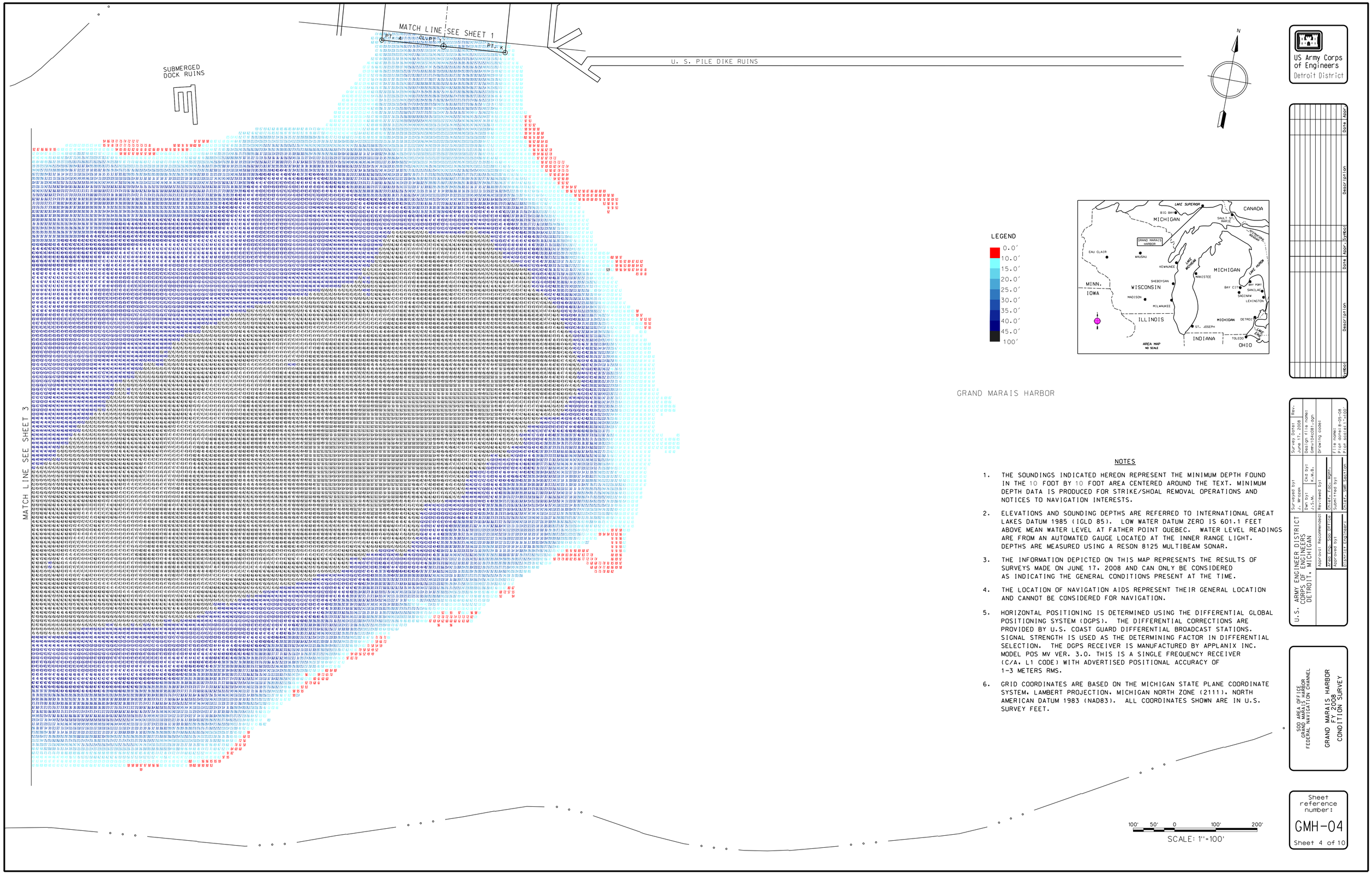

US Army Corps of Engineers
Detroit District

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 1985 (IGLD 85). LOW WATER DATUM ZERO IS 601.1 FEET ABOVE MEAN WATER LEVEL AT FATHER POINT QUEBEC. WATER LEVEL READINGS ARE FROM AN AUTOMATED GAUGE LOCATED AT THE INNER RANGE LIGHT. DEPTHS ARE MEASURED USING A RESON 8125 MULTIBEAM SONAR.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON JUNE 17, 2008 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.
5. HORIZONTAL POSITIONING IS DETERMINED USING THE DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS). THE DIFFERENTIAL CORRECTIONS ARE PROVIDED BY U.S. COAST GUARD DIFFERENTIAL BROADCAST STATIONS. SIGNAL STRENGTH IS USED AS THE DETERMINING FACTOR IN DIFFERENTIAL SELECTION. THE DGPS RECEIVER IS MANUFACTURED BY APPLANIX INC. MODEL POS MV VER. 3.0. THIS IS A SINGLE FREQUENCY RECEIVER (C/A, L1 CODE) WITH ADVERTISED POSITIONAL ACCURACY OF 1-3 METERS RMS.
6. 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.

Symbol	Description	Date	Appr.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
DETROIT, MICHIGAN

Surveyed by: J. Wrobek
Survey Dates: June 17, 2008
Rev.
Dwn by: J. Wrobek
Chd by: M.A.B.
Design File name: Design
Drawing Code: 1
Reviewed by: Chief, Fdc. Mgmt.
Approval Recommended: Area Eng. Soo Office
Approved by: District Engineer
Submitted by: Chief, SAR Section
File name: Plot date: 8-05-08
Plot scale: 1"=100'

SOO AREA OFFICE
GRAND MARAIS HARBOR
FEDERAL NAVIGATION CHANNEL

GRAND MARAIS HARBOR
FY 2008
CONDITION SURVEY

Sheet reference number:
GMH-04
Sheet 4 of 10