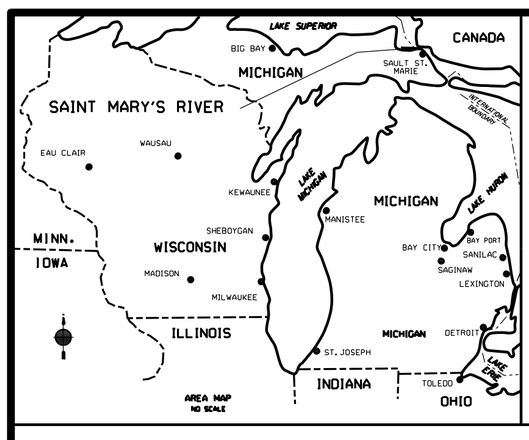


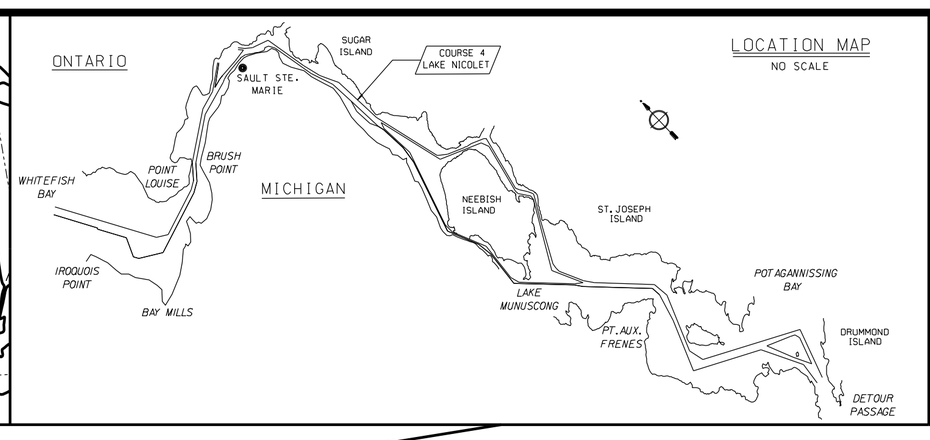


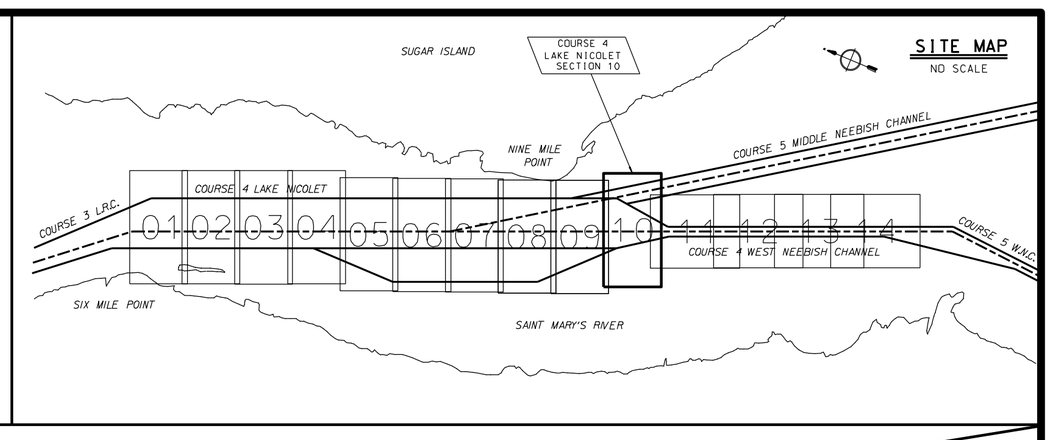


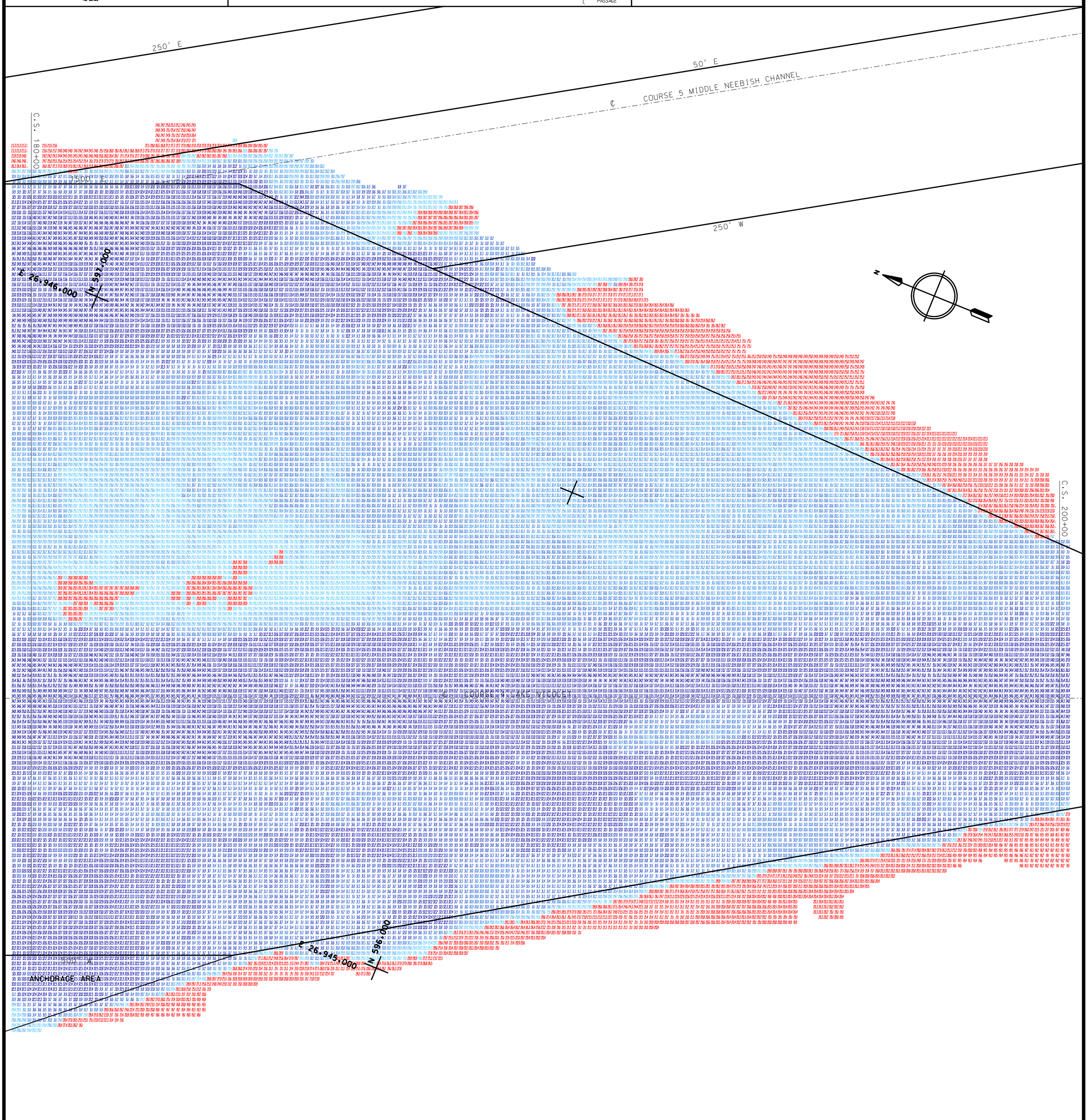


## NOTES

1. THE SOUNDINGS INDICATED HEREON REPRESENT THE MINIMUM DEPTH FOUND IN THE 10 FOOT BY 10 FOOT AREA CENTERED AROUND THE TEXT. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SHOAL REMOVAL OPERATIONS AND NOTICES TO NAVIGATION INTERESTS.
2. ELEVATIONS AND SOUNDING DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM 1955 (IGLD 55). LOW WATER DATUM ZERO IS 577.2 FEET ABOVE MEAN WATER LEVEL AT FATHER POINT QUEBEC. WATER LEVEL READINGS ARE FROM AN AUTOMATED GAUGE LOCATED AT NAVIGATION LIGHT #54. DEPTHS ARE MEASURED USING A R2SONIC 2024 MULTIBEAM SONAR.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON MAY 16, 2013 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS PRESENT AT THE TIME.
4. THE LOCATION OF NAVIGATION AIDS REPRESENT THEIR GENERAL LOCATION AND CANNOT BE CONSIDERED FOR NAVIGATION.
4. HORIZONTAL POSITIONING IS DETERMINED USING THE DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS). THE DIFFERENTIAL CORRECTIONS ARE PROVIDED BY U.S. COAST GUARD DIFFERENTIAL BROADCAST STATIONS LOCATED AT PICKFORD, AND CHEBOYGAN MI. SIGNAL STRENGTH IS USED AS THE DETERMINING FACTOR IN DIFFERENTIAL SELECTION. THE DGPS RECEIVER IS MANUFACTURED BY STARLINK, INC. MODEL DNAV 212, SERIAL NO. 292. THIS IS A SINGLE FREQUENCY RECEIVER (C/A, L1 CODE) WITH ADVERTISED POSITIONAL ACCURACY OF 1-3 METERS RMS.
