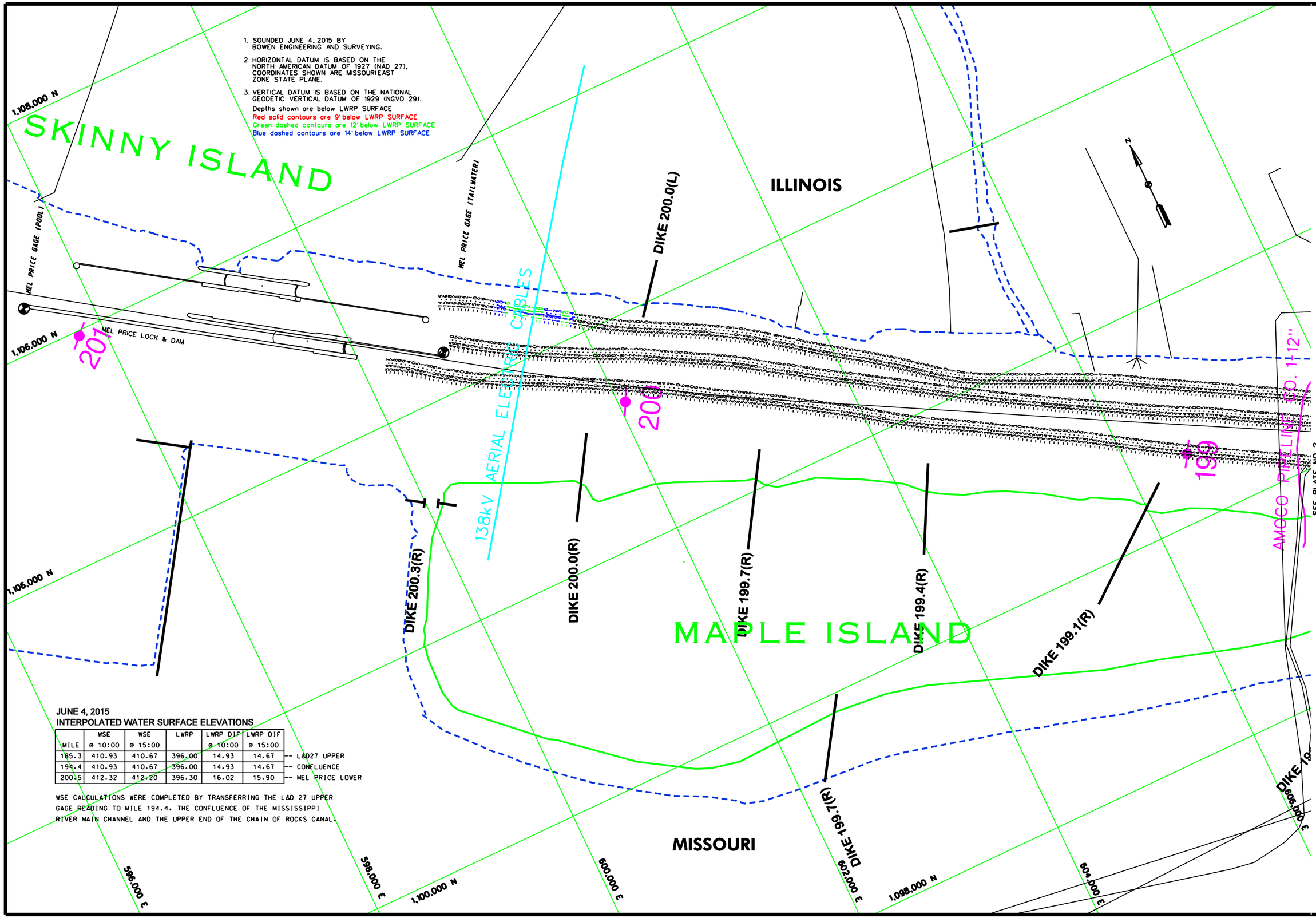
1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.

2 HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.

3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE



JUNE 4, 2015
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L. W. R. P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.3310/001	60.6715/001

ELEVATIONS ARE REFERRED TO N.G.V.D. CONTOURS ARE BELOW 1936-37 LOW WATER REFERENCE PLANE (L.W.R.P.) (34,000 C.F.S.)

