrop Grumman in November 2002.



Ronald Jordan (X91), secures the area after the *USS Dwight D. Eisenhower* moves out of dry dock to the outfitting berth. The undocking was among the 2002 milestones. It moved one month ahead of schedule.

Great Products

Schielvelbein listed a number of project milestones.

- Maintenance period of the *Enterprise* progressing.
- Progress on the new propulsion system design for CVN 21, formally CVNX.
- Progress with submarines, which included a *Texas* keel-laying and the delivery of five sections for *Virginia* to Electric Boat.
- Accomplishments on the *Reagan* such as catapult testing and the Navy crew moving on board.
- Ramped-up work on the fabrication of steel units and continued detail design of the *Bush*.

Great People

Northrop Grumman Newport News hired nearly 700 salary and 1,600 union eligible employees, Schielvelbein said. Workforce numbers total about 18,800.

"Our plan for 2003 is one of stability," Schielvelbein said. "The huge challenge for us is to transition folks off the *Enterprise* when she is redelivered and the *Reagan* when she is delivered."

He noted that using leased workers allows the company to train people while hiring and training new employees. The leasing of employees is really a protection mechanism. "We don't want to hire just to lay off," he said.

Great Results

"We've seen a lot of great results this past year," Schielvelbein said. "And we have some significant challenges ahead of us next year."

That includes working with the Navy to realign the contract for the CVN 77 warfare system to best integrate new and available technologies, and achieving cost savings in all product lines. The company is also expanding the concept of lean principles and practices, he said.

Leadership training, particularly for foremen, will be a focus in 2003. "Their leadership is unquestionably one of the most important factors in our ability to succeed," Schielvelbein said.

continued on page 2
See Milestones

Did You Know?

Several ships have been named after distinguished Americans while still alive. Among them: *USS Jimmy Carter*, *USS Nimitz*, *USS John C. Stennis*, *USS Ronald Reagan*, and *USS Arleigh Burke*.

Employees design "Lean" machine for CVN 77

Building an aircraft carrier is a long and complex process, but thanks to a group of employees in the Structural Fabrication and Assembly department (X10), one phase just got a little leaner. Through a collaborative effort with Norton Sandblasting Equipment and Supplies, this group developed a machine called a Plate Edge Cleaner that has significantly improved the process of removing paint from the steel plates that will one day join together to become the *USS George H. W. Bush* (CVN 77).

"The mechanics working on the floor of the SPF shop brought the idea for the machine to management about a year ago," X10 Manufacturing Process Owner Joe Sabol says. "They wanted to develop something to make the paint removal process more efficient." Early in the construction process, steel plate sections of an aircraft carrier are primed to prevent rust and deterioration. Once the plates are ready to be welded together, the primer has to be removed from the edges in order to weld. The process for doing this consists of laying plates on the floor of the

SPF shop and using a belt sander to remove the paint or sanding it by hand. After one side of the plate is finished, a crane is needed to turn the plate over and the same process takes place on the other side. This method takes about 20 minutes per plate. "We were looking for an easier and faster way to do the job," X18 Mechanic Steve Hathaway says.



Pictured from left to right: Larry O'Bryan (Q37), Bruce Hutton (X10), Steve Hathaway (X18), Larry Castello (X11), Paul Douglas (X10), Joe Sabol (X10). Group members not pictured: John French (Q41) and Mike Longest (X10)

What Hathaway and the other lean-thinking group members ended up with is a machine he likens to a big vacuum cleaner. The machine is powered by air, which comes through a hose from two giant white tanks. It makes a two-inch swipe down the side of the plate and blasts away the paint. It then sucks up

the old blast, eliminating some of the cleanup.

"With this machine, the amount of time we spend to remove primer on a plate has been cut in half and we've eliminated the need for crane service," X11 Mechanic Larry Castello says. It is estimated that over 8000 crane lifts could be avoided with the addition of the Plate Edge Cleaner in the SPF shop. "The old process involved flipping the plate over with a crane," Castello says. "Now instead of flipping the plate, all we have to do is grab the cleaning head by its handle and flip it over. Then we can sand the other side of the plate." The cleaning head only weighs about 20 pounds and one person can operate it. The tanks that power the machine are on wheels, making it easy to move around the shop floor. The elimination of thousands of crane lifts also reduces the chance of accidents and improves safety.

