

Photo courtesy of Corey Adkins



CASE STUDY

CONSTRUCTION OF FISHERIES RESEARCH VESSEL

November, 2017

R/V Stanford H. Smith

U.S. Fish & Wildlife Service, New Franken, WI

CASE STUDY

CONSTRUCTION OF FISHERIES RESEARCH VESSEL

R/V Stanford H. Smith - U.S. Fish & Wildlife Service



Moran Iron Works was awarded the contract to build a 56'9" research vessel by the US Fish & Wildlife Service in August, 2016. Initial project planning began in November, 2016 with subsequent detailing and engineering work proceeding through January, 2017.

With the keel laid in late-January, hull work began in February. MIW staff, using plasma cutting and forming equipment, precision-cut and formed all aluminum plate and structural members used in the hull construction before preparing and welding the hull. Fabrication continued through Spring and Summer, 2017, With components and equipment being installed throughout the build process. In all, over a dozen specialized navigation and research systems are included in the vessel with the entire electrical system measuring over two miles in length. The boat is powered by twin John Deere 500 HP diesel engines and is designed to reach a speed of 20 knots.

With construction completed in Autumn, 2017, the Stanford H. Smith was launched in October for sea trials and preparation for delivery to its home port of Kewaunee, Wisconsin.

VESSEL

R/V Stanford H. Smith

OWNER

U.S. Fish & Wildlife Service - New Franken, WI

BUILDER

Moran Iron Works - Onaway, MI

LOCATION

For operation in Lakes Michigan, Huron, and Superior

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CASE STUDY

CONSTRUCTION OF FISHERIES RESEARCH VESSEL

R/V Stanford H. Smith - U.S. Fish & Wildlife Service



DESIGNER

Architect:
Seacraft Design -
Sturgeon Bay, WI

HULL CONSTRUCTION

Aluminum

STATISTICS

Length: 56'9"
Beam: 16'
Depth (Molded): 6'1"
Draft: 4'6" Max
Deadweight Tonnage
(OSVs): 63,582 lbs
Speed: 20 knots



REAR CARGO DECK

195 sq. ft. covered
255 sq. ft. uncovered

MAIN PROPULSION

Twin John Deere
6135 SFM85, 500
BHP@1900RPM

MARINE GEAR

Twin Disc MGX5126A
2.04:1

STEERING SYSTEM

Kobelt/Timco

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R/V Stanford H. Smith - U.S. Fish & Wildlife Service



TWIN PROPELLERS

Michigan Wheel 34" dia,
32pitch, NIBRAL, 5
Blade

SHIP'S SERVICE POWER

Northern Lights 16kw
M844 DW3

CREW CAPACITY/ PASSENGER CAPACITY

1 Master + 2 Crew

FLUID CAPACITY

Fuel Oil 1,160 gal
Potable Water 75 gal
Holding Tank 78 gal



ANCILLARY EQUIPMENT/ SYSTEMS

Kennebec Crossley Net Lifter
Effer Deck Crane
Rapp Marine Trawl Winches & Net
Reel
InMac-Kolstrand Science &
Davit Winch

