

**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

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.

GRIDS SHOWN ARE BASED ON THE NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM, US SURVEY FOOT.

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

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN BY CROSS SECTION 8+00E IN ST. JOSEPH HARBOR, MI.

PROJECT DEPTHS FOR THIS HARBOR RANGE FROM 23.0' TO 18.0'

POSITIONING METHOD: MARINESTAR GNSS G2+  
MOTION COMPENSATION: APPLANIX OCEAN MASTER POS MV  
EQUIPMENT: ODOM CV SINGLE BEAM ECHOSOUNDER  
SOFTWARE: HYPACK 2021  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

**US Army Corps of Engineers**  
District: CELRE

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 particular purpose, expressed, or implied concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose of the recipient. These data belong to the Government. Therefore the recipient may not transfer these data to others without transferring the Disclaimer.

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

**ST JOSEPH HARBOR, MI**

**St Joseph Harbor**

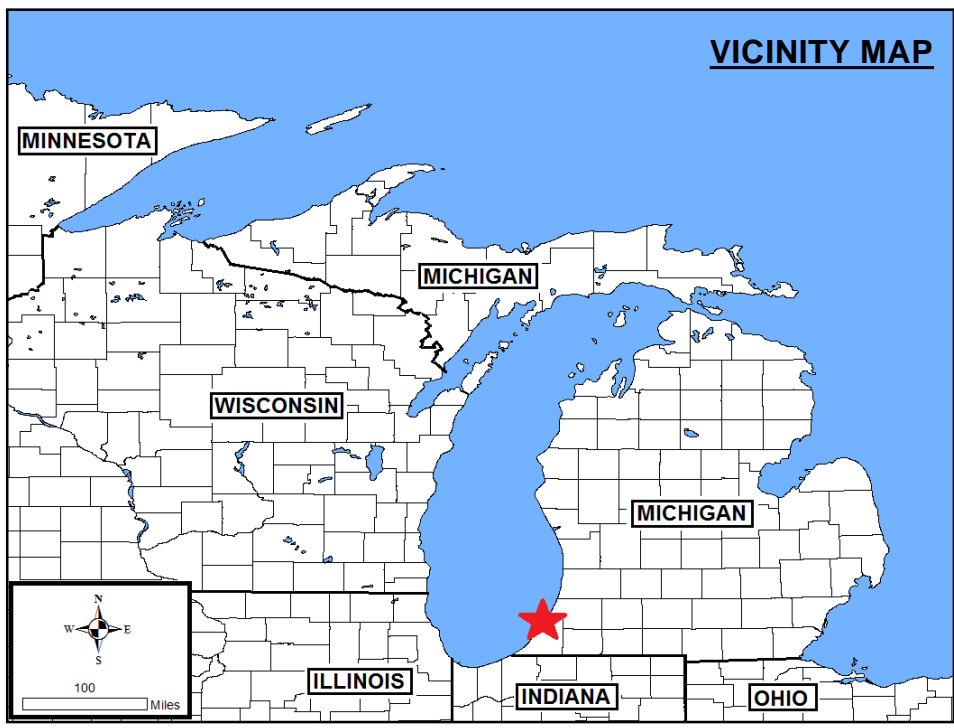
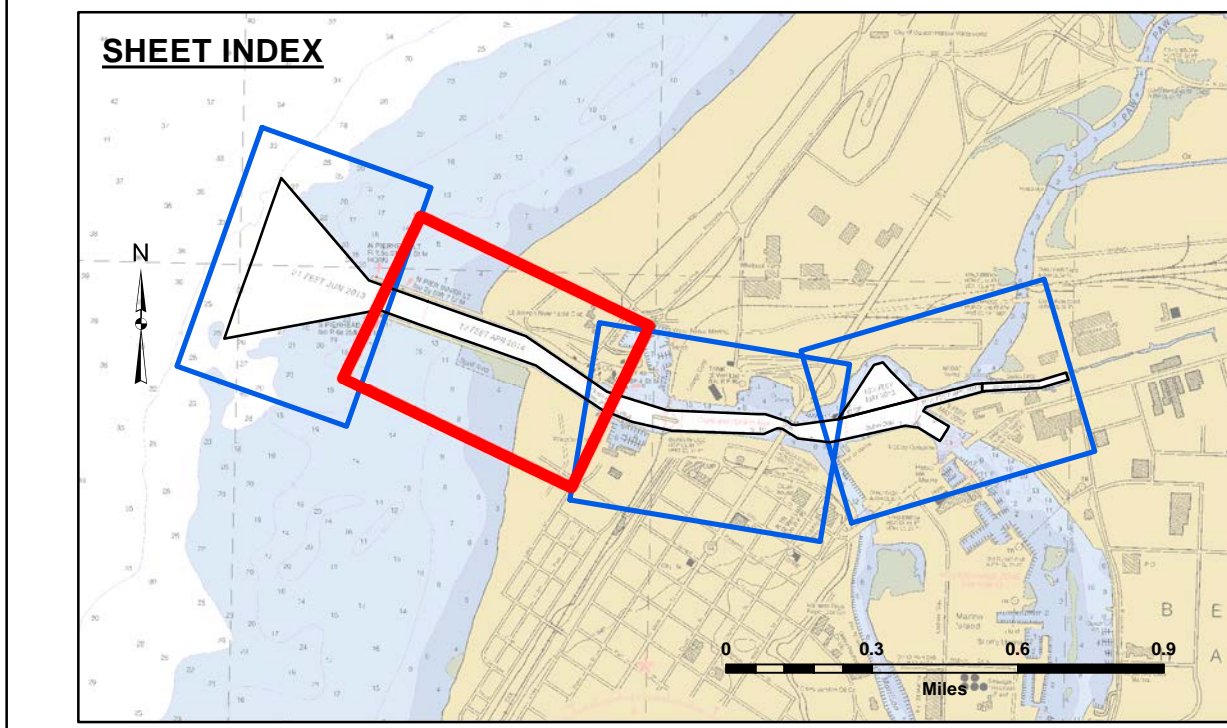
**ST\_01\_JOE\_20230620\_AD**

