

KALAMAZOO CANVAS BOAT COMPANY CANOE
Grand Canyon Boats
Grand Canyon National Park
Grand Canyon Village
Coconino County
Arizona

HAER AZ-86
HAER AZ-86

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240

HISTORIC AMERICAN ENGINEERING RECORD

KALAMAZOO CANVAS BOAT COMPANY CANOE

HAER AZ-86

Location:	Grand Canyon National Park, Grand Canyon vicinity, Coconino County, Arizona Kalamazoo Canvas Boat Company Canoe is located at latitude: 36.050189, longitude: -112.132891. The point represents the building housing the Grand Canyon National Park Museum Collection. It was obtained from Google Earth on April 22, 2021, and there is no restriction on its release to the public.
Date of Construction:	Unknown, but used by David Rust (1874-1963) prior to 1963
Builder:	Kalamazoo Canvas Boat Company of Kalamazoo, Michigan, successor to the King Folding Canvas Boat Company ¹
Original Owner:	Unknown
Present Owner:	National Park Service
Significance:	The Kalamazoo Canvas Boat Company Canoe is an example of a surviving collapsible metal-frame and canvas canoe utilized in the Glen Canyon area by renowned explorer and promoter David Dexter Rust.
Description:	The Kalamazoo Canvas Boat Company Canoe is a collapsible metal-rod frame canoe covered with a dark brown coated canvas that is secured to the top edges of the frame by metal rivets and staples. ² It measures 15'-10 1/2" long with a 3'-5 1/8" beam. Some of the metal rods have come loose from the frame and are hanging unattached. The canvas is also slightly worn. There are rope rings at the bow and stern. A folding wood combination thwart seat and oar locks are located in the middle of the canoe. A folding wood keel and floorboard is set inside the boat. The boat is labeled on the inside front and back with the name Kalamazoo Canvas Boat Company.

¹ King Folding Canvas Boat Company was famous for its patented folding canvas boat (Patent No. 507,439, granted October 1893). For more information, see Scott M. Peters, *Making Waves: Michigan's Boat Building Industry, 1865-2000* (Ann Arbor: University of Michigan Press, 2015). A copy of a catalog is available here: <https://adirondack.pastperfectonline.com/library/53B04AA6-3134-4072-BDBF-722916412993>, accessed May 2021.

² Kalamazoo Canvas Boat Company Canoe has been accessioned as Catalog Number GRCA 83614.

History: David Rust (1874-1963), who is known to have used canvas canoes in the Glen Canyon area, once owned this boat.³ Rust was a placer miner and explorer, who established a tourist camp near the current Phantom Ranch in the Inner Canyon in 1903, installed a cableway across the Colorado River, and improved the trail to Bright Angel Canyon from the North Rim.

The Glen Canyon National Recreation Area acquired this boat along with a similar canvas canoe and two wooden folding sets of floorboards from the Rust family with the assistance of Otis R. “Dock” Marston (who was friends with Rust) and Ken Sleight, both of whom were river runners and historians. In July 2008, both canoes and sets of floorboards were transferred to Grand Canyon National Park for inclusion in the historic boat collection. From October 2008 to December 2013, the boats were stored in the Maintenance Warehouse. In December 2013 the park’s historic boats were moved into a new storage area in the Powell Building.⁴

Sources:

The report is based on information from the Grand Canyon Museum Collection and the following sources.

Martin, Tom. “Chapter 5 1910-30 Rust Canvas Canoes.” On Vimeo: <https://vimeo.com/444310568>, accessed April 2021.

Peters, Scott M. *Making Waves: Michigan’s Boat Building Industry, 1865-2000*. Ann Arbor: University of Michigan Press, 2015.

