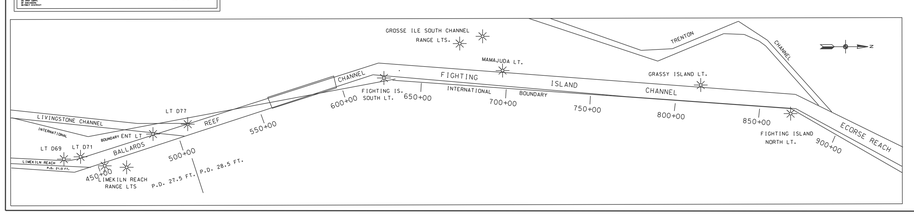
E 13457000
N 243000
E 13458000
N 242400
E 13457000
N 242400
E 13458000
N 242000
560+00
570+00
580+00
591+00
CENTER LINE, BALLARDS REEF CHANNEL
FLOW
E 13459000
N 242000
D 84
USA
CANADA
INTERNATIONAL BOUNDARY LINE
L.W.D. 570.4'
PROJECT DEPTH 28.5'
E 13459000
N 243000
E 13459000



LEGEND

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 AT THE TIME.

LOW WATER DATUM

ELEVATIONS AND PROJECT DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM. (1985)

GRID COORDINATES

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

ALL COORDINATES ARE IN U.S. SURVEY FEET.

DIRECTIONS

ALL DIRECTIONS ARE GRID AZIMUTHS REFERRED TO NORTH ZERO.

PROJECT DEPTHS ARE AS SHOWN ON DRAWING. ALL DEPTHS ARE IN U.S. SURVEY FEET.

THE AUTOMATED ELECTRONIC SURVEY WAS CONDUCTED BY ROBERT W. POLAK AND JAMES P. BYRNE. ABOARD THE USACDE SURVEY VESSEL "WHEELER".

AUTOMATED EQUIPMENT USED

POSITIONING:	TSS POS-MV
SOFTWARE:	HYPACK HYSWEEP
SONIC SOUNDER:	RESON SEABAT 8125

28.5 ft. PROJECT DEPTH CONTOUR

NOTES:

1. GAGES USED WERE OBTAINED ELECTRONICALLY FROM THE NOAA GAGE AT WYANDOTTE (9044030). VIA THE INTERNET.
2. POSITIONS WERE DETERMINED BY GPS REFERENCE BEACON 838. LOCATED AT FORT WAYNE DETROIT. MICHIGAN - FREQUENCY 319 KHZ. 200 BPS
3. DEPTH MEASURED USING SEABAT 8125 ULTRA HIGH RESOLUTION FOCUSED MULTIBEAM ECHOSOUNDER SYSTEM AND ODOM DIGIBAR PRO DB1200 VELOCITY PROFILER.
4. EDITED MULTIBEAM SOUNDINGS WERE SORTED INTO A 37 FT. BY 15 FT. MATRIX. THE LARGEST STRIKE LOCATED IN EACH CELL WAS THEN SELECTED FOR PLOTTING AT THE CELL CENTER.

100' 0' 100' 200'
SCALE

NO.	DATE	REVISION	BY
1.	3 SEPT 2008	EDITTED NOTES	RWP
2.	3 SEPT 2008	PLACED SOUNDINGS AND CONTOURED	RWP

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

DESIGNED BY:
DRAWN BY: RWP
CHECKED BY:
REVIEWED BY:
SUBMITTED BY:
CHIEF, PROJ MNGT SEC P.E.
APPROVED:
CHIEF, CONSTRUCTION - OPERATIONS DIVISION P.E.

DETROIT AREA OFFICE 21 JULY 2008

DETROIT RIVER, MICHIGAN
BALLARD'S REEF CHANNEL
CS 560+00 TO CS 591+00
MULTI-BEAM CONDITION SWEEP SURVEY
AVERAGE DEPTH PLOT

APPROVAL RECOMMENDED:
CHIEF, OPERATIONS MAINT. BRANCH P.E. DATE

SCALE AS SHOWN

SHEET 5 OF 6

DRAWING NUMBER
br5c0708.dgn