The machine is undergoing a few finishing touches, and the group plans to begin using it in about three months. Thorough testing has been conducted and the results show the machine will



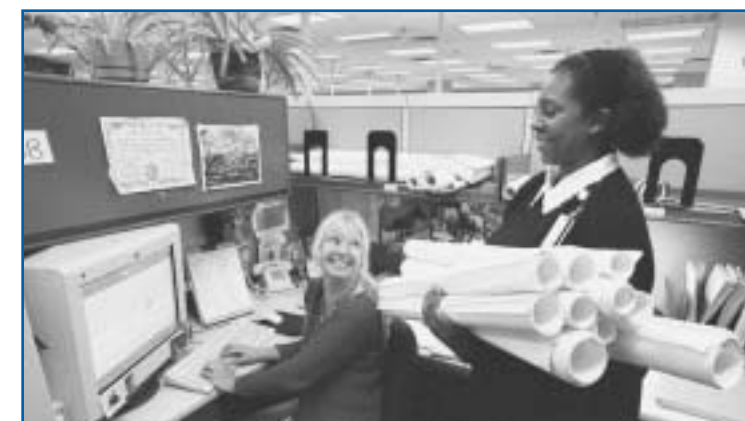
Photo by John Whalen

reduce man-hours, reduce crane lifts and improve cycle time. The shipyard currently owns three Plate Edge Cleaners, and after seeing a demonstration, sister shipyard Ingalls has ordered one machine and plans to order another during 2003.

Larry O'Bryan from Welding Engineering credits much of the machine's success to the operators. "The operators are the ones who created it. They developed and designed it, and the process is more efficient and effective as a result." ⚡

Employees say happy trails to the paper trail

Carrier drawings being sent electronically



Handling rolled paper drawings may soon be a thing of the past for Mary Andrews (standing) and Denise Hobson of the Design Release Center. They are witnessing the administrative process for approving drawings transition to a paperless, electronic one. photo by Chris Oxley

It won't be long before Northrop Grumman Newport News employee Pat Jaques unrolls his last aircraft carrier drawing for processing.

No, he's not retiring. He and a group of inspired employees are retiring the old way ship drawings make their way through the company's administrative circuit. Together, using lean concepts, they're turning a paper trail into a time saving electronic one.

The Old Paper Trail

"It takes about 25,000 drawing revisions to build an aircraft carrier," Jaques says.

He should know. Every one of those revisions makes its way to the Design Release Center (DRC), which he supervises. "When a designer finishes work on a drawing in a computer drafting tool, he or she sends the drawing to a special printer called a plotter," Jaques says. "The designer waits while at least three copies of the drawing are plotted. Then the designer sends them to us."

At the DRC, Jaques and others are responsible for administrative checks and balances that must be made before drawings reach the shipbuilders. Does it have the correct signatures? Were specifications approved? Are all supplemental documents in place? There's a long checklist for each drawing.

Once that's done, DRC employees release the drawings and prepare them for mailing to Office Services. Issue dates and distribution lists are hand-written onto the drawings. Then the drawing is sent to Image Management where each page is scanned into the computer for printing.

The New Electronic Trail

In July 2002, Jaques and a team of 15 employees used lean concepts they had recently learned and began to map out a new, electronic system for new construction and overhaul drawings.

Now, when a drawing is complete, the designer creates an electronic file that is moved with the click of a mouse to DRC's electronic folder. Administrative checks are done right from the computer screen. The drawing moves electronically to Office Services where distribution lists are keyed in and then to Image Management where the drawing no longer has to be scanned before printing. The drawing makes the entire trip around the circuit electronically, eliminating the manual steps.

The savings are found in both time and money. "There's no more waiting while the drawing is plotted or mailed through the circuit, and down the line it saves a lot of paper and saves everyone from having to handle that paper," Jaques says.

"The biggest benefit of this process is that the drawing or revisions get to the trades — the real customer of the process — much faster now," Team Member Helen Nicholls, supervisor, Office Services says.