Project

Information: The Kalamazoo Canvas Boat Company Canoe was documented as part of the Historic American Engineering Record’s Maritime Recording Program. The Historic American Engineering Record (HAER) is part of Heritage Documentation Programs, a division of the National Park Service. Todd Croteau, HAER Architect, served as project manager. Ryan Pierce produced the measured drawings in 2012. Grand Canyon National Park staff provided the written information for the historical report, which was formatted by Justine Christianson, HAER Historian, in 2021.

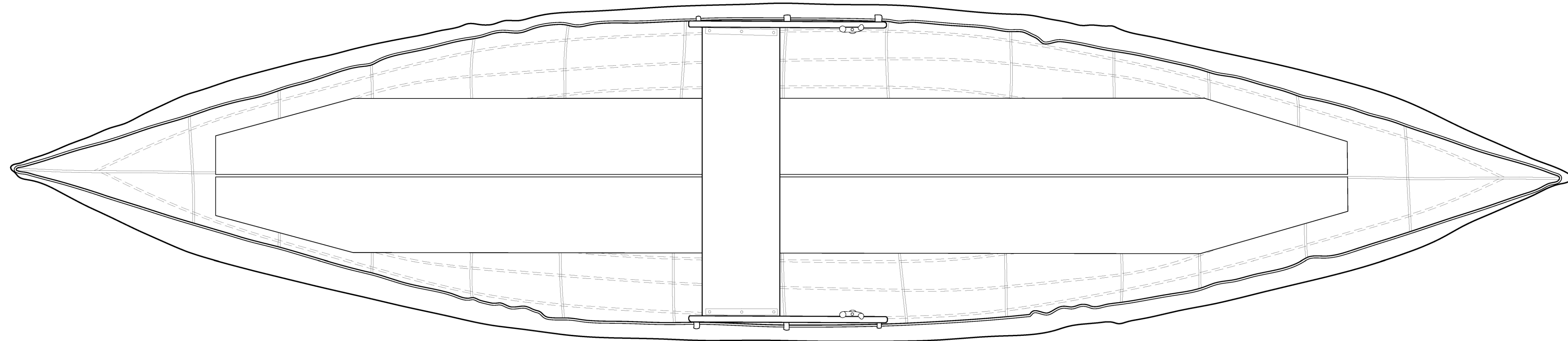
³ *Utah Historical Quarterly*, 28, 1968, pp. 303, 307 references these Rust canvas “fold boats.”

⁴ “Phantom Ranch,” available online at Nature, Culture and History at the Grand Canyon website, www.grcainhistory.org/sites/Colorado-river-corridor/phantom-ranch, accessed April 2021; Tom Martin, “Chapter 5 1910-30 Rust Canvas Canoes,” on Vimeo: <https://vimeo.com/444310568>, accessed April 2021.

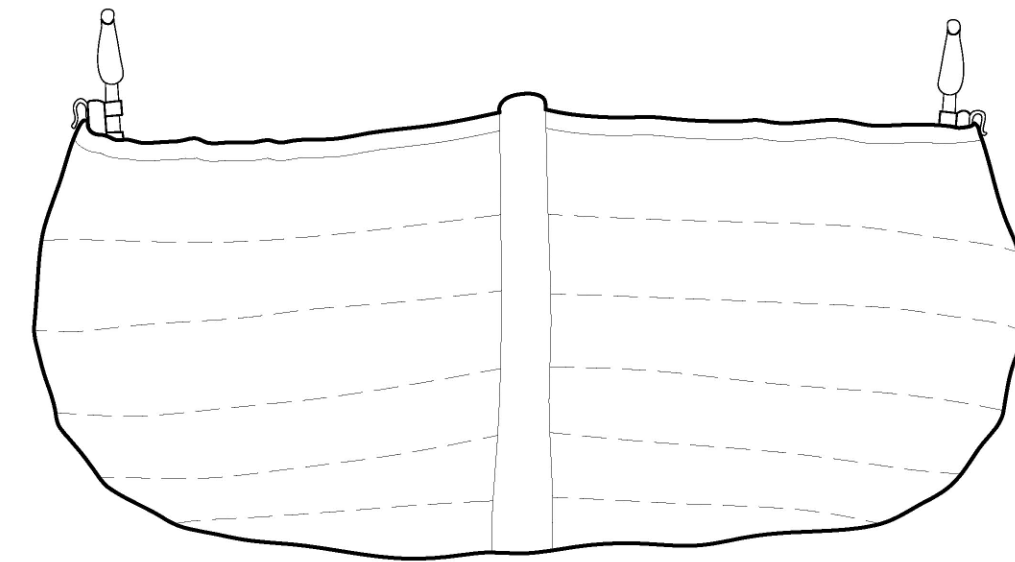
Kalamazoo Canvas Boat Company Canoe (*Rust Canoe*)

