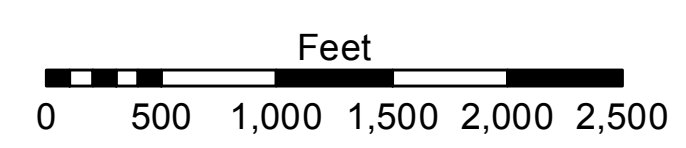
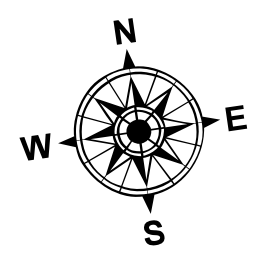
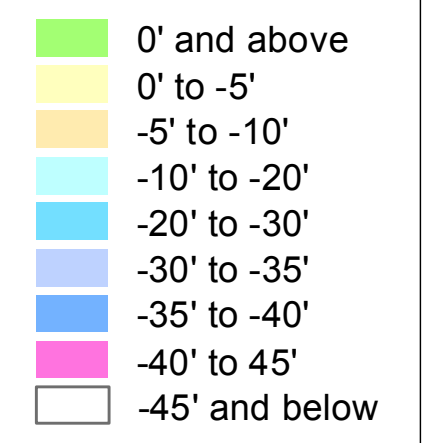


LEGEND	
--- Federal Navigation Channel	○ Cable Area
— Federal Navigation Center Line	□ Placement Area
— As-built Pipeline/Cable	□ Anchorage Area
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point
— Project Depth Contour	⚓ Wrecks-Submerged
□ Borrow Area	★ Beacon, General
● Shoalest Sounding**	◆ Red Navigation Buoy
◆ Green Navigation Buoy	



LWRP: 1.9
 Gage Reading: BR:18.7 D:10.6 USED:15.00 NAVD
 Sea Conditions: CALM
 Vessel Name: OB-189
 Survey Type: CS
 Sounding Frequency***: HIGH

NOTES:
 Horizontal Coordinate System:
 North American Datum of 1983 (NAD83), projected to the State Plane
 Coordinate System (SPCS), Louisiana South Zone. Distance units in U.S. Survey Feet.
 Vertical Datum:
 Soundings are shown in feet and indicate depths below Low Water Reference Plane 2007 (NAVD).
 Distances on the Mississippi River, above and below Head of Passes are shown
 at 1 mile intervals.
 The location of navigation aids are base on and provided by the U.S. Coast Guard and USACE crew.
 2015 Aerial Photography data source: NAIP, USDA-FSA-APFO Aerial Photography Field Office.
 Reference is N.O.A.A. Navigation Chart No. 11370.
 ** Shoalest Sounding per Quarter per Reach.
 *** High frequency (200 kHz) survey data represents the first signal return at a sounding
 location and will include suspended solids, known as "fluff", if present. Low frequency (20 kHz)
 survey data normally penetrates through this "fluff" layer to depict elevations of consolidated bottom
 material. Low frequency accuracies may vary depending on channel conditions and fathometer
 settings.



DISCLAIMER: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data are not warranted for any purpose other than that for which they were prepared. The user is responsible for the results of any use of the data. The data are not to be used for any purpose other than that for which they were prepared. The data are not to be used for any purpose other than that for which they were prepared. The data are not to be used for any purpose other than that for which they were prepared.

Submitted:	Surveyed By: RYLAND/RHODEN
Recommended:	Plotted By: BD
Approved:	Checked By: AC

MISSISSIPPI RIVER - B.R. TO GULF
GRANADA CROSSING
MD_10_GRA_20210204_CS
04 February 2021

Sheet Reference Number
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