**20 June 2023**

**Sheet Reference Number**

**2 of 4**





**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

Feet

0 100 200 300 400 500 600

**NOTES:** THE SOUNDINGS INDICATED HEREON ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10 FOOT BY 10 FOOT AREA CENTERED ON THE TEXT. DERIVED FROM A 1 FOOT BY 1 FOOT AVERAGE DATASET AT CELL CENTER. THIS MAP SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SWEEP REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.

GRIDS SHOWN ARE BASED ON THE NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM, US SURVEY FOOT.

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

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN BY CROSS SECTION 8+00E IN ST. JOSEPH HARBOR, MI.

PROJECT DEPTHS FOR THIS HARBOR RANGE FROM 23.0' TO 18.0'

POSITIONING METHOD: MARINESTAR GNSS G2+  
MOTION COMPENSATION: APPLANIX OCEAN MASTER POS MV  
EQUIPMENT: RSONIC 2024 MULTIBEAM  
SOFTWARE: HYPACK 2021  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

\*\* SHORLEST SOUNDING PER QUARTER PER REACH.

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT

Submitted:	Surveyed By:
Recommended:	Piloted By:
Approved:	Checked By:

Chief, Survey Section  
Chief, Technical Services

ST JOSEPH HARBOR, MI  
St Joseph Harbor  
ST\_01\_JOE\_20230301\_CS  
01 March 2023