CLASSIFICATION/ CERTIFICATION

None, Uninspected Public Vessel

DELIVERY DATE

November, 2017



CASE STUDY

CONSTRUCTION OF HIGH SPEED ALUMINUM PASSENGER FERRY

September 2015

Miss Margy

Shepler's Mackinac Island Ferry

Straits of Mackinac, MI

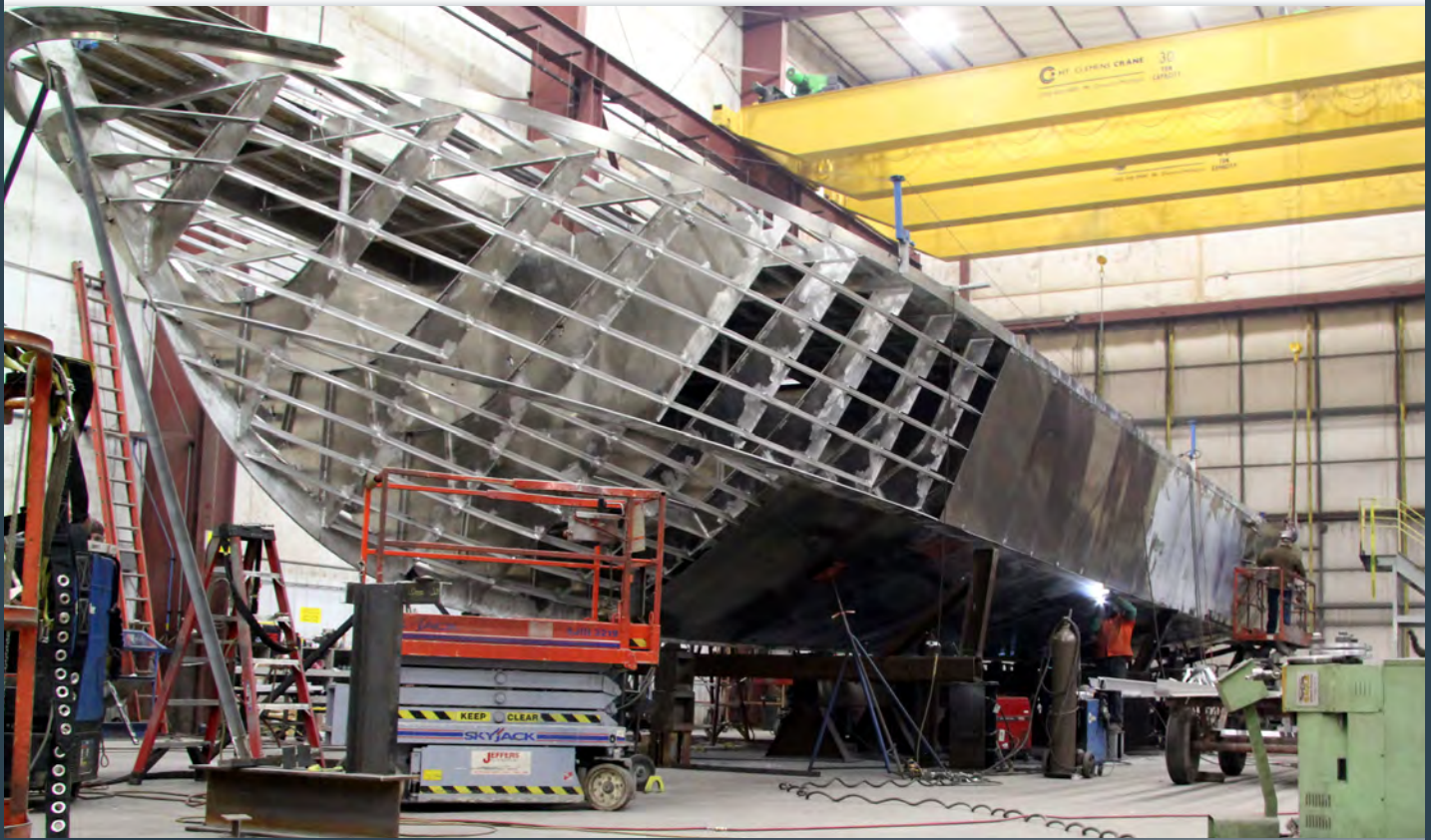
CASE STUDY

CONSTRUCTION OF HIGH SPEED ALUMINUM PASSENGER FERRY

Miss Margy - Shepler's Mackinac Island Ferry



Moran Iron Works was awarded the contract to construct a high speed aluminum passenger vessel to operate in the Straits of Mackinac. The MISS MARGY is a K Class passenger vessel built in accordance with U.S. Coast Guard regulations. Moran worked with SeaCraft Design, a naval architecture and design firm based in Sturgeon Bay, Wisconsin, for the vessel design. The vessel was launched at Port Calcite in late May 2015. It was taken to its homeport in Mackinaw City where final cosmetic touches have been applied. The vessel was christened in July 2015 and underwent final sea trials prior to its formal addition to the fleet in late September 2015.



CUSTOMER

Shepler's Mackinac Island Ferry

LOCATION

For operation in the Straits of Mackinac, MI

PROJECT DURATION

Dec. 2014 - Sept. 2015

COST

\$3.8 million

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CASE STUDY

CONSTRUCTION OF HIGH SPEED ALUMINUM PASSENGER FERRY

Miss Margy - Shepler's Mackinac Island Ferry



DIMENSIONS

Length: 85 ft

Breadth: 22 ft

Depth: 9 ft

WEIGHT

68 Tons

MATERIAL

Aluminum

ENGINES

Three 2000 hp

CAPACITY

281 Passengers



OPERATING SPEED

40 mph

OTHER

Classified USCG -
Title 46 CFR Chapter
I Subchapter K: Small
Passenger Vessels
Carrying More Than
150 Passengers

Climate-controlled
interior with air
conditioning and
fog-free windows

CASE STUDY

CONSTRUCTION OF HIGH SPEED ALUMINUM PASSENGER FERRY

Miss Margy - Shepler's Mackinac Island Ferry





CASE STUDY

CONSTRUCTION OF TWO OCEAN GOING DECK BARGES

April, 2015

Kokosing III & Kokosing IV

Durocher Marine, a division of Kokosing Construction Company, Inc.

