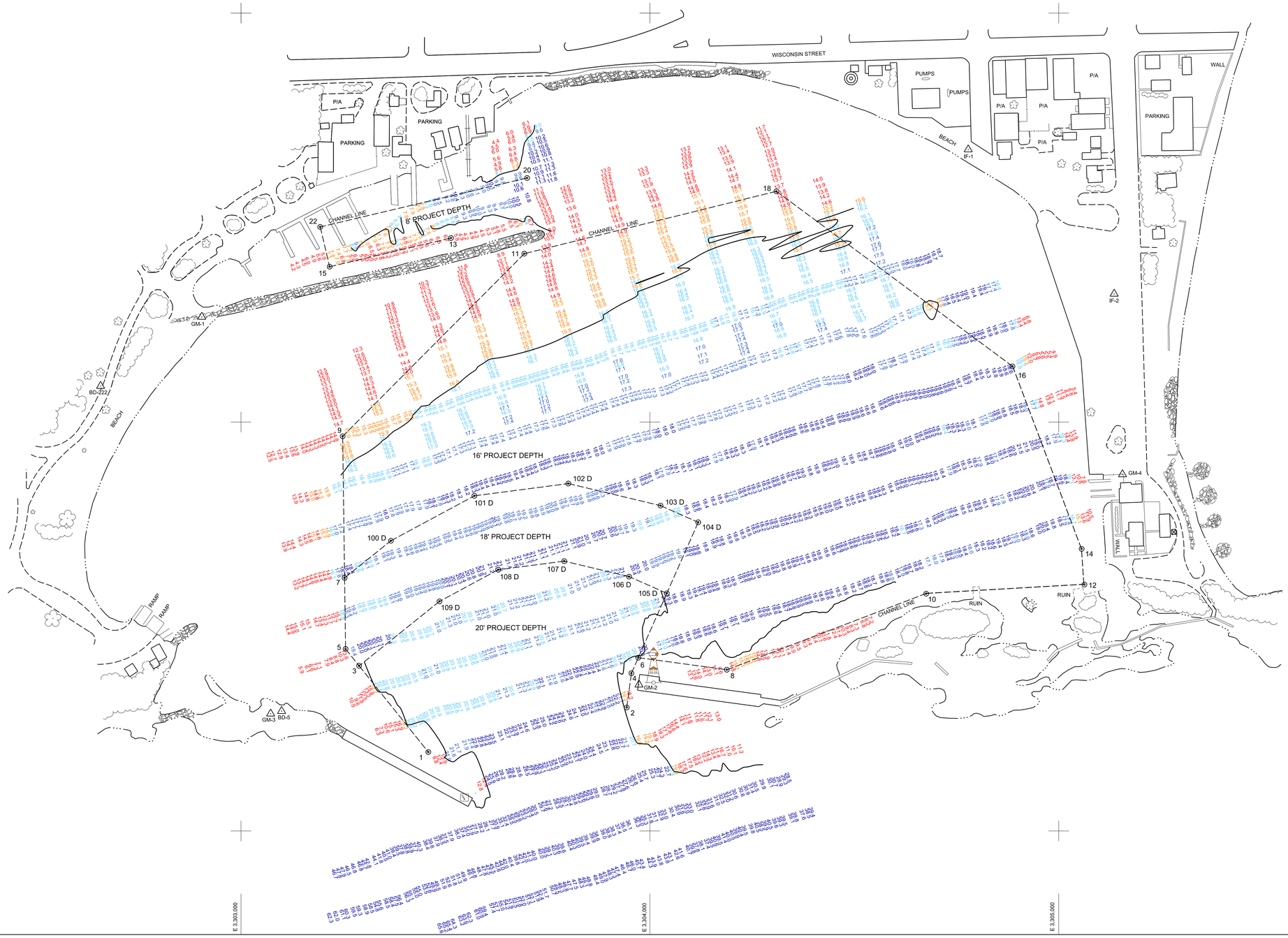

NOTES

1) THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON OCTOBER 15, 2015 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS PRESENT AT THAT TIME.

2) SOUNDING DEPTHS ARE REFERENCED TO INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD 85) LOW WATER DATUM ELEVATION 601.1 FEET ABOVE MEAN WATER LEVEL AT RIMOUSKI QUEBEC. WATER LEVEL READINGS ARE FROM AN AUTOMATED NOAA GAGE LOCATED AT GRAND MARAIS, MINNESOTA (9099990). DEPTHS ARE MEASURED USING A ROSS LABORATORIES MODEL 825C PORTABLE SURVEY SOUNDER.

