



NOTES

- 1) 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 PRESENT AT THAT TIME.
- 2) ALL SOUNDINGS ARE IN FEET AND ARE REFERENCED TO LOW WATER DATUM ELEVATION 681.1 ABOVE MEAN SEA LEVEL, I.C.L.D. 1985. NOAA INTERNET GAGE USED FOR SURVEY.
- 3) PROJECT DEPTHS FOR THIS AREA ARE 8', 16', 18', & 20'.
- 4) THE GRID COORDINATE SYSTEM SHOWN IS REFERENCED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM, LAMBERT PROJECTION, NORTH ZONE (2201), NORTH AMERICAN DATUM 1983 (NAD 83), US FOOT.
- 5) THE LOCATION OF NAVIGATION BUOYS REPRESENTS THE GENERAL LOCATION ON THE DATE OF THE SURVEY AND CANNOT BE CONSIDERED FOR NAVIGATION.
- 6) THE SURVEY SHOWN WAS CONDUCTED BY DC COLTZ, PARTY CHIEF DURING 23 AUG., 2011 USING D.G.P.S., POSITIONING, AN INTERSPACE SOUNDING, AND A HYPACK AUTOMATED HYDROGRAPHIC SURVEY SYSTEM.
- 7) THE BASE MAP FEATURES DEPICTED ON THIS MAP WERE DIGITIZED FROM EXISTING CHARTS AND ARE OUTDATED AND INACCURATE.

CHANNEL LINE COORDINATE TABLE

STA.	NORTHING	EASTING	STA.	NORTHING	EASTING
1	794193.184	3303457.981	14	794689.814	3305055.594
2	794302.072	3303543.514	15	795379.806	3302216.787
3	794403.988	3303288.964	16	795136.152	3304887.324
4	794385.784	3303954.925	18	795564.221	3304309.586
5	794445.236	3303259.815	20	795596.015	3303699.753
6	794423.846	3303971.776	22	795477.802	3303193.768
7	794618.940	3303253.449	100	794709.725	3303366.648
8	794394.368	3304188.283	1010	794819.606	3303570.749
9	794965.098	3303248.740	1020	794849.579	3303800.592
10	794581.146	3304675.842	1030	794795.721	3304026.829
11	795411.743	3303592.957	1040	794754.885	3304118.293
12	794603.353	3305061.536	1050	794581.180	3304041.483
13	795450.021	3303513.567	1060	794622.015	3303749.140
			1070	794659.883	3303790.620
			1080	794638.807	3303629.014
			1090	794561.545	3303485.515

SURVEY CONTROL POINTS

STA.	DESCRIPTION	NORTHING	EASTING
GM-1	DISK	795257.115	3302984.186
GM-2	DISK	794357.789	3303973.320
GM-3	DISK	794286.528	3303873.831
GM-4	ALUM. CAP	794871.850	3305155.971
IF-1	ALUM. CAP	795666.398	3304778.613
IF-2	ALUM. CAP	795513.469	3305135.515
BO-5	CHISELED **	794293.046	3303899.362
BO-222	DISK	795088.007	3302656.681

LEGEND

- △ HORIZONTAL CONTROL POINT
- NO. DREDGING LIMIT TURNING POINT
- CHANNEL LINE
- - - DREDGING LIMIT
- SHORELINE
- PROJECT DEPTH CONTOUR

SCALE IN FEET

0 100 200 300 400 500

NO.	DATE	REVISION	BY

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

GRAND MARAIS HARBOR MINNESOTA

CONDITION SURVEY- AUGUST 2011

DESIGNED BY: *
DRAWN BY: *
CHECKED BY: *
REVIEWED BY: *

APPROVAL RECOMMENDED: * DATE: _____

CHIEF, PROJ., OPNS., SEC. CHIEF, OPERATIONS & MANAGEMENT BR.

APPROVED: *
CHIEF, CONST.-OPNS. DIVISION

DULUTH, MN

SCALE AS SHOWN 1" = 100'
CADD FILE NAME = GM11C.dgn
DRAWING NUMBER: _____
SHEET: 1 OF 1