CASE STUDY

CONSTRUCTION OF TWO OCEAN GOING DECK BARGES

Kokosing III & Kokosing IV - Durocher Marine



Moran Iron Works was awarded the contract to build two ocean going deck barges for Durocher Marine, a division of Kokosing Construction Company Inc., based in Cheboygan, Michigan. The two deck barges are 180' X 54' X 12' and built in accordance with International Maritime Organization (IMO), ABS, and USCG regulations and classifications. The barges follow ABS rules for building and classing steel barges for offshore service. They are classed as ABS + A1 Ocean Service Deck Barges and have an International Load Line Certificate.

The keels were laid mid-summer 2014 at the Onaway fabrication facility. Both barges were launched in mid-April 2015 at the deep water port at Calcite in Rogers City, Michigan at the company's Port Calcite facility.



CUSTOMER

Durocher Marine, a Division of Kokosing Construction Company, Inc.

LOCATION

For operation in the Great Lakes

PROJECT DURATION

May 2014 - April 2015

CASE STUDY

CONSTRUCTION OF TWO OCEAN GOING DECK BARGES

Kokosing III & Kokosing IV - Durocher Marine



WEIGHT

500 ton each

MATERIAL

Steel

STATISTICS

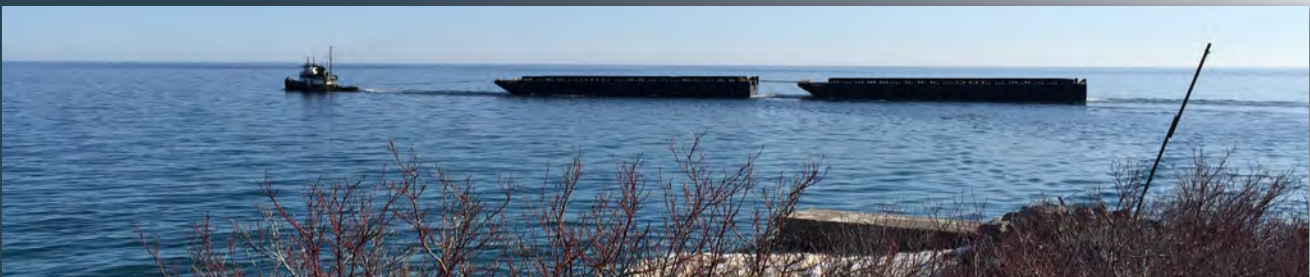
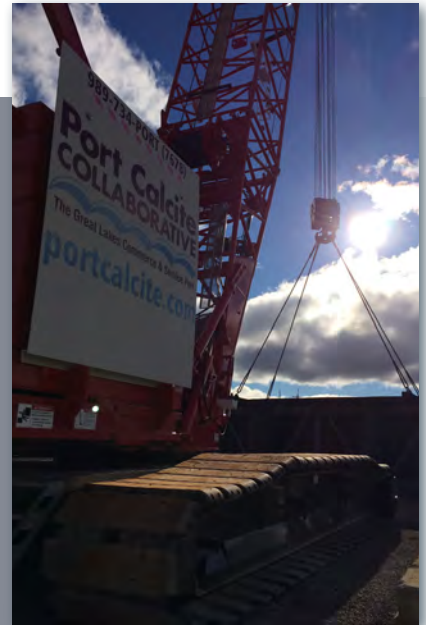
Length: 180ft

Breadth: 54ft

Depth: 12ft

OTHER

Classes ABS + A1
Ocean Service Deck
Barges; International
Load Line Certificate

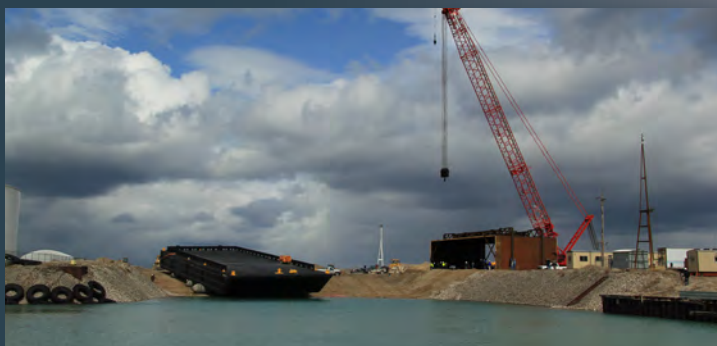


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CASE STUDY

CONSTRUCTION OF TWO OCEAN GOING DECK BARGES

Kokosing III & Kokosing IV - Durocher Marine





CASE STUDY

FUEL BARGE DRYDOCK, INSPECTION, AND REPAIR

July, 2014

Greenstone II

U.S. Department of the Interior

(Subcontracted by Schwartz Boiler Shop)