Sheet  
Reference  
Number  
2 of 4

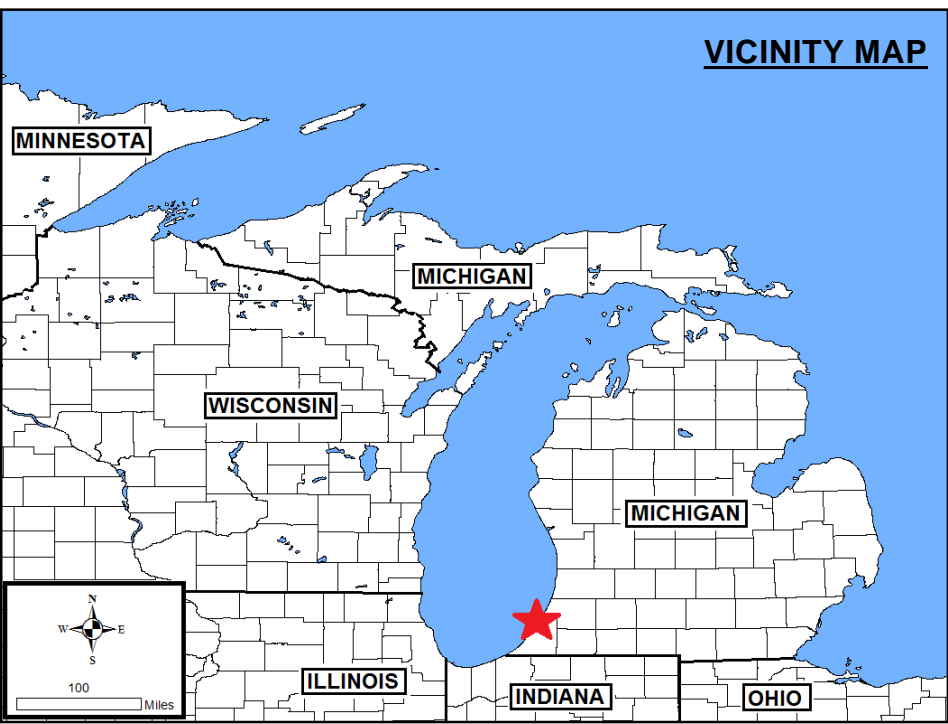