SEE PLATE NO. 2

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER

Surveyed by: BOWEN ENGINEERING
Survey Date: JUNE 4, 2015
Drawn by: x
Reviewed by: x
Ckd by: x
SUBMITTED: x
APPROVED: x
File name: MISSISSIPPIRIVERSPECIFICATIONS
Plot date: ##/##/YY/THU##:##

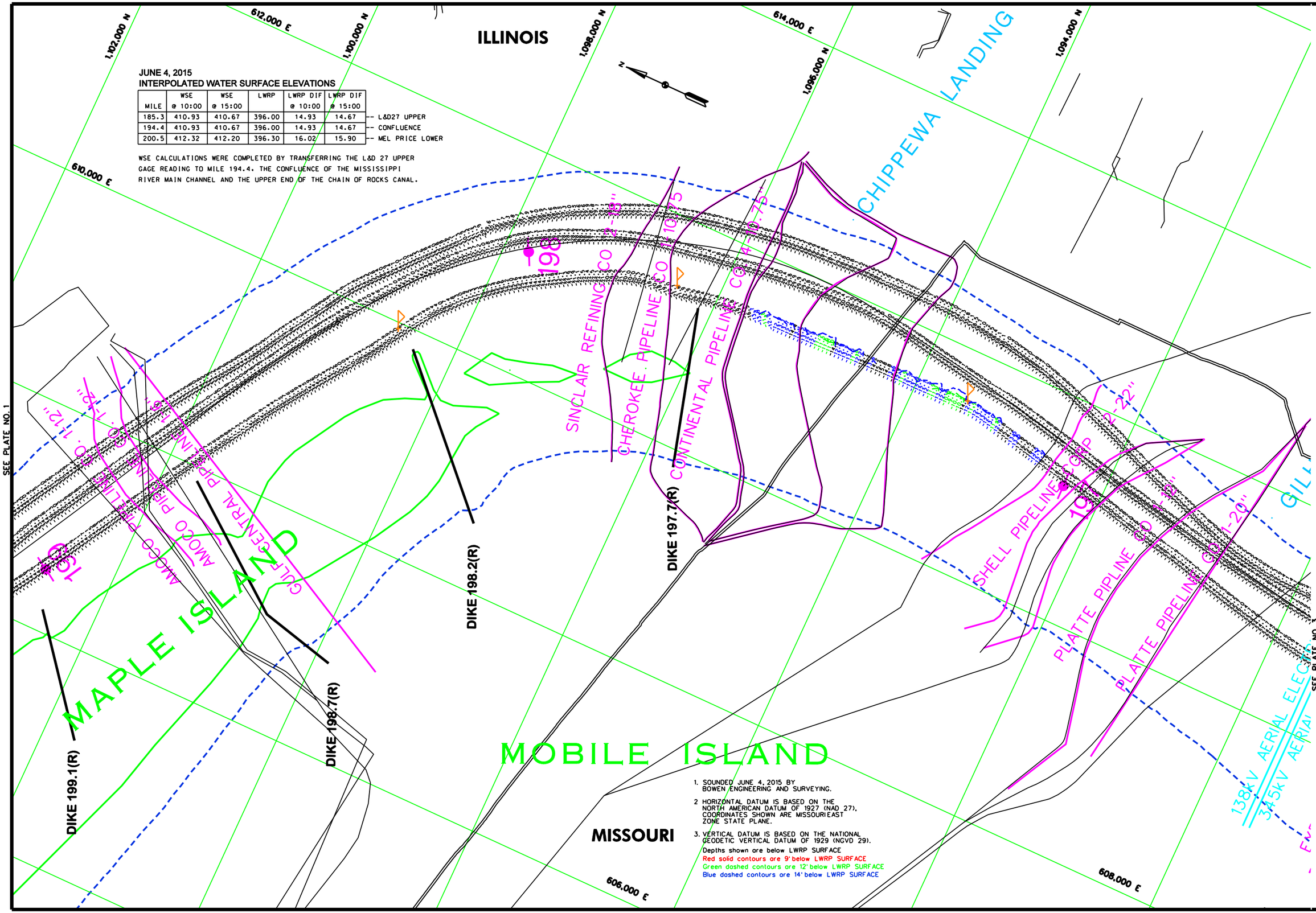
240 METERS 120 0 120 400
800 FEET 400 0 400

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE SHOWN. THE SCALE IS AS INDICATED AND THE GENERAL CONDITIONS EXISTING AT THAT TIME

CHANNEL PATROL

RIVER MILES 198.9 – 200.6

PLATE NUMBER
1



JUNE 4, 2015
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.