CASE STUDY

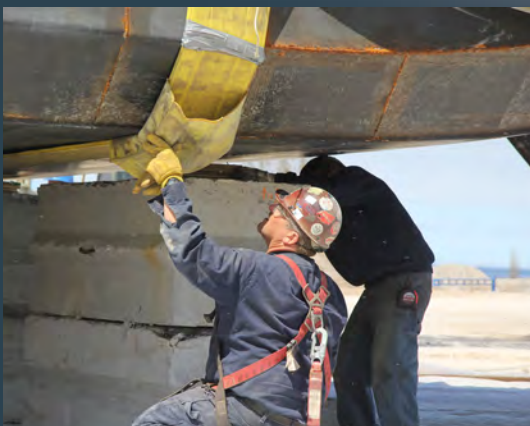
FUEL BARGE DRYDOCK, INSPECTION, REPAIR

Greenstone II - U.S. Department of the Interior



The GREENSTONE II, a U.S. Department of Interior fuel barge, was hauled out at the Port Calcite facility in late May 2014 with MIW's 440-ton Manitowoc 16000 crane. Schwartz Boiler of Cheboygan, MI performed the blasting, painting, and repair work. Upon completion of drydocking, repair work, and inspections by the U.S. Coast Guard, the barge was relaunched at Port Calcite in late June.

Built by Fraser Shipyards in 2004, the 70' long, 65-ton GREENSTONE II is a double-skinned fuel barge commissioned by the U.S. National Park Service for operation in Isle Royale National Park.



CASE STUDY

FUEL BARGE DRYDOCK, INSPECTION, REPAIR

Greenstone II - U.S. Department of the Interior



CUSTOMER

U.S. Department of the Interior
(Subcontracted by Schwartz
Boiler Shop)

LOCATION

Lake Superior; Houghton,
Michigan to Isle Royale,
Michigan

PROJECT DURATION

May 2014 - July 2014

STATISTICS

Length: 70ft

MATERIAL

Steel

WEIGHT

68 TONS



CASE STUDY

PASSENGER FERRY REPOWER AND MODIFICATIONS

May 2013
Sacre Bleu
Shepler's Mackinac Island Ferry

CASE STUDY

PASSENGER FERRY REPOWER AND MODIFICATIONS

Sacre Bleu - Shepler's Mackinac Island Ferry



Moran Iron Works performed a major vessel modification and repowering on Shepler's Mackinac Island Ferry's SACRE BLEU in early 2013. The SACRE BLEU was constructed in 1959 as a 65' steel monohull ferry. In 1986, the vessel had an additional 30' added to the center span to increase capacity. In February 2013, Moran Iron Works was contracted by Shepler's and began a major vessel modification and repower project on the vessel. The scope of work included extensive updates to the bow design as well as hull and deck strengthening reinforcements for increased durability, specifically for the purpose of allowing for an extended navigating season through ice-to-ice operational capabilities. In addition, a full fixed CO2 fire suppression system was installed.



CASE STUDY

PASSENGER FERRY REPOWER AND MODIFICATIONS

Sacre Bleu - Shepler's Mackinac Island Ferry



The vessel was hauled out at Port Calcite where the forward section of the vessel was removed as was most of the deck plating, leaving the aft and mid sections, the original decklevel pilot house, and internal framing still intact. A new redesigned 25' bow section was fabricated at our main fabrication shop in Onaway, as was a 47' fully-equipped pilot house and passenger cabin. Both the new bow section and the pilot house were transported to the Port Calcite facility where they, along with the new heavier deck plating, were attached to what remained of original vessel. Work was completed, and the SACRE BLEU was delivered in early May, in time for the 2013 season.



CUSTOMER

Shepler's Mackinac Island Ferry

LOCATION

For operation in the Straits of Mackinac, MI

PROJECT DURATION

Feb. 2013 - May 2013

STATISTICS

Length: 91ft

Breadth: 36ft

Depth: 10ft

MATERIAL

Steel

OTHER

Classed USCG - Title 46 CFR
Chapter I Subchapter T: Small
Passenger Vessels