By August, the first drawing was issued electronically and to date more than 100 have been issued. As a service provider whose drawings were some of the first to be issued electronically, Mike Wynn is thrilled with the results. "This group has met the challenge in a short time to develop an electronic process that eliminates the paper trail," the director of New Construction Aircraft Carrier Engineering says. "This process has reduced cycle time from two weeks to less than a day. That's pretty nice."

Jaques says about 2,000 carrier drawings will go through the electronic circuit in the first year and jump to 4,000 plus in the next couple of years. What's next? "Possibly submarine drawings," he says. ⚡

Milestones continued

As 2002 was ending, he said, the business faced a backlog of work worth about \$5 billion.

"Our plate is very full for the next year and that's a good thing," Schievelbein said. "Ultimately what that means is a stable workforce and that is a great result for the company, the sector, our customer and our community." ⚡

Employees shared their ideas of significant moments in the past year. Here's what they said:



"It seems to have been from all evidence a tremendous success. Everybody is happy with the merger." — Quality Inspector **George Dawson**, citing as a milestone the one-year anniversary of Newport News as a part of Northrop Grumman.



"There are so many things happening in all the different programs. Every program has at least one great achievement if not many. The continued funding of the CVNX program by the government is an important milestone. It's a vote of confidence from the customer that we are giving them what they want and it's a major product line for the future." — **Geoff Hummel**, CVNX construction supervisor.



"Getting the three carriers to where they were at the end of the year — preparing the *Reagan* for delivery, the *Enterprise* for redeployment and the undocking of the *Eisenhower* — was significant. The fact we had limited manpower and were able to progress the three carriers to where they are today was to me was the most significant thing for 2002." — **Ray Stallings**, trade resource manager for piping and machinery.



"One of the biggest moments was when Laura Bush came for the keel-laying. That stood out in my mind. Everything was done so well and it was just really a highlight to see one of our welders inscribe her initials there. It was really nice." — **Jerri Ward**, drawing clerk at the Modular Outfitting Facility.



"On August 4, 2002, when the 1J unit of the *Virginia* [forward main ballast tanks and the torpedo room] was heading up the James River to Electric Boat in Groton, Connecticut, I had such an overwhelming feeling of pride, joy, and accomplishment in that my team had done what we had set out to do." — General Foreman **Karen Chuyka**, who works in the Modular Outfitting Facility.