5. GRID COORDINATES ARE BASED ON THE MICHIGAN STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, MICHIGAN NORTH ZONE (2111), NORTH AMERICAN DATUM 1983 (NAD83). ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET. CROSS SECTIONS AND RANGES ARE REFERRED TO COURSE 4 WEST NEEBISH CHANNEL.
6. UNLESS OTHERWISE NOTED PROJECT DEPTH IS 29.0' BELOW LOW WATER DATUM.

**LEGEND**

- 0.0'
- 29.0'
- 29.5'
- 30.0'
- 30.5'
- 31.0'
- 31.5'
- 32.0'
- 50.0'

100' 50' 0 100' 200'

SCALE: 1"=100'

FLOW

Sheet reference number: C4W-10
Sheet 10 of 14

SOO AREA OFFICE
SAINT MARY'S RIVER
FEDERAL NAVIGATION CHANNEL

COURSE 4 LAKE NICOLET
SURVEY SECTION 10
C.S. 180+00 to C.S. 200+00
CONDITION SURVEY

| | | | |
|---|---|---|---|
| U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS DETROIT, MICHIGAN | Surveyed by: J.Haas A.Payson | Survey Date: May 16, 2013 | Rev. |
| | Dwn by: J.S.M. / Ckd by: | Design file name: C4wv110c131.dgn | |
| Approval Recommended: Area Eng. Soo Office | Reviewed by: Chief, Fac. Mgmt. | Drawing code: | |
| Approved by: District Engineer: | Submitted by: Chief, SMR Section | File name: Plot date: 05-07-13 Plot scale: 1"=100' | |

| Symbol | Description | Date | Appr. | Symbol | Description | Date | Appr. |
|---|---|---|---|---|---|---|---|

US Army Corps of Engineers
Detroit District