1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L. W. R. P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.3310/001	60.6715/001

ELEVATIONS ARE REFERRED TO N.G.V.D. CONTOURS ARE BELOW 1936-37 LOW WATER REFERENCE PLANE (L.W.R.P.) (34,000 C.F.S.)

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

Surveyed by: BOWEN ENGINEERING
Survey Date: JUNE 4, 2015
Drawn by: x
Reviewed by: x
Ckd by: x
SUBMITTED: x
APPROVED: x
File name: ##########
Plot date: ##########

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER

120 0 240 METERS
400 0 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF DREDGING AND DIKE REPAIR WORK PERFORMED BY THE CORPS OF ENGINEERS AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

CHANNEL PATROL

RIVER MILES 198.7 – 198.9

PLATE NUMBER
2

ILLINOIS

JUNE 4, 2015

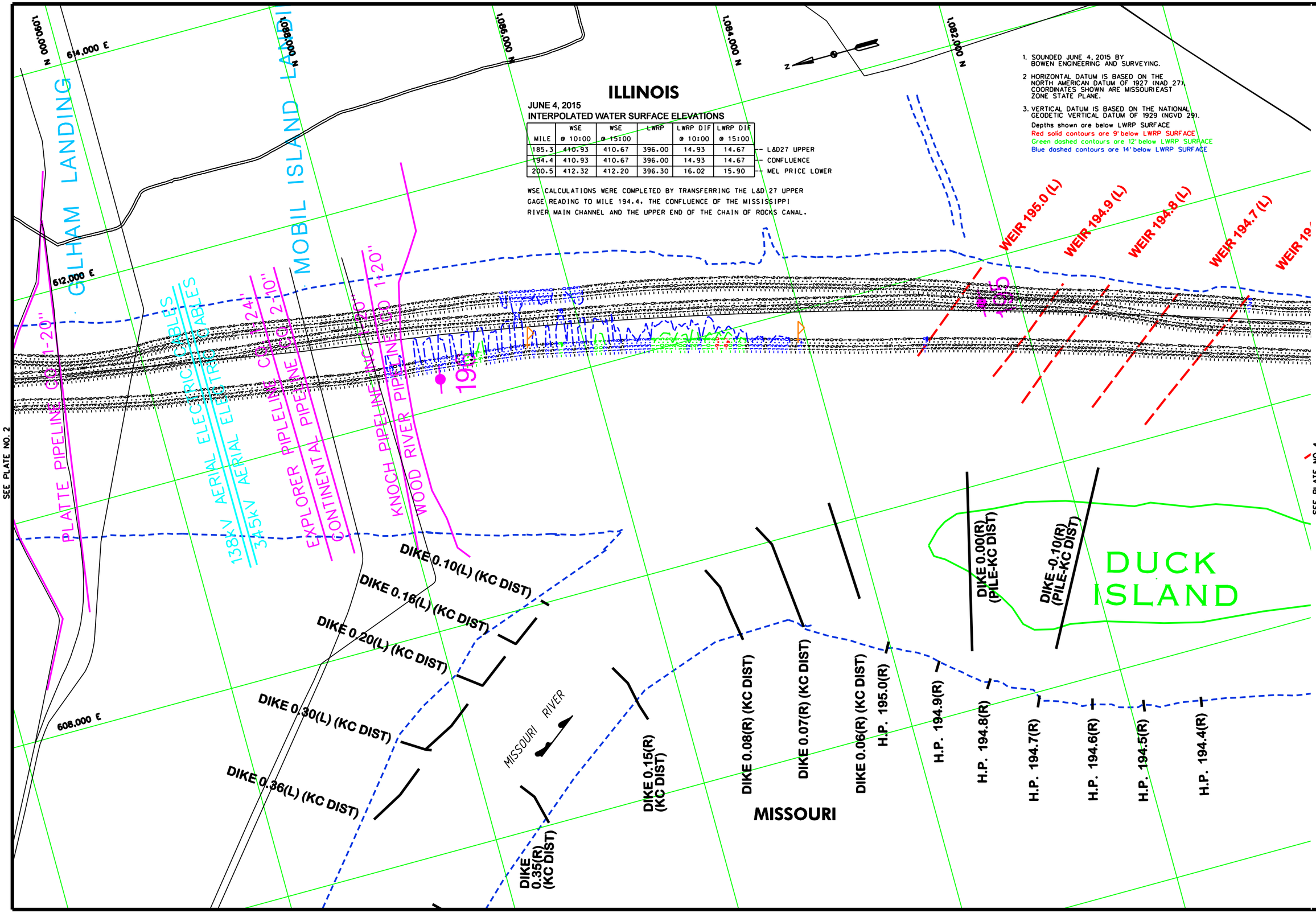
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.