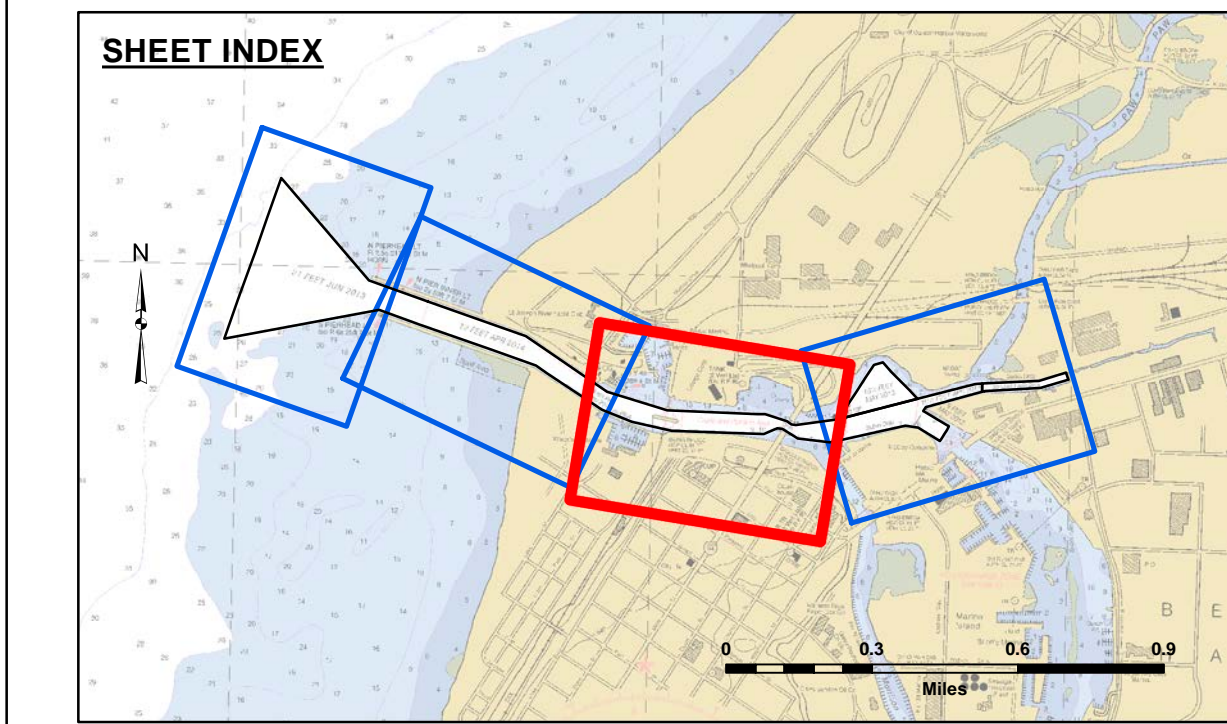
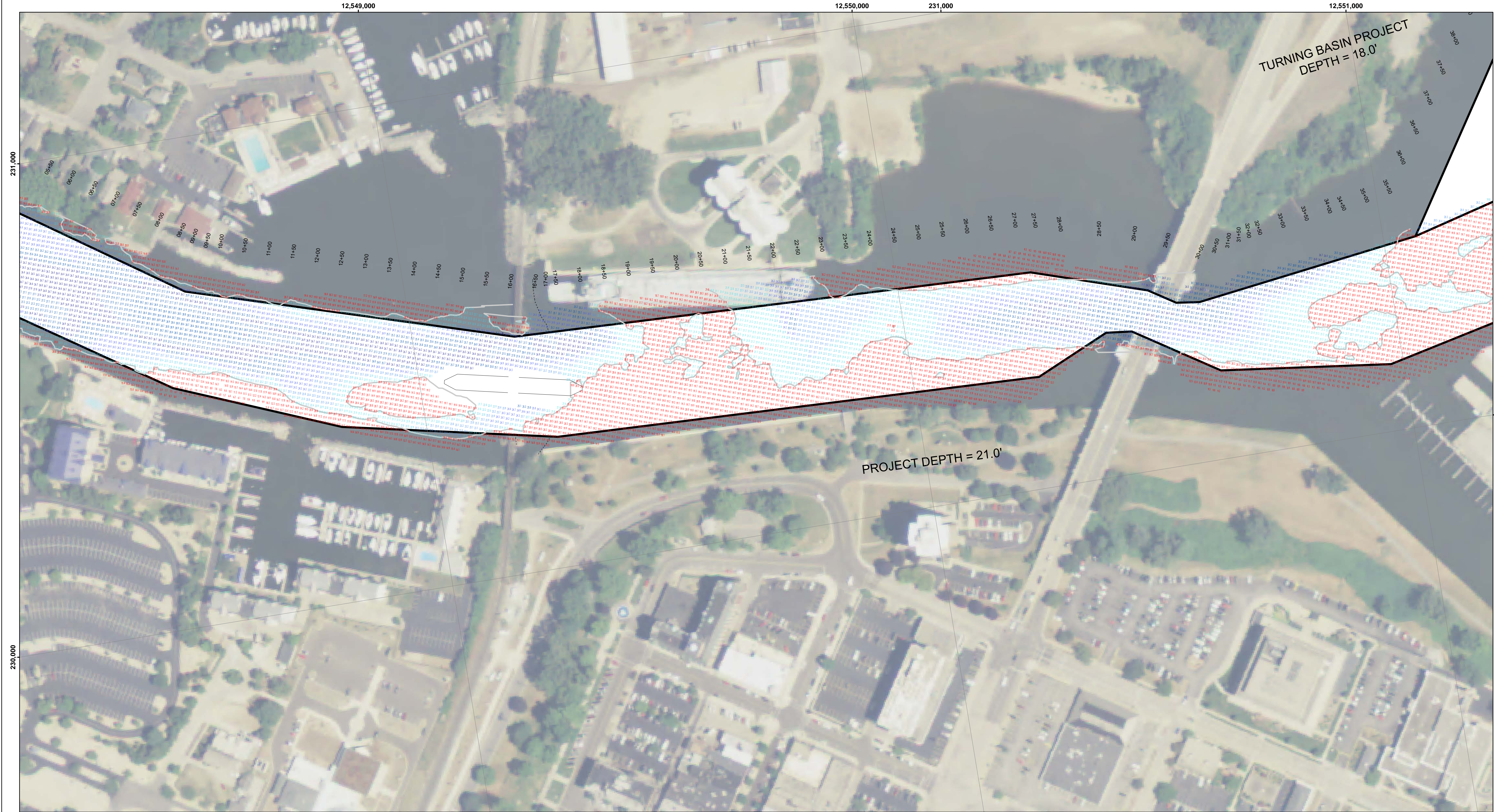
Revision Number:  
4.2-20230301



