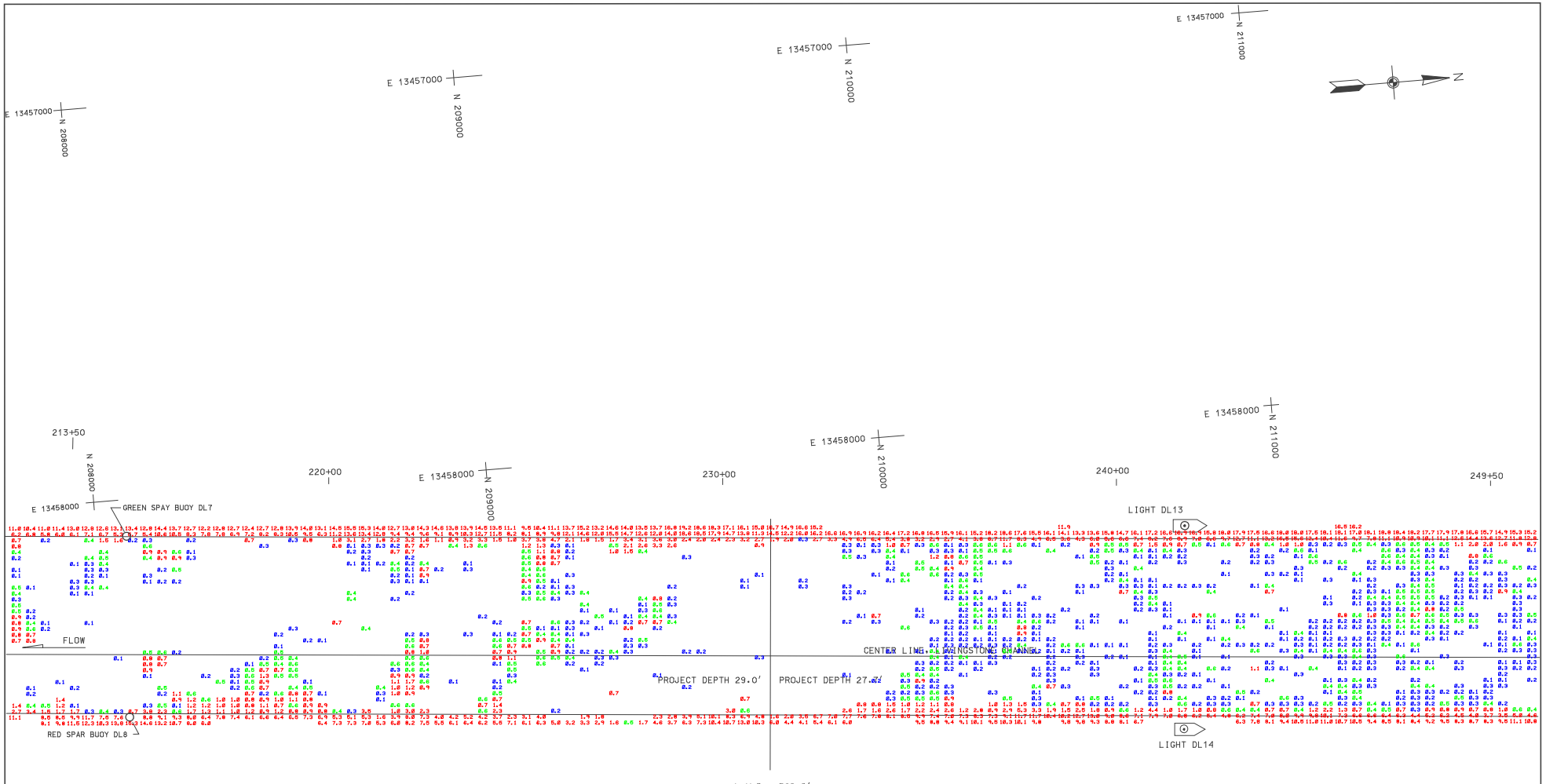

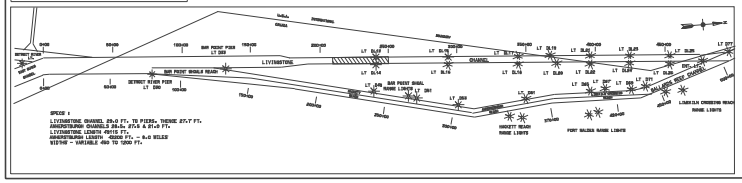

LEGEND

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) CORRESPONDING TO THE WATER SURFACE ABOVE MEAN WATER LEVEL AT RIMOUSKI, QUEBEC.

GRID COORDINATES

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

DIRECTIONS

ALL DIRECTIONS ARE GRID AZIMUTHS REFERRED TO NORTH ZERO.

PROJECT DEPTHS ARE AS SHOWN ON DRAWING.

THE AUTOMATED ELECTRONIC SURVEY WAS CONDUCTED BY FRED LEGCH, PARTY CHIEF, ABOARD THE USACOE SURVEY VESSEL WHEELER

AUTOMATED EQUIPMENT USED

POSITIONING SYSTEM	TSS POS-MV
DATA PROCESSOR	DELL 330 PC
SOFTWARE	HYPACK
PLOTTER	ENCAD CADJET 2
MULTI-BEAM SONAR	RESON SEABAT 8125

NOTES:

1. GAGES USED FOR 29.0 FOOT PROJECT DEPTH WERE OBTAINED FROM NOAA GAGES AT FERMI AND GIBRALTAR VIA THE INTERNET. GAGES USED FOR 27.7 FOOT PROJECT DEPTH WERE OBTAINED FROM GAGE BOARD AT LIGHT DL 14.
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

100 50 0 100 200FT

SCALE: 1"= 100'

NO.	DATE	REVISION	BY

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

DETROIT AREA OFFICE — 05 MAY 2004

DETROIT RIVER, MICHIGAN

LIVINGSTONE CHANNEL

CS 213+50 TO CS 249+50
MULTI-BEAM SURVEY RESULTS
MINUMUM STRIKE PLOT

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

APPROVAL RECOMMENDED: P.E. DATE
CHIEF, OPERATIONS TECHNICAL SUPPORT BRANCH

SCALE AS SHOWN

SHEET 7 OF 14

DRAWING NUMBER Lc7s0504.dgn