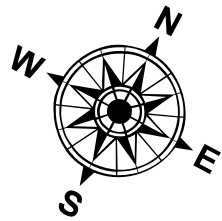
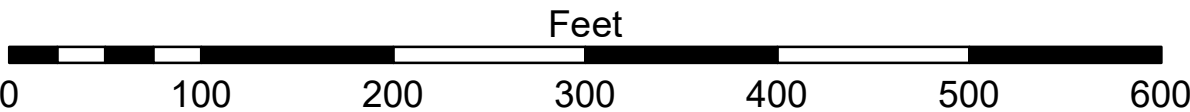


- LEGEND**
- Cable Submarine
  - - - Cable Overhead
  - Placement Area
  - ⚓ Beacon, General
  - Contour Lines
  - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
  - PROJECT DEPTH
  - PROJECT DEPTH +1'
  - PROJECT DEPTH +2'
  - PROJECT DEPTH +3'
  - PROJECT DEPTH +4'
  - PROJECT DEPTH +5'



1 inch = 100 feet



**NOTES:** THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

STATIONS -23+00 TO -32+00 REPRESENTS SURVEY ON 30APR2022.  
THE INNER HARBOR REPRESENTS SURVEY ON 04MAY2022

HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U S FOOT.

ALL SOUNDINGS ARE REFERENCED TO I.G.L.D. 1985 ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC.

HYDRAULIC CORRECTOR OF 0.3 FT. APPLIED

PROJECT DEPTHS FOR MUSKEGON HARBOR INCLUDE: 29', 28' AND 27'

VERTICAL WATER LEVEL READING WERE TAKEN FROM A FIXED GAGE MARK LONG THE SHEET STEEL WALL IN THE CG BASIN NEAR CROSS SECTION 00+50E

POSITIONING: APPLANIX POS M/V  
CORRECTIONS: MARINESTAR GNSS G2  
SONAR: ODOM CV300  
SOFTWARE: HYPACK 2018  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

ALL COORDINATES ARE IN U.S. SURVEY FEET.



DISCLAIMER: The data represented on this map is the property of the United States Government. The data is provided for informational purposes only and does not constitute a warranty of accuracy. The user is responsible for the results of any application of the data for other than its intended purpose. The data is provided for informational purposes only and does not constitute a warranty of accuracy. The user is responsible for the results of any application of the data for other than its intended purpose.

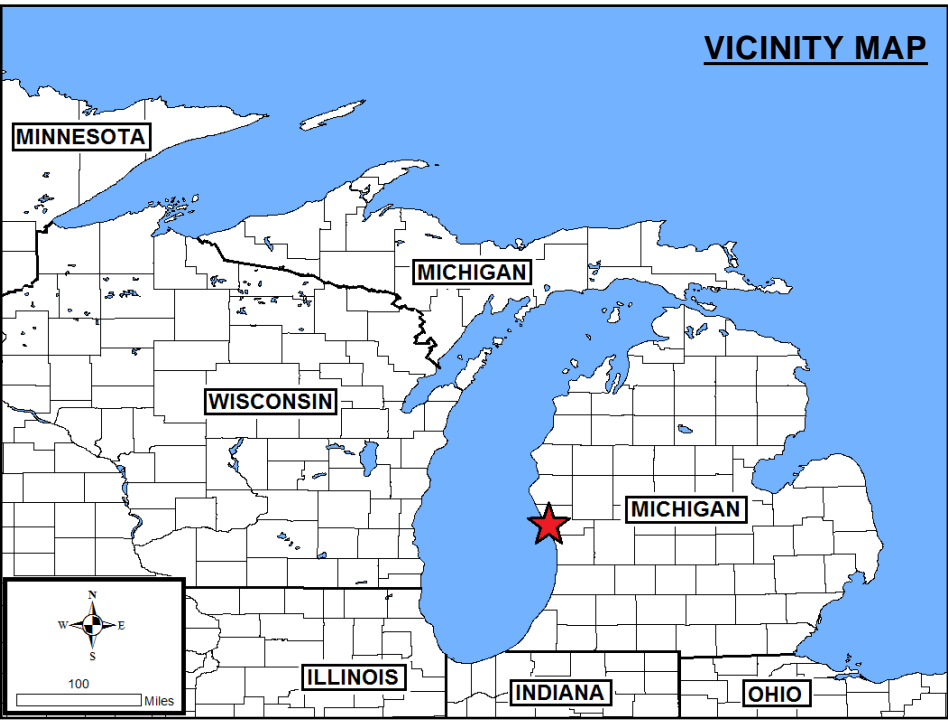
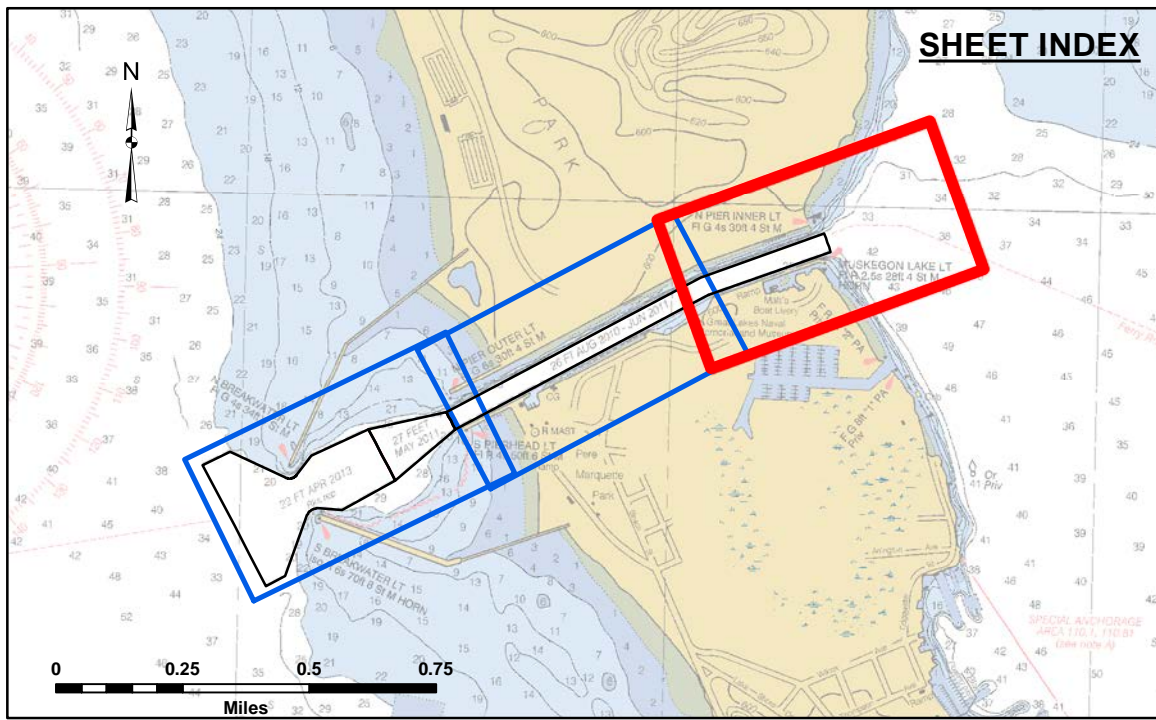
DISCLAIMER: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the data is provided for informational purposes only and does not constitute a warranty of accuracy. The user is responsible for the results of any application of the data for other than its intended purpose. The data is provided for informational purposes only and does not constitute a warranty of accuracy. The user is responsible for the results of any application of the data for other than its intended purpose.