1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE



US Army Corps of Engineers
St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L.W.R.P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.3310/001	60.6715/001

ELEVATIONS ARE REFERRED TO N.G.V.D. CONTOURS ARE BELOW 1956-57 LOW WATER REFERENCE PLANE (L.W.R.P.) (34.200 C.F.S.)

Surveyed by: BOWEN ENGINEERING
Survey Date: JUNE 4, 2015
Drawn by: x
Checked by: x
Reviewed by: x
SUBMITTED: x
APPROVED: x
File name: ##REDACTED##
Plot date: ##REDACTED##

U.S. ARMY ENGINEER DIVISION CORPS OF ENGINEERS ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER

CHANNEL PATROL

RIVER MILES 194.5 – 196.7

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION REPORTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE SHOWN. THE CHANNEL MAY CHANGE AS NEGOTIATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

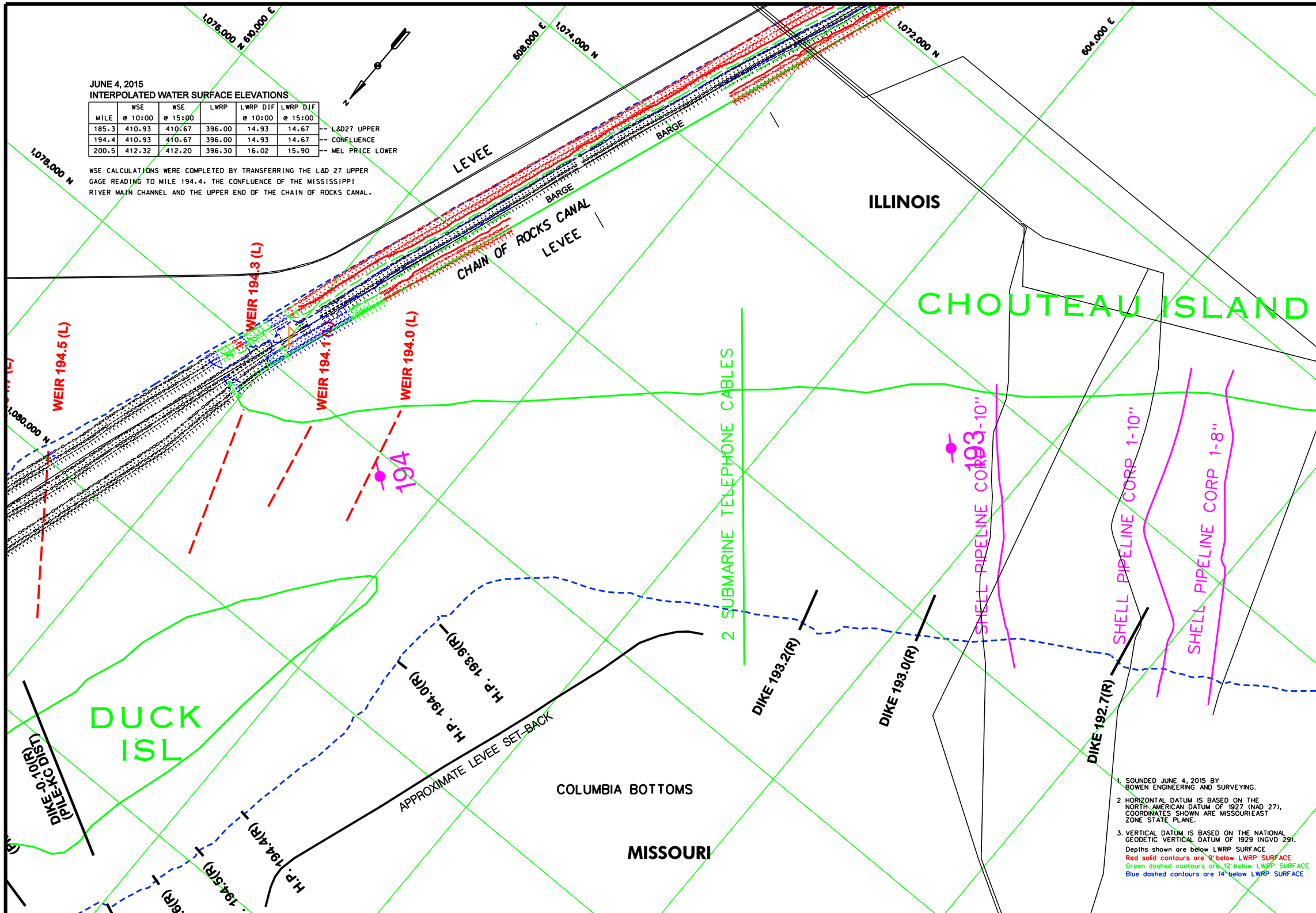
PLATE NUMBER
3

SEE PLATE NO. 4A

JUNE 4, 2015
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.



1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L. W. R. P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.3310/001	60.6715/001

ELEVATIONS ARE REFERED TO N.G.V.D. CONTOURS ARE BELOW 1936-37 LOW WATER REFERENCE PLANE (L.W.R.P.) (34,000 C.F.S.)

Survey Date: JUNE 4, 2015
Surveyed by: BOWEN ENGINEERING
Drawn by: x
Checked by: x
Reviewed by: x
SUBMITTED: x
APPROVED: x
File name: MISSISSIPPIRIVERSECTIONS
Plot date: ########

U.S. ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER

240 METERS 120 0 120 240
800 FEET 400 0 400 800

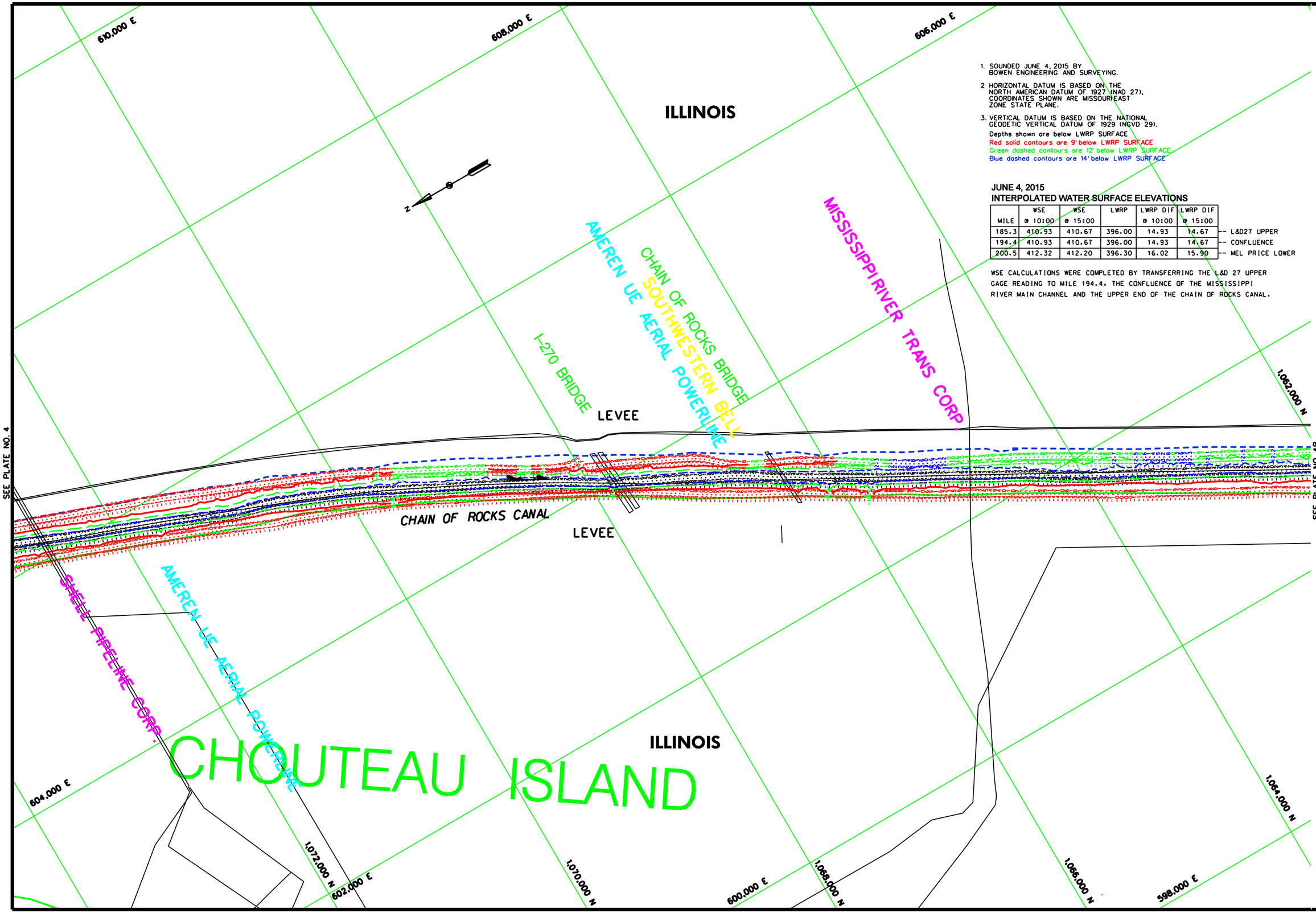
THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE BY OTHERS. THE CORPS OF ENGINEERS DOES NOT VERIFY AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