DISCLAIMER: The data presented on this map is for informational purposes only. The data was collected by the US Army Corps of Engineers and is not intended for use in any other application. 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 intended for use in any other application. The user is responsible for the results of any application of the data for other than its intended purpose.



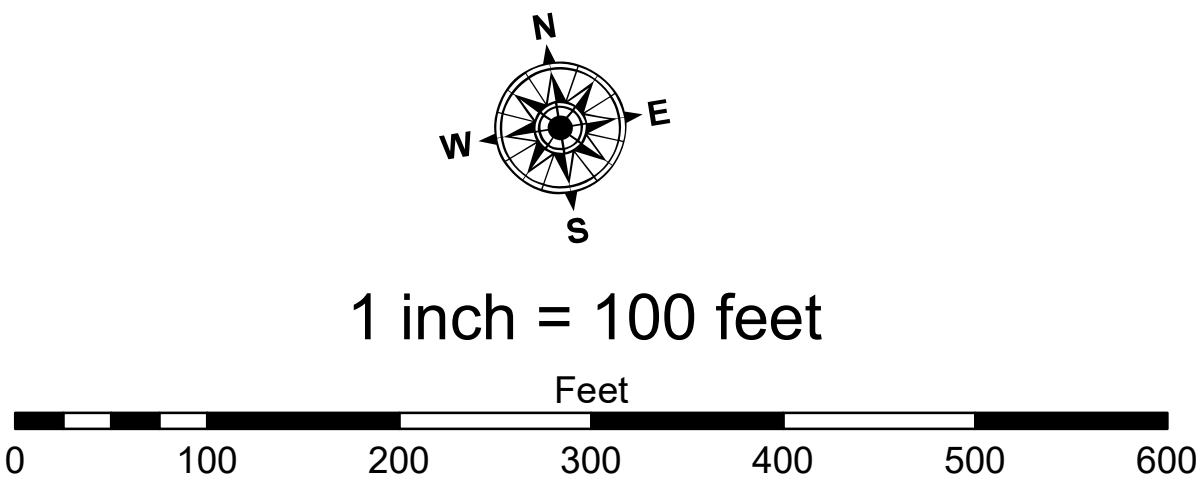


**LEGEND**

- 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'



**NOTES:** THE SOUNDINGS INDICATED HEREON ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10 FOOT BY 10 FOOT AREA CENTERED ON THE TEXT, DERIVED FROM A 1 FOOT BY 1 FOOT AVERAGE DATASET AT CELL CENTER. THIS MAP SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SHOAL REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.

GRIDS SHOWN ARE BASED ON THE NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM, US SURVEY FOOT.

ALL SOUNDINGS ARE REFERENCED TO 1 G.L.D. 1985 FOR LAKE MICHIGAN, ELEVATION 577.5 FT. ABOVE MEAN SEA LEVEL AT RIMOUSKI, QUEBEC.

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN BY CROSS SECTION 8+00E IN ST. JOSEPH HARBOR, MI.

PROJECT DEPTHS FOR THIS HARBOR RANGE FROM 23.0' TO 18.0'

POSITIONING METHOD: MARINESTAR GNSS G2+  
MOTION COMPENSATION: APPLANIX OCEAN MASTER POS MV  
EQUIPMENT: RSONIC 2024 MULTIBEAM  
SOFTWARE: HYPACK 2021  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

\*\* SHOALEST SOUNDING PER QUARTER PER REACH.

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

US Army Corps of Engineers  
District: CELRE

DISCLAIMER: The data presented on this map is for informational purposes only. The data was collected using a single beam echosounder. The data is not intended for navigation or other purposes. The user is responsible for the results of any application of the data for other than its intended purpose.