U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT			
Submitted:	Surveyed By:		
Recommended:	Plotted By:		
Approved:	Checked By:		

Muskegon Harbor, MI  
Muskegon Harbor  
MU\_01\_MSK\_20220504\_CS  
04 May 2022

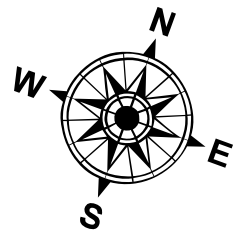
Sheet  
Reference  
Number  
2 of 3



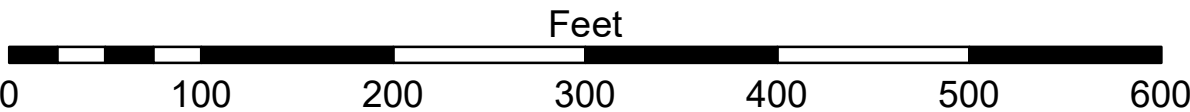


- LEGEND**
- ..... Cable Submarine
  - - Cable Overhead
  - Placement Area
  - ⚓ Beacon, General
  - Contour Lines
  - ▭ Channel Limits

- SOUNDING LEGEND**
- LESS THAN PROJECT DEPTH
  - PROJECT DEPTH
  - PROJECT DEPTH +1'
  - PROJECT DEPTH +2'
  - PROJECT DEPTH +3'
  - PROJECT DEPTH +4'
  - PROJECT DEPTH +5'



1 inch = 100 feet



**NOTES:** THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

STATIONS -23+00 TO -32+00 REPRESENTS SURVEY ON 30APR2022.  
THE INNER HARBOR REPRESENTS SURVEY ON 04MAY2022

HORIZONTAL GRID DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, SOUTH ZONE (2113), NORTH AMERICAN DATUM 1983, U S FOOT.

ALL SOUNDINGS ARE REFERENCED TO I.G.L.D. 1985 ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC.

HYDRAULIC CORRECTOR OF 0.3 FT. APPLIED

PROJECT DEPTHS FOR MUSKEGON HARBOR INCLUDE: 29', 28' AND 27'

VERTICAL WATER LEVEL READING WERE TAKEN FROM A FIXED GAGE MARK LONG THE SHEET STEEL WALL IN THE CG BASIN NEAR CROSS SECTION 00+50E

POSITIONING: APPLANIX POS M/V  
CORRECTIONS: MARINESTAR GNSS G2  
SONAR: ODOM CV300  
SOFTWARE: HYPACK 2018  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

ALL COORDINATES ARE IN U.S. SURVEY FEET.



**DISCLAIMER:** The data presented in the results of data collection is for informational purposes only. The data is not intended for use in any legal proceeding or for a specific project. The user is responsible for the results of any application of the data for other than its intended purpose. The user is responsible for the results of any application of the data for other than its intended purpose.

**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 provided. The recipient may not transfer these data to others without also transferring the Disclaimer.

U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT			
Submitted:	Surveyed By:	Plotted By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

**Muskegon Harbor, MI**  
**Muskegon Harbor**  
**MU\_01\_MSK\_20220504\_CS**  
**04 May 2022**

**Sheet**  
**Reference**  
**Number**  
**3 of 3**