Plan/Elevations

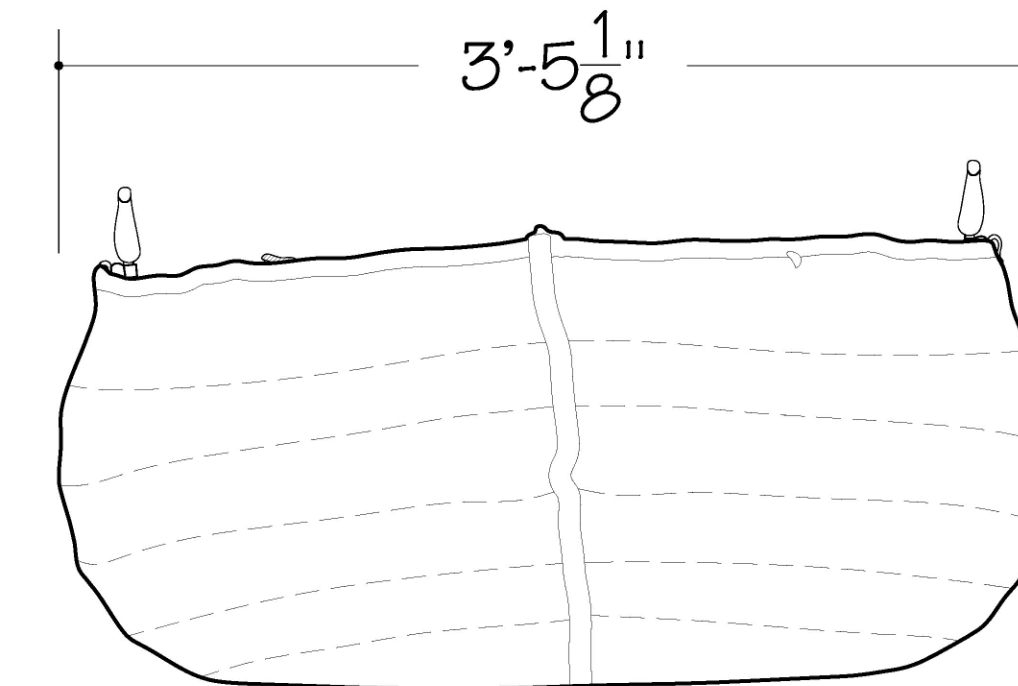
Colorado River Boat



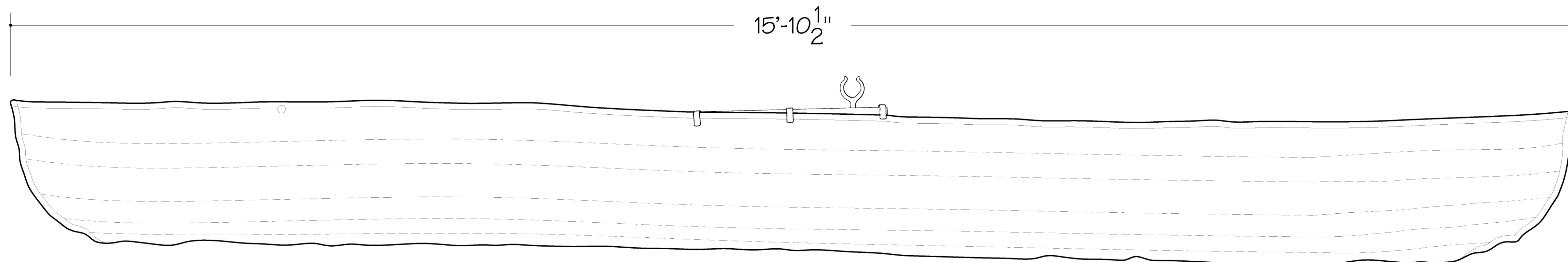
Plan



Bow Elevation



Stern Elevation



Port Elevation

SCALE: 1 1/2"=1'-0"

