SURVEY NOTES:

1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

2) VERTICAL DATUM:
NAVD88 (GEOID18), FOOT

3) DEPTHS SHOWN ARE BELOW LWRP2014 SURFACE.

4) SURVEY INFORMATION:
SURVEY VESSEL: BOWEN1 (24' SCULLY'S WORK BOAT)
ECHO SOUNDER: TELEDYNE ECHOTRAC E20
TRANSDUCER: ODOM SMSW200-4 (4° BEAM, 200 kHz)
SOUND VELOCITY SOURCE: VALEPORT SWIFT SVP
INS: SBG ELLIPSE2-E-G4A2-B1
GNSS RECEIVER: TRIMBLE MPS865 WITH DUAL ANTENNAS
GNSS SOURCE: TRIMBLE CENTERPOINT RTX
TIDE METHOD: REAL-TIME KINEMATIC
TIDE SOURCE: TRIMBLE CENTERPOINT RTX

5) THE SURVEY WAS COMPLETED IN ACCORDANCE WITH QUALITY CONTROL PLAN PROCEDURES.

NOVEMBER 30, 2023
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 13:00	LWRP 2014	LWRP DIF @ 10:00	LWRP DIF @ 13:00
167	371.40	371.56	368.58	2.82	2.98
168	371.94	372.10	369.21	2.73	2.89
169	372.48	372.65	369.97	2.51	2.68
170	373.04	373.21	370.74	2.30	2.47

GAGE RECORD

River Mile	River Gage	Zero NAVD88	Time 1	Stage 1	Time 2	Stage 2
151.9	Herculaneum, MO	368.23	10:00	-4.90	13:00	-4.85
168.7	Jefferson Barracks, MO	377.34	10:00	-5.03	13:00	-4.86
176.8	Engineers Depot, MO	378.98	10:00	-2.12	13:00	-1.97

ILLINOIS

MISSOURI

Carroll Is

BARGE

BARGE

170

169

N

Scale: 1 inch = 800.00 Feet

500 1000 2000 3000 4000 Feet

St. Louis District

DATES OF SURVEY:
NOVEMBER 30, 2023

FILE NO.: 169K3023
REQUEST NO.: W912P923F0086

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: FIELD CARTOGRAPHER

Approved: CIVIL ENGINEERING TECHNICIAN

Approved: ASST. CHIEF OF SURVEY

Approved: CHIEF OF SURVEY

Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
CAPE GIRARDEAU, MO 63701

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
PRE DREDGE SURVEY
RIVER MILES 170.0 - 167.3

SHEET NO.
1 OF 2

SURVEY NOTES:

1) HORIZONTAL DATUM:
NAD83 (2011) MISSOURI EAST 2401, US SURVEY FOOT

2) VERTICAL DATUM:
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NOVEMBER 30, 2023
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ILLINOIS
MISSOURI
Columbia, IL
Carroll Island
Jefferson Barracks Chute
Public Park
BARGE
169
168
N
Scale: 1 Inch = 800.00 Feet
500 1000 2000 3000 4000 Feet

St. Louis District

DATES OF SURVEY:
NOVEMBER 28, 2023

FILE NO.: 169K3023
REQUEST NO.: W912P923F0086

SCALE:
1" = 800' (ANSI B)

FIELD BOOKS:

Approved: FIELD CARTOGRAPHER
Approved: CIVIL ENGINEERING TECHNICIAN
Approved: ASST. CHIEF OF SURVEY
Approved: CHIEF OF SURVEY
Date:

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI

SURVEYED BY:
BOWEN ENGINEERING AND SURVEYING, P.C.
2121 MEGAN DRIVE
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UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER
PRE DREDGE SURVEY
RIVER MILES 170.0 - 167.3

SHEET NO.
2 OF 2