CHANNEL PATROL

RIVER MILES 192.6 - 194.5

PLATE NUMBER

4



1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.
2. HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27), COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE

JUNE 4, 2015
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.

US Army Corps of Engineers
St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L. W. R. P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.3310/001	60.6715/001
			x	x

US ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER
CHAIN OF ROCKS CANAL

Surveyed by: BOWEN ENGINEERING
Survey Date: JUNE 4, 2015
Drawn by: x
Checked by: x
Reviewed by: x
SUBMITTED: x
APPROVED: x
File name: MISSISSIPPI RIVER CHAIN OF ROCKS CANAL
Plot date: ########

120 0 240 METERS
400 0 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED. THE DATA IS PRESENTED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

CHANNEL PATROL
RIVER MILES 194.5 – 185.1

PLATE NUMBER
5

1. SOUNDED JUNE 4, 2015 BY BOWEN ENGINEERING AND SURVEYING.

2 HORIZONTAL DATUM IS BASED ON THE NORTH AMERICAN DATUM OF 1927 (NAD 27). COORDINATES SHOWN ARE MISSOURI EAST ZONE STATE PLANE.

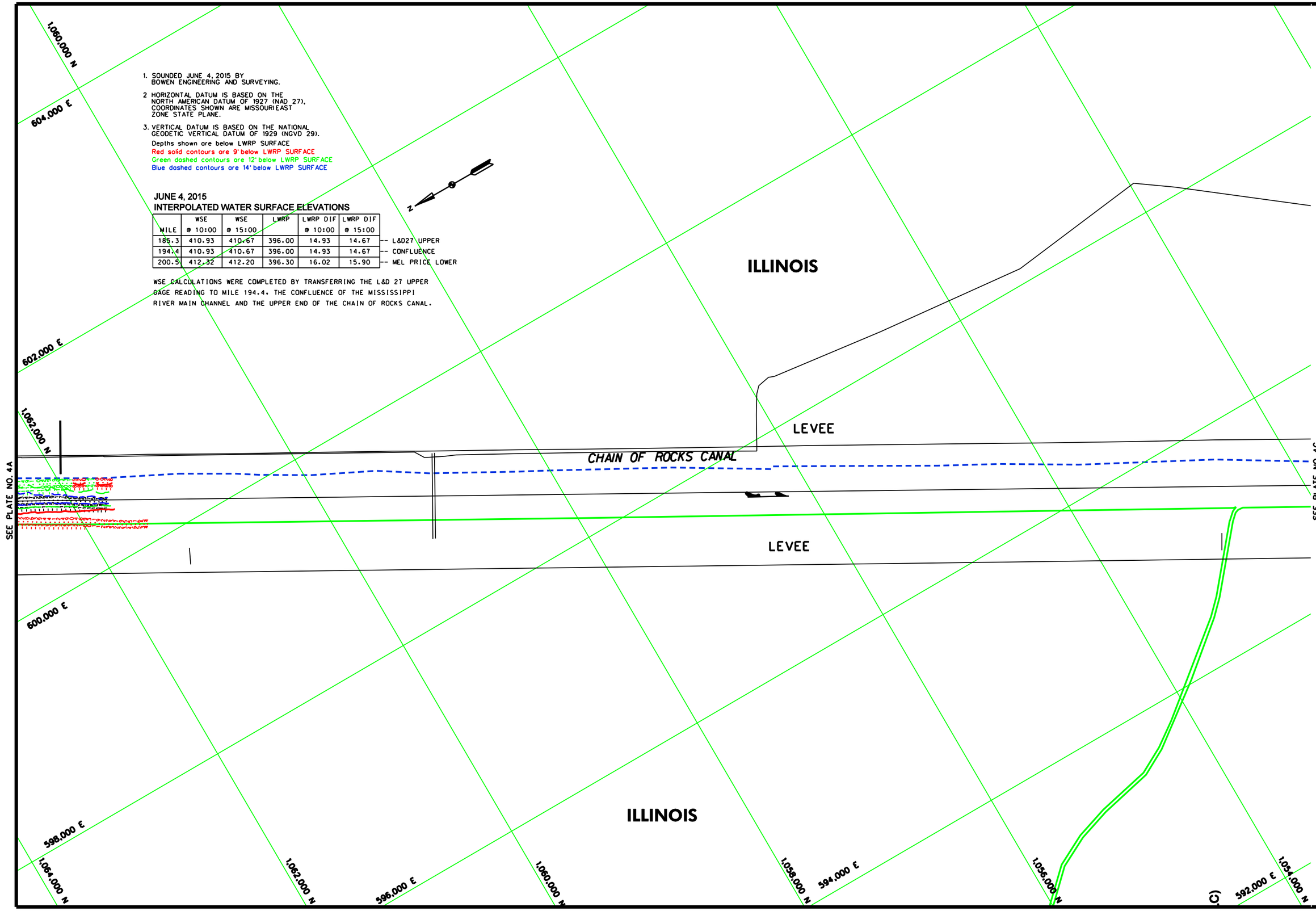
3. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

Depths shown are below LWRP SURFACE
Red solid contours are 9' below LWRP SURFACE
Green dashed contours are 12' below LWRP SURFACE