0 1 2 FEET

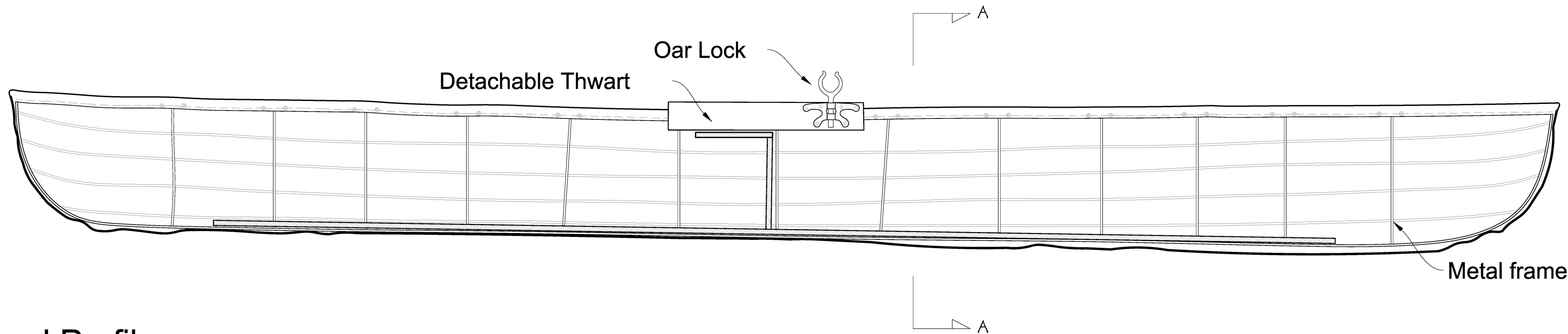
0 50 CENTIMETERS

Note: This boat is constructed of canvas fabric over a wire framework and has been drawn based on existing conditions with deformations

