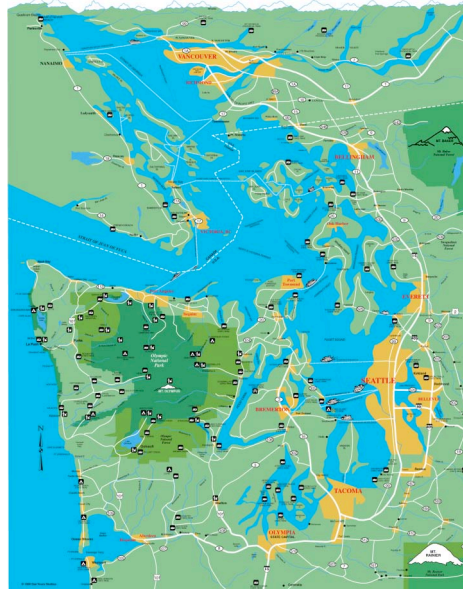


Matt Nichols:

- Puget Sound: home to world-class boat builders
- New high speed jet catamarans w/low wakes handle rough water
- Success of Aqua-Express (Kingston to Seattle) pax ferry
- New technologies also have military uses - Sea Fighter (next slide)



# The Seattle Times

seattletimes.com/localnews FEBRUARY 4, 2005 FRIDAY

The Navy's new high-speed catamaran will be christened tomorrow on Whidbey Island. The underside of the 200-foot twin-hulled vessel, shown below, can sit in water as shallow as 11 feet.

## "Sea Fighter" alters the look of the Navy



For the Sea Fighter catamaran, its underside shown here, can hug the shoreline in ponds smaller than those used in today's military vessels.

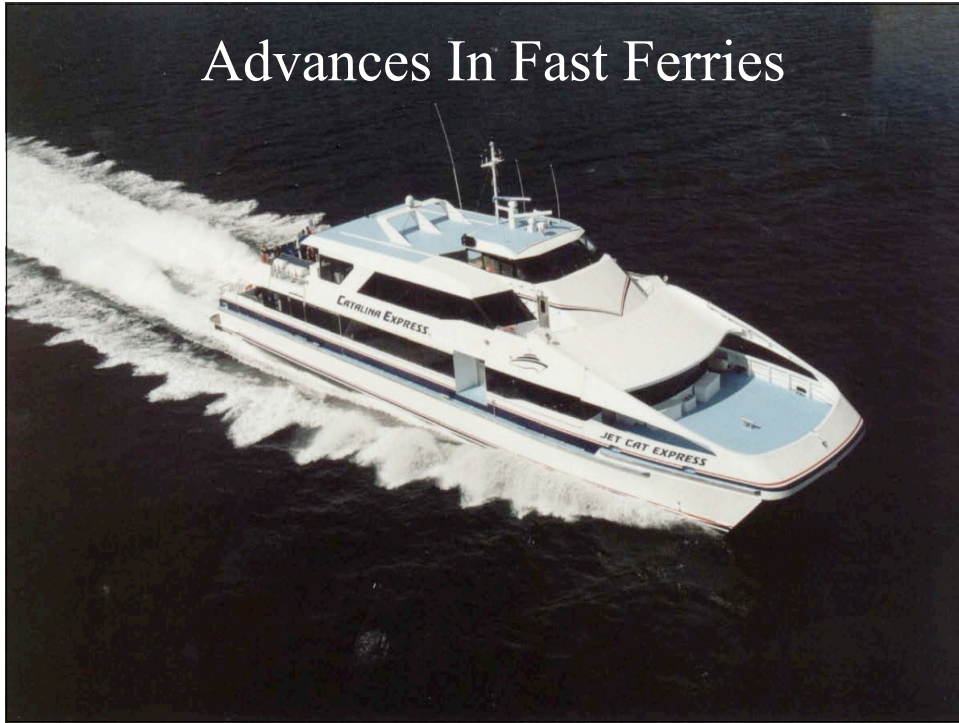
**BY SCOTT BRONSTEIN**  
 The bones of the Navy's new high-speed catamaran are getting in a military-sized dry dock, and it's hard to see how the ship will fit. The vessel's hull is made of aluminum and is 200 feet long. It's the largest hull ever built for a Navy vessel. The hull is being built in a dry dock at the Naval Shipyard in Groton, Conn. The hull is being built in a dry dock that is 170 feet long and 11 feet deep. The hull is being built in a dry dock that is 170 feet long and 11 feet deep. The hull is being built in a dry dock that is 170 feet long and 11 feet deep.