DISCLAIMER: The data presented on this map is for informational purposes only. The data was collected using a single beam echosounder. The data is not intended for navigation or other purposes. 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:	Piloted By:	Checked By:
Recommended:	Chief, Survey Section		
Approved:	Chief, Technical Services		

ST JOSEPH HARBOR, MI

St Joseph Harbor

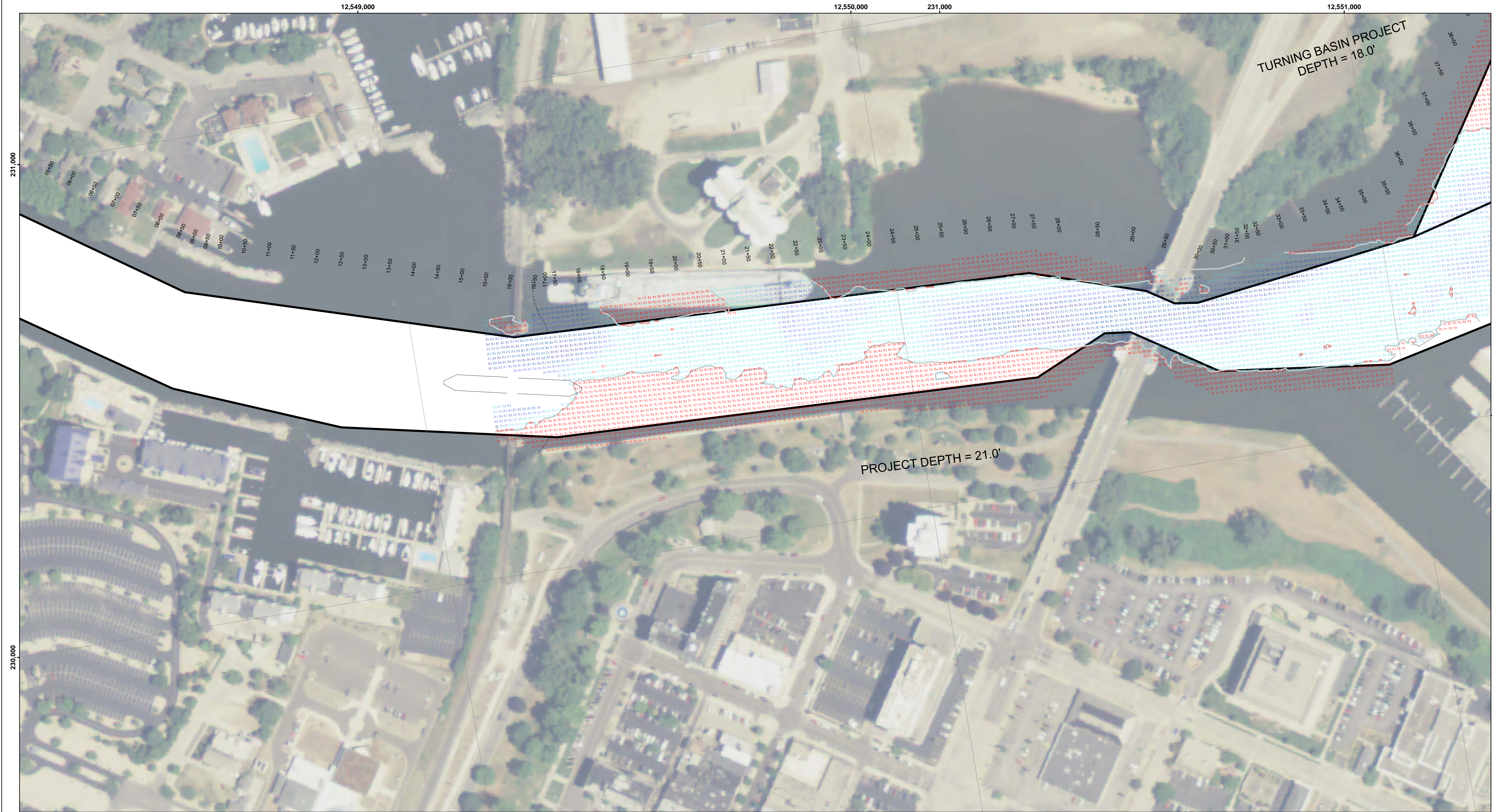
ST\_01\_JOE\_20230301\_CS

01 March 2023

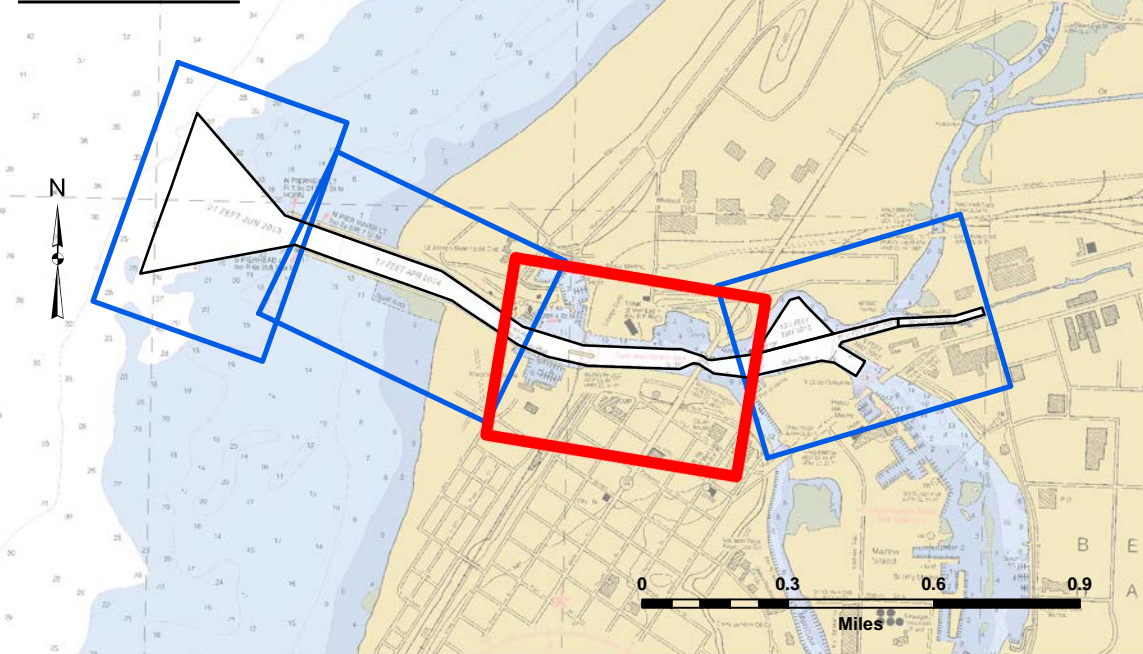
Sheet Reference Number  
3 of 4

Revision Number:  
4.2-20230301





SHEET INDEX

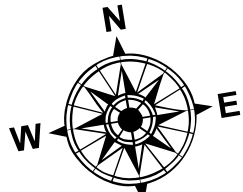


VICINITY MAP

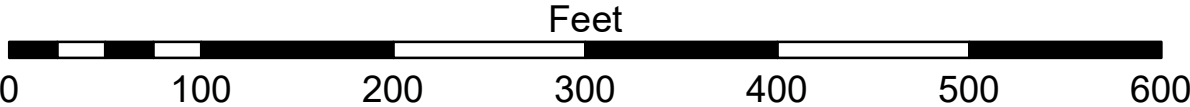


- LEGEND**
- ..... Cable Submarine
  - - Cable Overhead
  - Placement Area
  - ⊥ Beacon, General
  - Contour Lines
  - Channel\_Limits

- 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 SOUNDINGS INDICATED HEREON ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10 FOOT BY 10 FOOT AREA CENTERED ON THE TEXT DERIVED FROM A 1 FOOT BY 1 FOOT AVERAGE DATASET AT CELL CENTER. THIS MAP SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SHOAL REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.

GRIDS SHOWN ARE BASED ON THE NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM, US SURVEY FOOT.

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

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN BY CROSS SECTION 8+00E IN ST. JOSEPH HARBOR, MI.

PROJECT DEPTHS FOR THIS HARBOR RANGE FROM 23.0' TO 18.0'

POSITIONING METHOD: MARINESTAR GNSS G2+  
MOTION COMPENSATION: APPLANIX OCEAN MASTER POS MV  
EQUIPMENT: RSONIC 2024 MULTIBEAM ECHOSOUNDER  
SOFTWARE: HYPACK 2021  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS



US Army Corps  
of Engineers  
District: CELRE

Product Liability: The data represents the results of data collection processing for a specific US Army Corps of Engineers activity and indicates the general existing conditions. 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 Government makes no warranty, expressed or implied concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose of the data. The recipient agrees to hold the Government harmless under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. The recipient may not transfer, copy, reproduce, or otherwise use these data to others without the transferring the Disclaimer.

U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT

Submitted:

Surveyed By:

Plotted By:

Checked By:

ST JOSEPH HARBOR, MI

St Joseph Harbor

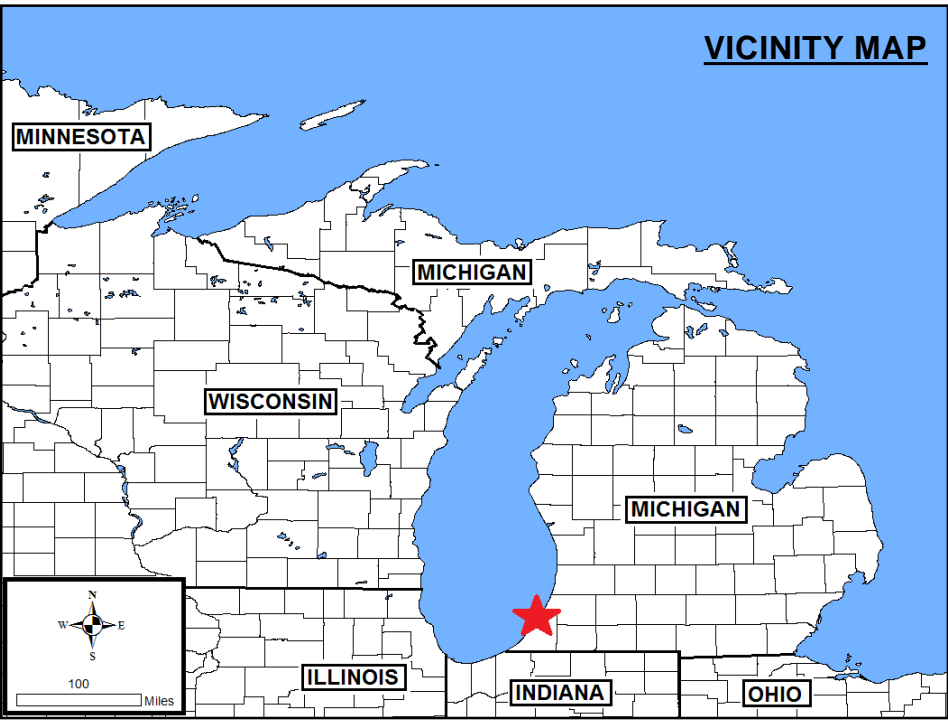
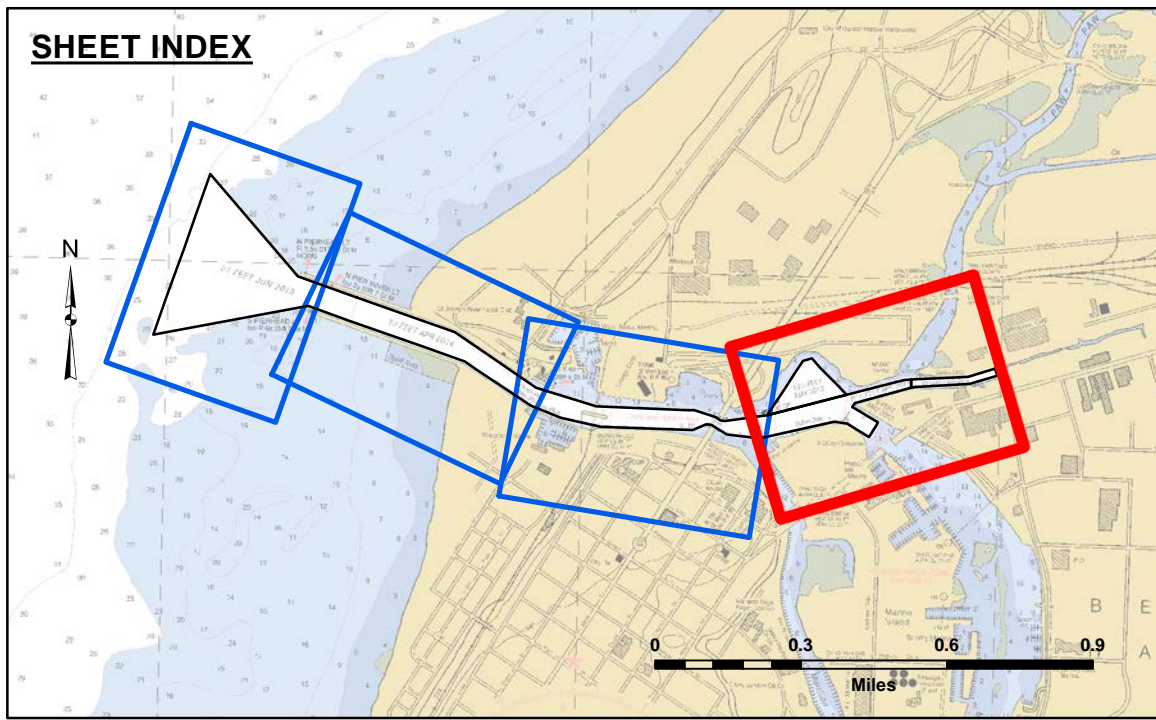
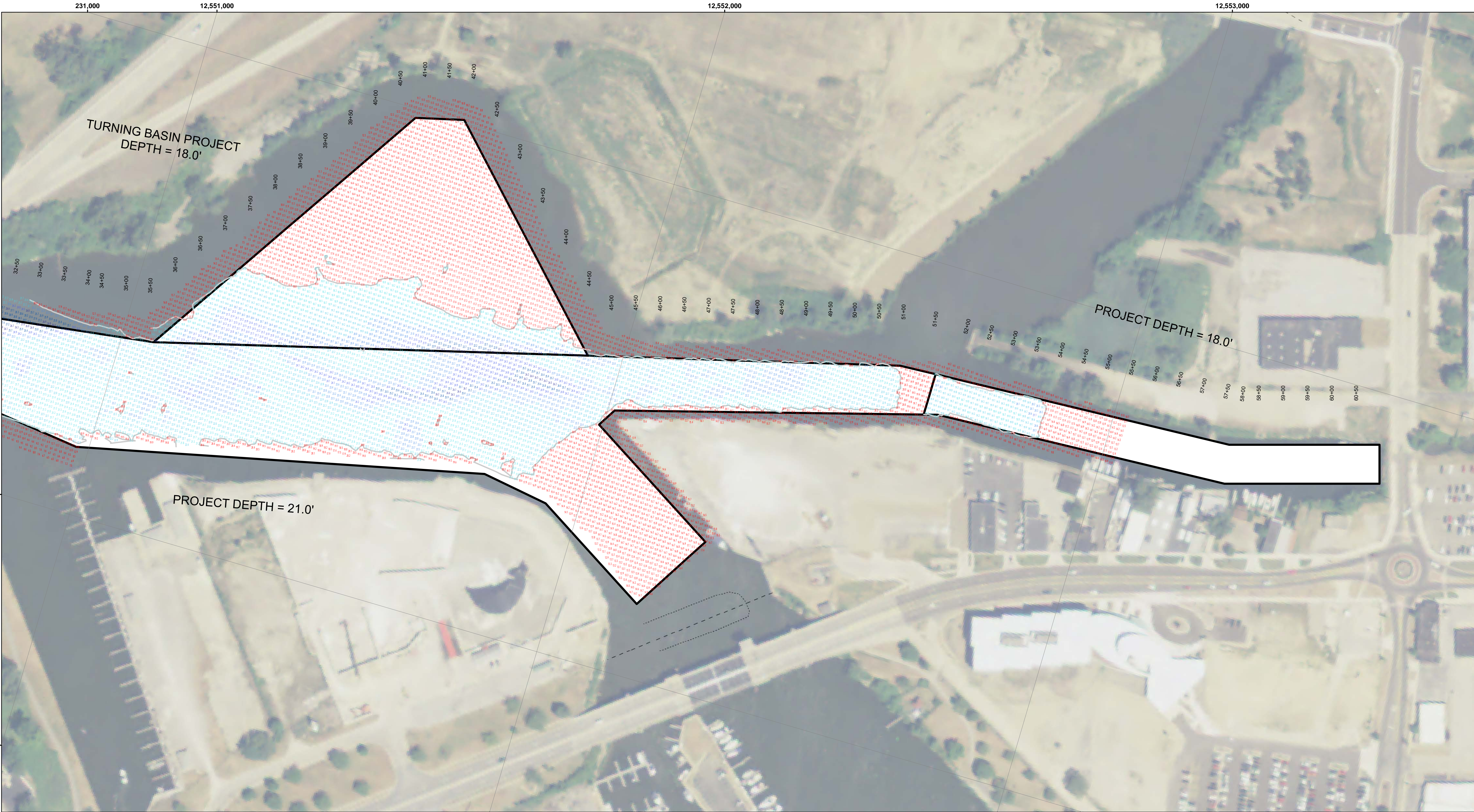
ST\_01\_JOE\_20230908\_AD