photos by John Whalen and Stu Gilman

A look at Northrop Grumman Newport News in 2002

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
<p>1. The U.S. Navy awards Northrop Grumman Newport News a \$191 million contract for an Extended Drydock Selected Restricted Availability on the aircraft carrier <i>USS Enterprise</i> (CVN 65). The work, which will last about a year, includes routine dry dock work, tank blasting and coating, hull preservation, propulsion and ship system repairs and limited enhancements to various hull, mechanical and electrical systems.</p>	<p>Northrop Grumman Newport News completes scheduled construction and delivers the stern section (Section 9) of <i>USS Virginia</i> to Electric Boat.</p>	<p>The U.S. Navy awards Northrop Grumman Newport News a multi-year, multiship contract by for nonpropulsion work on <i>Nimitz</i>-class aircraft carriers in San Diego through 2007. The contract is valued at about \$150 million.</p>	<p>The U.S. Navy awards Northrop Grumman Newport News a planning contract valued at about \$42 million for continued preparations for the overhaul and refueling of the nuclear-powered aircraft carrier <i>USS Carl Vinson</i> (CVN 70) scheduled for 2004. This contract is the first modification to one originally awarded in May 2001, bringing the total contract value to date to about \$52 million.</p>	<p>Northrop Grumman Newport News receives the Pro Patria Award from the Virginia Employer Support of the Guard and Reserve Committee for its outstanding support of the National Guard and Reserve.</p>	<p>Northrop Grumman Newport News completes scheduled construction and delivers the weapons room module of <i>USS Virginia</i> to Electric Boat.</p>	<p>A keel-laying Ceremony for the <i>Texas</i> takes place at Northrop Grumman Newport News July 12, 2002. The ceremony marks an important milestone in the construction of the ship. First Lady Laura Bush attends as the ship's sponsor and authenticated the keel for the <i>Texas</i>.</p>	<p>Northrop Grumman Newport News successfully conducts testing of catapult two on the <i>Ronald Reagan</i>.</p>	<p>Northrop Grumman Newport News holds a dedication ceremony for the Herbert H. Baleman Virginia Advanced Shipbuilding and Carrier Integration Center. A memorial bust of Baleman is unveiled to be housed in the center as a permanent symbol of Baleman's role as a shipbuilding advocate.</p>	<p>Michael Reagan, eldest son of President Ronald Reagan, joins 2,500 sailors from the aircraft carrier <i>Ronald Reagan</i> (CVN 76) in a ceremony marking the move aboard of the Navy crew.</p>	<p>Newport News Shipbuilding is a part of Northrop Grumman Corporation for one year.</p>	<p>Testing of <i>Ronald Reagan</i> catapults three and four begins with the launching of dead loads that simulate the weight of aircraft. Testing on catapult three is completed, and testing on four ends in January.</p>
<p>2. Northrop Grumman Newport News names Linda Leukhardt as sector vice president of business management and chief financial officer. She is responsible for the financial systems, programs and processes that ensure the successful accomplishment of the sector's business objectives.</p>			<p>Northrop Grumman Newport News completes scheduled construction and delivers the forward compartment hull cylinder (Section 3) for the <i>Texas</i> to Northrop Grumman Newport News.</p>		<p>The carrier <i>Ronald Reagan</i> moves from Outfitting Berth 1 to Pier 2 in the south yard for final outfitting and testing.</p>		<p>Northrop Grumman Newport News successfully conducts testing of catapult one on the <i>Ronald Reagan</i>.</p>	<p>Electric Boat completes scheduled construction and delivers the forward compartment hull cylinder (Section 8) and the forward compartment hull cylinder (Section 4/5) for the <i>Texas</i> to Northrop Grumman Newport News.</p>	<p>Northrop Grumman Newport News names Alene (Leni) Kaufman vice president and sector chief information officer. She's responsible for establishing the IT strategic direction and the day-to-day leadership of all information systems at Newport News.</p>	<p>Tom Schievelbein has his one-year anniversary as the Newport News sector president.</p>	<p>The <i>USS Dwight D. Eisenhower</i> (CVN 69) moves out of dry dock one month ahead of schedule and is halfway through its refueling and complex overhaul (RCOH).</p>

photos by NCGN Media Photography (Q29)

CVN77

The CVN 77 Program is sponsoring a contest to design a symbol for the newly named *Nimitz*-class aircraft carrier *George H.W. Bush* (CVN 77). The winning entry will be used to promote the program and encourage cooperation and spirit among shipbuilders designing and building the ship.

How to Enter:
Employees should submit a color sketch or detailed description of the symbol concept to Scott Davis, Department 099, building 1744-5, 8-6592, or by email at davis_sf@nns.com. Deadline is 4 p.m. February 28, 2003.
Winner will receive a \$50 gift certificate for dinner at a local restaurant, two free movie passes, and a shirt displaying the symbol.

Flashback

1990

More than a decade ago then President George H. W. Bush served as the principal speaker at the christening of the aircraft carrier *USS George Washington*. "Today the carrier remains an indispensable element in the American arsenal, projecting power, preserving peace," he told employees during that hot July day in 1990. Now his own name will emblazon the next carrier to join America's arsenal, CVN 77, which was officially named for him in December 2002.

photo by Mike Dillard

Habitat For Humanity Dedication Ceremony

Northrop Grumman Newport News and the United Steelworkers of America (Local 8888) held a dedication ceremony on December 18 for the house they built for the Peninsula Habitat for Humanity. Volunteers from Northrop Grumman Newport News built the house, called Labor Management House. The builders, Northrop Grumman Newport News representatives, the Union, Habitat for Humanity, and the Newport News Redevelopment and Housing Authority attended the ceremony. Many of the volunteer builders are pictured to the right.

photo by John Whalen