Looking for something out of an early 20th-century design, the Navy's new high-speed catamaran is getting in a military-sized dry dock, and it's hard to see how the ship will fit. The vessel's hull is made of aluminum and is 200 feet long. It's the largest hull ever built for a Navy vessel. The hull is being built in a dry dock at the Naval Shipyard in Groton, Conn. The hull is being built in a dry dock that is 170 feet long and 11 feet deep. The hull is being built in a dry dock that is 170 feet long and 11 feet deep.



**J. Chad Brown**, left, and **Chris**, right, are the project leader and the chief designer of the Sea Fighter catamaran. They are standing next to a large, white, curved hull section of the vessel.

## Advances In Fast Ferries



## Original Fast Ferry Requirements

- **Lowest Seat Cost Per Passenger.**



## Original Fast Ferries

Monohulls



Hydrofoils



Catamarans



Hover Crafts



Jet



## Today's Fast Ferry Requirements

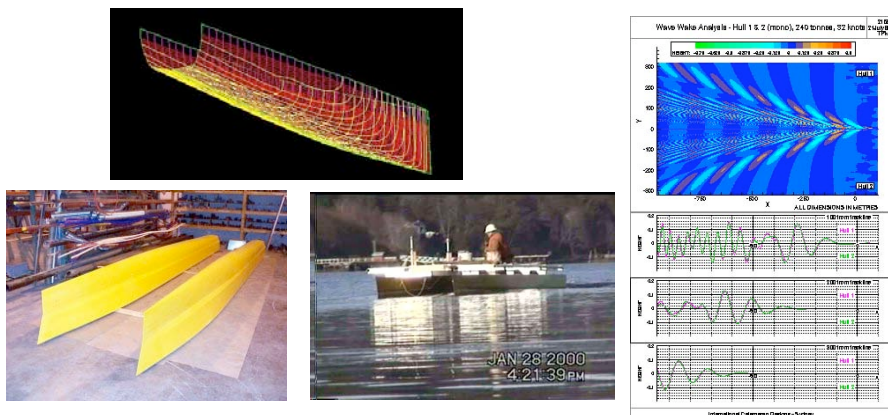
- Environmental Friendly
- Passenger Comfort
- Life Cycle Cost
- Capital Cost
- Upgrade Ability
- Redundancy
- Speed

# Environmental Concerns

- Wake Wash
  - Early Vessels
    - Shore erosion, damage to shore side facilities and danger to other vessels
  - New Vessels
    - All hulls modified to give off less wake
    - Hulls developed to meet specific wake requirements
    - Continual research

# Environmental Concerns

- Example of low wash hulls developed



## Environmental Concerns

- Emissions
  - Diesel Engines
    - All major engine suppliers sell IMO compliant engines
      - IMO requirements deal with NOx (Nitrogen Oxides)
        - » Ozone depleting substance
    - Electronically controlled engines allow further NOx reduction
      - Results
        - » Less fuel efficient
        - » More smoke from unburned carbon

## Passenger Comfort

- Seating Arrangements
  - Groups
  - Dinning
  - Privet
- Noise Levels
  - Soft mount machinery
    - Nichols Vessels - Soft mounted house
  - Location of seats / service areas

# Company Structure

Established

1939 Hood River, Oregon  
Nichols Boat Works



Mark Nichols

1964 Freeland, Washington  
Nichols and Drake



Bob Drake, Matt Nichols  
Frank Nichols, Archie Nichols

1972 Freeland, Washington  
Nichols Brothers Boat Builders,



Matt Nichols & Archie Nichols

2002 Freeland, Washington  
Nichols Brothers Boat Builders,  
Inc.



Bryan, Matt & Justin Nichols







## Recently Completed Projects

Comparable Projects

Materials

Over 30 Aluminum Vessels



Aluminum Catamaran



Aluminum Monohull

Size

Multiple Vessel Between 200' – 300'