Blue dashed contours are 14' below LWRP SURFACE

JUNE 4, 2015
INTERPOLATED WATER SURFACE ELEVATIONS

MILE	WSE @ 10:00	WSE @ 15:00	LWRP	LWRP DIF @ 10:00	LWRP DIF @ 15:00	
185.3	410.93	410.67	396.00	14.93	14.67	-- L&D27 UPPER
194.4	410.93	410.67	396.00	14.93	14.67	-- CONFLUENCE
200.5	412.32	412.20	396.30	16.02	15.90	-- MEL PRICE LOWER

WSE CALCULATIONS WERE COMPLETED BY TRANSFERRING THE L&D 27 UPPER GAGE READING TO MILE 194.4. THE CONFLUENCE OF THE MISSISSIPPI RIVER MAIN CHANNEL AND THE UPPER END OF THE CHAIN OF ROCKS CANAL.



US Army Corps of Engineers St. Louis District

GAGE RECORD

	MEL PRICE L&D TW	L&D 27 UPPER	CHAIN OF ROCKS, MO	L&D 27 LOWER
ZERO N.G.V.D.	395.48	350.00	313.91	350.00
MILE	200.5	185.3	190.4	185.1
L. W. R. P.	396.3	396.0	388.5	380.5
08 JUN 2015	16.8410/001	16.7215/001	60.9310/001	60.6715/001
			x	x

US ARMY ENGINEER DIVISION
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN

MISSISSIPPI RIVER
CHAIN OF ROCKS CANAL

Surveyed by: BOWEN ENGINEERING
Survey Date: JUNE 4, 2015
Drawn by: x
Reviewed by: x
Ckd by: x
SUBMITTED: x
APPROVED: x
File name: MISSISSIPPIRIVERCHAIN
Plot date: 8/8/2015 7:14:25 AM

120 0 120 240 METERS
400 0 400 800 FEET

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED. THE DATA SHOWN IS ACCURATE AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME

CHANNEL PATROL

RIVER MILES 194.5 – 185.1

PLATE NUMBER
6