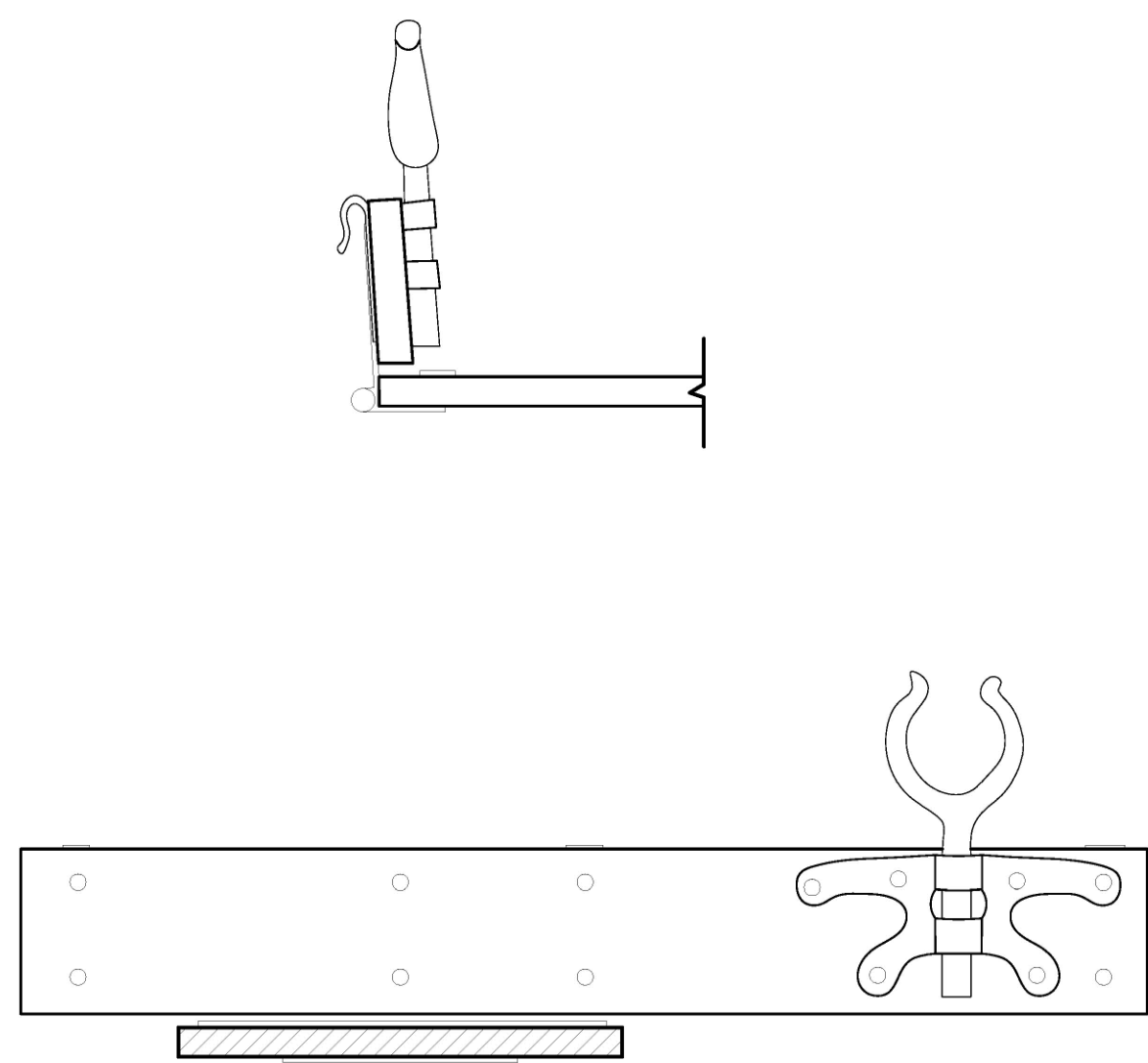
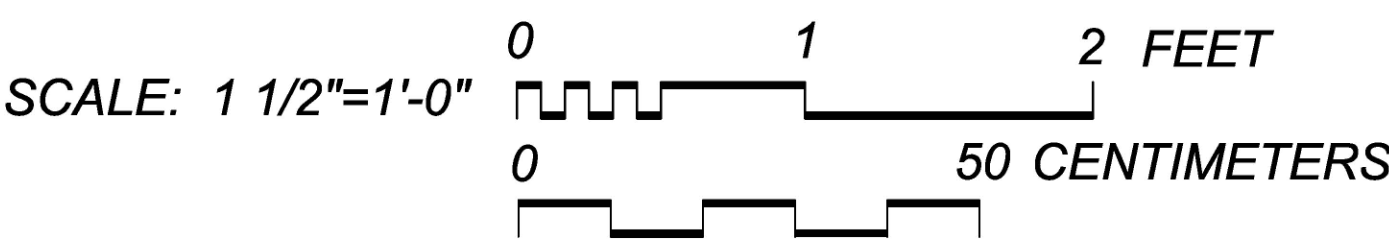
Kalamazoo Canvas Boat Company Canoe (*Rust Canoe*)