232' Vessel



265' Vessel

Power

Experience with Gas Turbine & Diesel Engine Installation



Gas Turbine Vessel



MTU 16V4000 Vessel

Speed

28 High Speed Vessels Constructed



40+ Knot Vessel



35+ Knot Vessel

# Military Projects

Sea Slice – Experimental High Speed Aluminum Navy Craft

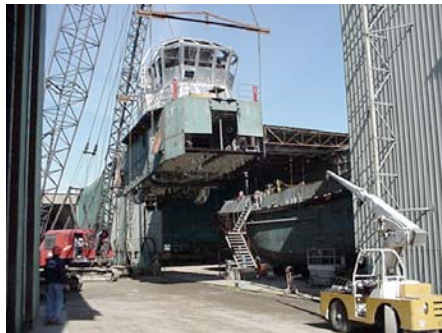


Two Army Transport Vessels – High Speed Aluminum Catamaran



# RECENTLY CONSTRUCTED VESSELS

•105' Fireboat – Delivery January 2003



•360' Overnight Cruise Boat – Delivery June 2003



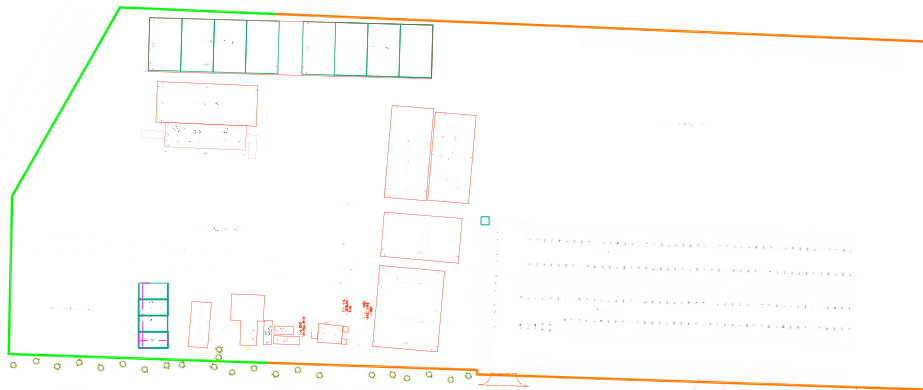
## Backlog

Miscellaneous repair jobs are scheduled for Winter 2002 / Spring 2003, but we have currently not signed any new construction projects for the remainder of 2003 and beyond.