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), U.S. SURVEY FOOT.

5) THE LOCATION OF NAVIGATION AIDS REPRESENTS THEIR GENERAL LOCATION AND CANNOT BE CONSIDERED FOR NAVIGATION.

6) HORIZONTAL POSITIONING IS DETERMINED USING THE DIFFERENTIAL GLOBAL POTITIONING SYSTEM (DGPS). THE DIFFERENETIAL CORRECTIONS ARE PROVIDED BY U.S. COAST GUARD DIFFERENTIAL BROADCAST STATIONS LOCATED AT WISCONSIN POINT, SUPERIOR, WISCONSIN.

LEGEND

- GPS CONTROL POINT
- HORIZONTAL CONTROL POINT
- NO. — CHANNEL LINE TURNING POINT
- CHANNEL LINE
- SHORELINE
- PROJECT DEPTH CONTOUR

8' LEGEND	16' LEGEND	18' LEGEND	20' LEGEND
0.0'	0.0'	0.0'	0.0'
7.0'	15.0'	17.0'	19.0'
8.0'	16.0'	18.0'	20.0'
9.0'	17.0'	19.0'	21.0'
10.0'	18.0'	20.0'	22.0'
30.0'	60.0'	60.0'	60.0'

SURVEY CONTROL POINTS

STA.	DESCRIPTION	COORDINATES	
		NORTHING	EASTING
GM-1	DISK	795257.115	3302904.186
GM-2	DISK	794357.789	3303973.320
GM-3	DISK	794286.828	3303072.531
GM-4	ALUMINUM CAP	794871.850	3305155.971
IF-1	ALUMINUM CAP	795666.358	3304776.613
IF-2	ALUMINUM CAP	795313.469	3305135.515
BD-5	CHISELED "+"	794293.046	3303099.362
BD-222	DISK	795088.007	3302656.681

N

0 100' 200'

CHANNEL LINE
COORDINATE TABLE

STA.	COORDINATES	
	NORTHING	EASTING
STA. 1	794193.184	3303457.981
STA. 2	794302.072	3303943.514
STA. 3	794403.908	3303288.964
STA. 4	794385.784	3303954.925
STA. 5	794445.236	3303255.815
STA. 6	794423.846	3303971.776
STA. 7	794618.940	3303253.449
STA. 8	794394.368	3304188.203
STA. 9	794965.098	3303248.740
STA. 10	794581.146	3304675.842
STA. 11	795411.743	3303692.957
STA. 12	794603.353	3305061.536
STA. 13	795450.021	3303513.567
STA. 14	794689.814	3305055.594
STA. 15	795379.806	3303216.787
STA. 16	795136.192	3304887.324
STA. 18	795564.221	3304309.506
STA. 20	795596.815	3303699.753
STA. 22	795477.102	3303193.768
STA. 100D	794709.725	3303366.648
STA. 101D	794819.606	3303570.749
STA. 102D	794849.579	3303800.592
STA. 103D	794795.721	3304026.029
STA. 104D	794754.885	3304118.293
STA. 105D	794581.180	3304041.403
STA. 106D	794622.015	3303949.140
STA. 107D	794659.883	3303790.620
STA. 108D	794638.807	3303629.014
STA. 109D	794561.545	3303485.515

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPD	MARK	DESCRIPTION	DATE	APPD

U.S. ARMY CORPS OF ENGINEERS
DETROIT DISTRICT
DETROIT, MI

DULUTH AREA OFFICE
600 LAKE AVENUE SOUTH
DULUTH, MN 55802

SURVEYORS: DAN BY: CSC
REVIEWED BY:
APPROVED BY:
PLOT SCALE: 1" = 100'
SIZE: ANSI E
DATE OF SURVEY: 15-Oct-15
SUBMITTED BY:
CONTRACT NO.:
IMAGE DATE:
IMAGE SOURCE:
DRAWING DATE: 28-Feb-16
FILE NAME: GRMRHR2015.dgn

GRAND MARAIS HARBOR
MINNESOTA

CONDITION OF CHANNEL
OCTOBER 2015

SHEET IDENTIFICATION
VH101

GMA7570/50