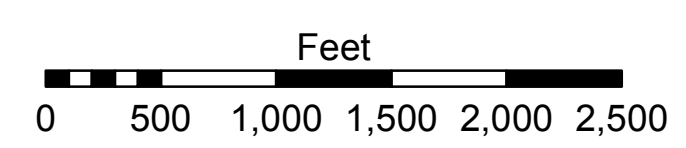
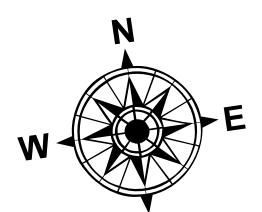


**LEGEND**

--- Federal Navigation Channel	○ Cable Area	□ Borrow Area	■ 0' and above
— Federal Navigation Center Line	■ Placement Area	● Shoalest Sounding**	■ 0' to -5'
— As-built Pipeline/Cable	□ Anchorage Area	★ Beacon, General	■ -5' to -10'
..... Unconfirmed Pipeline/Cable	⊗ Obstruction Point	◆ Red Navigation Buoy	■ -10' to -20'
— Project Depth Contour	⚓ Wrecks-Submerged	◆ Green Navigation Buoy	■ -20' to -30'
			■ -30' to -35'
			■ -35' to -40'
			■ -40' to -45'
			■ -45' and below



LWRP: 1.9  
 Gage Reading: BR:9.0 D:4.8 USED: 7.10 NAVD  
 Sea Conditions: CALM  
 Vessel Name: M/V OB 189  
 Survey Type: CONDITION  
 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. 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 to be used for any purpose other than that for which they were originally prepared, and that the data are not to be used for any purpose other than that for which they were originally prepared. The user is responsible for the results of any use of the data. The user is responsible for the results of any use of the data. The user is responsible for the results of any use of the data. The user is responsible for the results of any use of the data.

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	
Submitted:	Surveyed By: RYLAND/ADAMS
Recommended:	Plotted By: JH
Approved:	Checked By: JH

**MISSISSIPPI RIVER - B.R. TO GULF  
 GRANADA CROSSING  
 MD\_10\_GRA\_20220802\_CS  
 02 August 2022**

**Sheet Reference Number  
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