Colorado River Boat

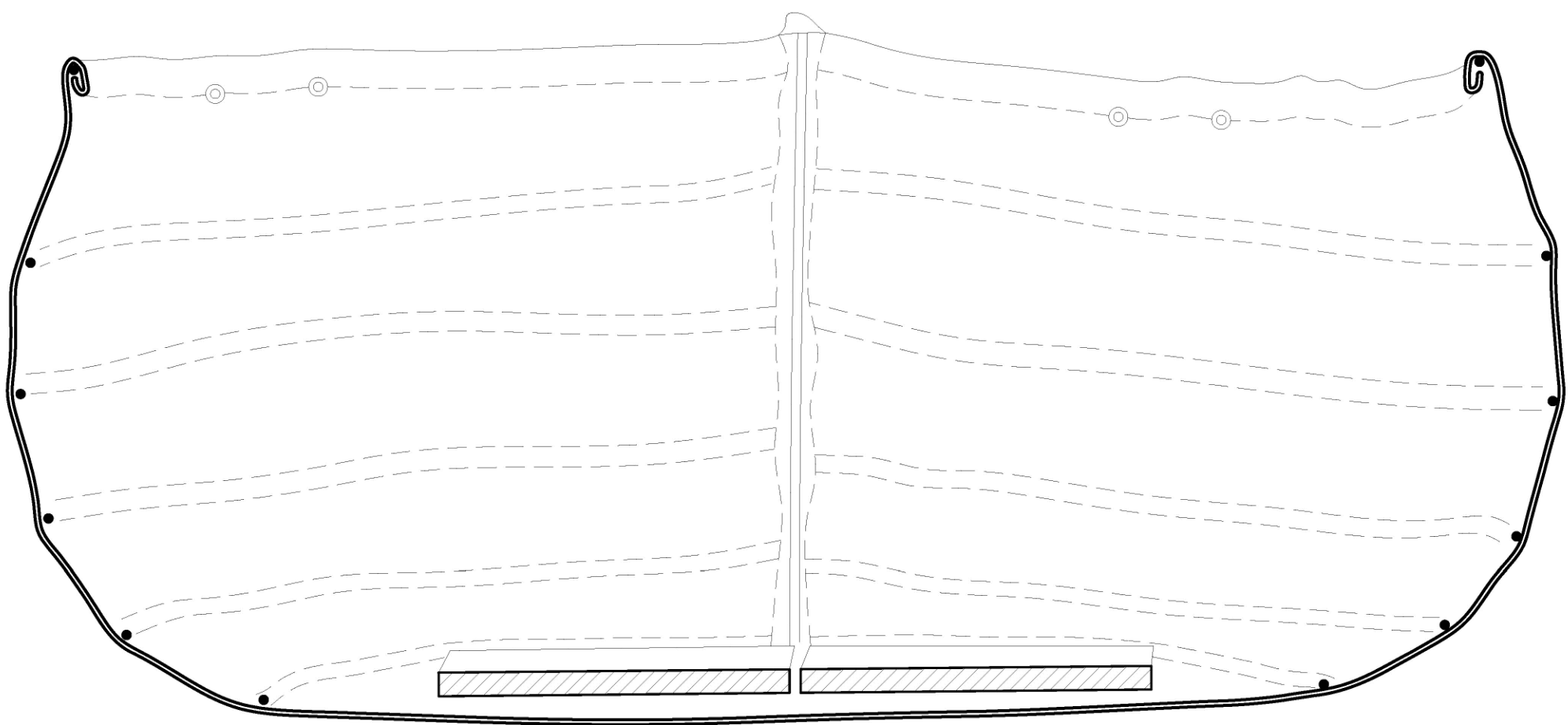
Sections



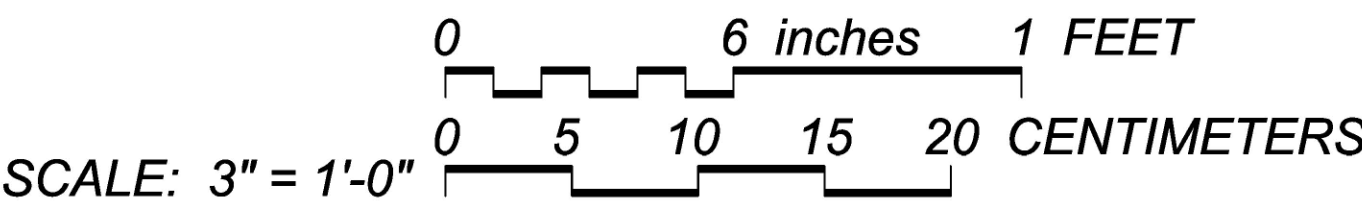
Inboard Profile



Folding Thwart Detail



Stern Section A-A



Note: This boat is constructed of canvas fabric over a wire framework and has been drawn based on existing conditions with deformations

Kalamazoo Canvas Boat Company Canoe (Rust Canoe)