08 September 2023

Sheet  
Reference  
Number  
3 of 4

Revision Number:  
4.2-20230908





**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

Feet

**NOTES:** THE SOUNDINGS INDICATED HEREON ARE GENERALIZED DEPTHS AND ARE NOT REPRESENTATIVE OF THE FULL DATASET. THE SOUNDINGS REPRESENT THE MINIMUM DEPTH FOUND WITHIN THE 10 FOOT BY 10 FOOT AREA CENTERED ON THE TEXT. DERIVED FROM A 1 FOOT BY 1 FOOT AVERAGE DATASET AT CELL CENTER. THIS MAP SHOULD NOT BE USED FOR CHANNEL CLEARANCE OR VOLUME COMPUTATIONS. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SOAL REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.

GRIDS SHOWN ARE BASED ON THE NATIONAL GEODETIC SURVEY PROJECTION TABLES, STATE OF MICHIGAN, SOUTH ZONE (2113), LAMBERT PROJECTION, 1983 NORTH AMERICAN DATUM, US SURVEY FOOT.

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

VERTICAL WATER LEVEL READINGS WERE TAKEN FROM A FIXED GAGE MARK ALONG THE SHEET STEEL WALL IN BY CROSS SECTION 8+00E IN ST. JOSEPH HARBOR, MI.

PROJECT DEPTHS FOR THIS HARBOR RANGE FROM 23.0' TO 18.0'

POSITIONING METHOD: MARINESTAR GNSS G2+  
MOTION COMPENSATION: APPLANIX OCEAN MASTER POS MV  
EQUIPMENT: RESONIC 2024 MULTIBEAM ECHOSOUNDER  
SOFTWARE: HYPACK 2021  
VESSEL: LAUNCH 3058

2010 AERIAL PHOTOGRAPHY DATA SOURCE: USGS

U.S. ARMY CORPS OF ENGINEERS  
DETROIT DISTRICT

Submitted:	Surveyed By:
Recommended:	Plotted By:
Approved:	Checked By:

ST JOSEPH HARBOR, MI  
St Joseph Harbor  
ST\_01\_JOE\_20230908\_AD  
08 September 2023

Sheet  
Reference  
Number  
4 of 4

Revision Number:  
4.2-20230908-20

US Army Corps  
of Engineers  
District: CELRE

DISCLAIMER: The data presented in this map is 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 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 prepared. The recipient may not transfer these data to others without also transferring the Disclaimer.