# Facilities

## Construction Buildings / Yard Plan



•14 Acre Shipyard  
Yard Plan

# Facilities

## Construction Buildings / Yard Plan



•14 Acre Shipyard

# Facilities

## Launching

•1500 Ton Crawler System

•Catamaran & SWATH on Crawlers



# Facilities

## Dockside Facilities / Navigation Restrictions

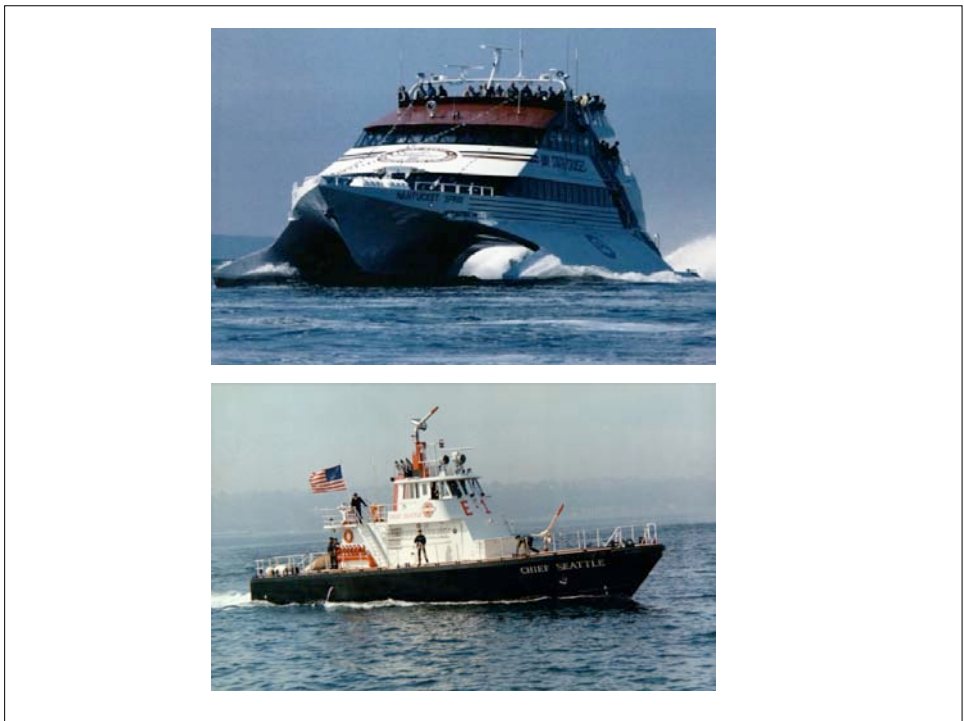


•Dockside Facilities  
•Maximum vessel length 360'  
•Maximum vessel draft 25'

•315' x 85' x 13' High Speed Aluminum Military Vessel  
•Dockside at Nichols facility for repairs

Item (Description, size, capacity, etc.)	Quantity
1500 Ton hydraulic driven crawler launching machine	1
150 Ton link belt Crawler Crane w/120 boom	1
65 Ton Manitowac Crawler Crane w/ 90' boom	1
35 Ton Grove Hydraulic crane w/175' boom	1
20 Ton P&H Hydraulic crane w/64' boom	1
5 ½ ton Drott hydraulic crane w/ 16' boom	2
10 ton Boom truck 56' extending boom	1
2 to 9 ton forklifts	8
Man lifts	11
Scissor lifts	4
1 to 2 ton overhead cranes	9

## Facilities Major Equipment







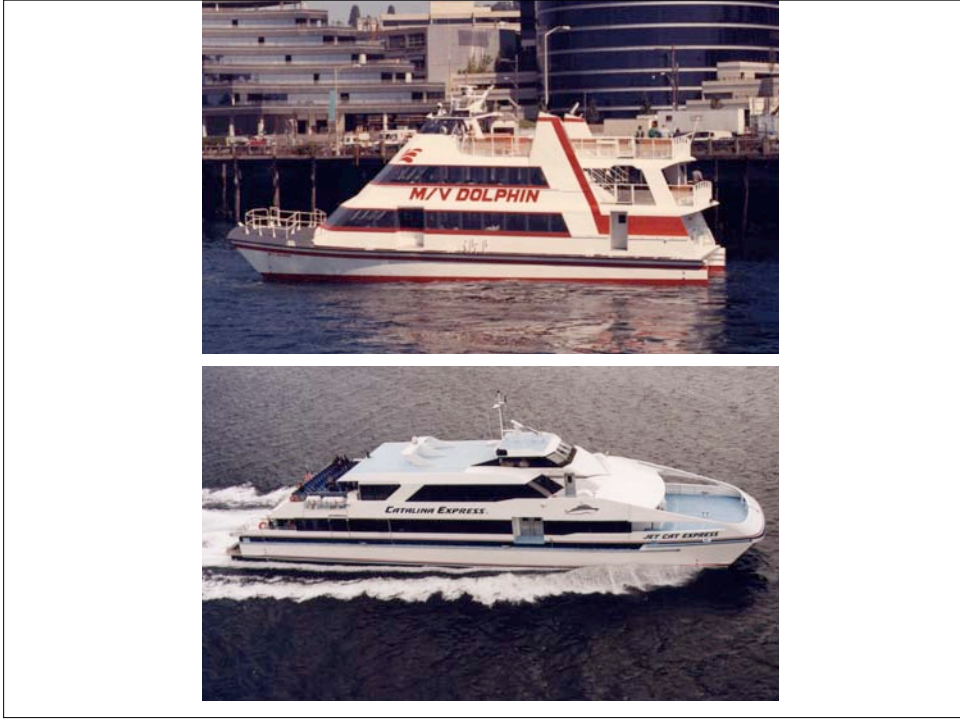
## Quality Assurance

- All documents and data generated go through an approval process before being released









# Classified Contracting

- We have performed classified contracting on past projects and would be willing to do so again.





X-CRAFT LAUNCH FEBRUARY 2005