Colorado River Boat

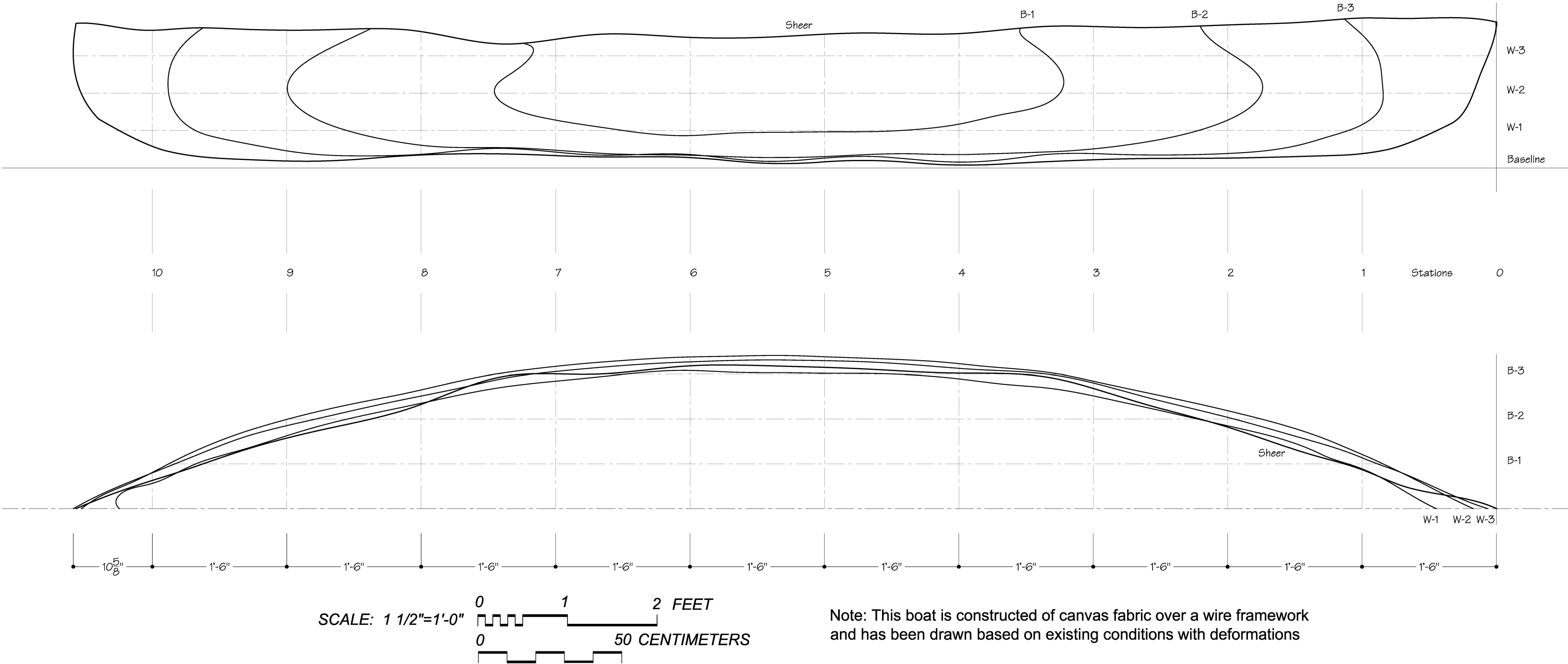
Lines

Table of Offsets

Offsets in Feet-Inches-Eighths Offsets are to outside of skin

Stations		0.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000
X-Positions		0- 0-0	1- 6-0	3- 0-0	4- 6-0	6- 0-0	7- 6-0	9- 0-0	10- 6-0	12- 0-0	13- 6-0	15- 0-0
Heights Above Baseline	Buttock 0- 6-0		0- 5-6+	0- 1-7+	0- 1-7+	0- 0-6+	0- 1-2+	0- 1-6+	0- 2-1	0- 1-6+	0- 2-2+	
	Buttock 1- 0-0			0- 6-3+	0- 2-4+	0- 1-6+	0- 1-4+	0- 1-6	0- 2-3	0- 3-0+		
	Buttock 1- 6-0					0- 5-7	0- 4-7	0- 4-3	0- 6-3+			
	Sheer		1- 8-0+	1- 7-1	1- 6-7+	1- 6-0+	1- 5-7+	1- 5-4	1- 5-2	1- 6-2	1- 6-3+	1- 6-4+
	Sheer at Bow	1- 7-4										
Half Breadths From CL	Sheer at Stern	1- 7-3										
	WL 1- 3-0		0- 6-6+	1- 0-2	1- 4-6+	1- 6-6	1- 7-6+	1- 7-5	1- 6-3	1- 3-0+	0-11-1	0- 4-6+
	WL 0-10-0		0- 7-2	1- 1-1	1- 5-0+	1- 7-3	1- 8-2+	1- 7-0+	1- 3-7	0-11-7+		0- 4-7
	WL 0- 5-0		0- 5-2+	0-11-0+	1- 3-0+	1- 5-3	1- 6-1	1- 6-4	1- 5-0+	1- 2-1	0- 9-6	0- 3-3
	Sheer		0- 5-1+	0-10-7	1- 4-0+	1- 6-1+	1- 6-7	1- 7-1	1- 6-0+	1- 2-0	0- 9-3+	0- 3-6

Note: This boat is constructed of canvas fabric over a wire framework and has been drawn based on existing conditions with deformations.
