

| CENTER LINE T.P. |               |            |
|------------------|---------------|------------|
| T.P.             | EAST<br>X     | NORTH<br>Y |
| 50               | 13.526.483.12 | 403.360.38 |
| 51               | 13.525.985.48 | 403.408.48 |
| 52A              | 13.525.103.68 | 403.588.21 |
| 52B              | 13.524.935.20 | 403.550.41 |
| 53               | 13.524.823.71 | 403.502.62 |
| 54               | 13.524.543.27 | 403.217.45 |

| CHANNEL LINE T.P. |               |            |
|-------------------|---------------|------------|
| T.P.              | EAST<br>X     | NORTH<br>Y |
| 50N               | 13.526.481.14 | 403.385.69 |
| 50S               | 13.526.485.11 | 403.335.07 |
| 51N               | 13.525.985.19 | 403.433.07 |
| 51S               | 13.525.981.77 | 403.383.72 |
| 52AN              | 13.525.103.36 | 403.613.79 |
| 52AS              | 13.525.104.00 | 403.562.63 |
| 52BN              | 13.524.931.56 | 403.514.30 |
| 52BS              | 13.524.946.82 | 403.526.51 |
| 53N               | 13.524.809.45 | 403.523.77 |
| 53S               | 13.524.837.97 | 403.481.46 |
| 54N               | 13.524.525.45 | 403.234.98 |
| 54S               | 13.524.561.10 | 403.199.92 |

- NOTES:
- GAGES USED WERE TAKEN FROM A GAGE BOARD SET ON THE WEST SIDE OF A PILING, ON THE SOUTH SIDE OF THE CLINTON RIVER, AT OR ABOUT CROSS SECTION 371+00.
  - POSITIONS WERE DETERMINED BY GPS REFERENCE BEACON 838, LOCATED AT FORT WAYNE DETROIT, MICHIGAN - FREQUENCY 319 KHZ, 200 BPS
  - TRANSDUCER FREQUENCY USED TO MEASURE DEPTH DATA WAS 208 KHZ AND THE BEAM ANGLE WAS 3.0 DEGREES.

| HORIZONTAL CONTROL |               |            |
|--------------------|---------------|------------|
| STATION            | COORDINATES   |            |
|                    | EAST<br>X     | NORTH<br>Y |
| WHITTLE            | 13.526.657.50 | 403.334.31 |
| BINGHAM            | 13.524.853.51 | 403.571.78 |

**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.

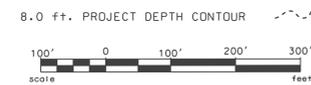
**LOW WATER DATUM**  
ELEVATIONS AND PROJECT DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM, 1985, THE LOW WATER DATUM FOR THE CLINTON RIVER IS 572.3 FT. ABOVE MEAN SEA LEVEL.

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

**DIRECTIONS**  
ALL DIRECTIONS ARE GRID AZIMUTHS REFERRED TO NORTH ZERO.

**PROJECT DEPTHS**  
PROJECT DEPTHS ARE AS INDICATED ABOVE.

**AUTOMATED EQUIPMENT USED**  
POSITIONING: TRIMBLE OGPS  
SOFTWARE: COASTAL OCEANOGRAPHICS  
SONIC SOUNDER: INNSPACE 448



| NO. | DATE           | REVISION                                       | B.A. |
|-----|----------------|--|------|
| 1   | MARCH 11, 1994 | ADDED POINTS 52A, 52B, 52AN, 52AS, 52BN & 52BS | B.A. |

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

**CLINTON RIVER, MICH.**  
CONDITION SOUNDINGS  
C.S. 369+00W TO C.S. 392+00W  
16 JANUARY 2008  
DETROIT AREA OFFICE

DRAWN BY: R.W.P.  
DESIGNED BY:  
CHECKED BY:  
REVIEWED:  
SUBMITTED:  
APPROVAL RECOMMENDED:  
DATE: 16 JANUARY 2008  
SCALE: 1" = 100'  
DRAWING NUMBER: cl11008c.dgn  
SHEET 10 OF 10