Vessel orientation is in situ in cradle, actual waterline is unknown.
Section spacing 1' 6", Waterline spacing 5", Half Breadth spacing 6"



DELINEATED BY: RYAN PIERCE, 2012
HAER MARITIME
RECORDING PROGRAM
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

GRAND CANYON VICINITY

KALAMAZOO CANVAS BOAT COMPANY CANOE
GRAND CANYON NATIONAL PARK
COCONINO COUNTY

ARIZONA

SHEET
3 OF 3

HISTORIC AMERICAN
ENGINEERING RECORD

INDEX NUMBER
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IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING

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Photos taken in storage warehouse.

INDEX TO BLACK AND WHITE PHOTOGRAPHS

Michael C Quinn, photographer, 2012

AZ-86-1	Starboard side elevation.
AZ-86-2	Port side elevation.
AZ-86-3	3/4 view from astern looking forward along the port side.
AZ-86-4	3/4 view from the bow looking astern along the starboard side.
AZ-86-5	Top view showing rod framing and canvas strips with wooden folding thwart and floors.
AZ-86-6	Top view showing rod framing and canvas strips with wooden thwart and oar locks.
AZ-86-7	Bottom view.
AZ-86-8	Detail view showing interior of boat with framing, folding thwart and floor boards. Note the oarlocks built into the removable thwart.