





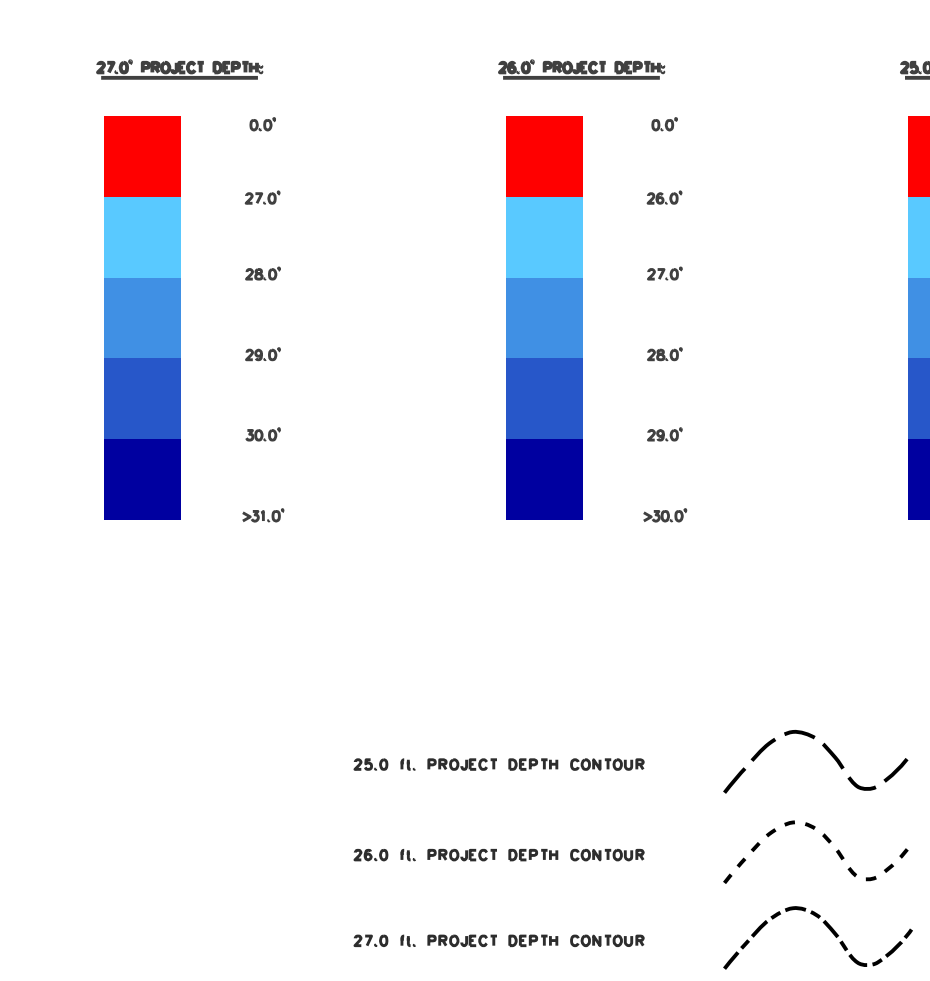


| CENTER LINE T.P. | | |
|------------------|---------------|------------|
| T.P. | EAST X | NORTH |
| 0 | 13,260,317.57 | 782,549.60 |
| 1B | 13,260,293.21 | 782,700.78 |
| 2B | 13,260,362.45 | 784,549.62 |

| CHANNEL LINE T.P. | | |
|-------------------|---------------|------------|
| T.P. | EAST X | NORTH Y |
| 4A | 13,260,344.38 | 784,860.61 |
| 4 | 13,260,261.75 | 784,532.84 |
| 3 | 13,260,424.84 | 783,543.27 |
| 1 | 13,260,413.61 | 783,243.53 |
| 2 | 13,260,192.91 | 782,694.62 |
| 5 | 13,260,760.00 | 784,874.64 |

| | |
|---|-------------------------|
| HORIZONTAL CONTROL | |
|  | THIRD ORDER |
|  | LESS THAN THIRD ORDER |
|  | THIRD ORDER & BENCHMARK |
|  | VALUE UNKNOWN |
| VERTICAL CONTROL | |
|  | BENCHMARKS |
|  | |



- NOTES:
- 1) THE SOUNDINGS AND ASSOCIATED INFORMATION REPRESENTED HEREIN ARE THE RESULT OF SURVEYS MADE ON THE DATE AS INDICATED AND CAN ONLY BE CONSIDERED REPRESENTATIVE OF THE GENERAL CONDITIONS EXISTING AT THE TIME OF SURVEY.
 - 2) THE SOUNDINGS DEPICTED HEREIN ARE EXPRESSED IN U.S. SURVEY FEET AND TENTHS THEREOF AND ARE REFERENCED TO THE FOLLOWING DATUMS:
HORIZONTAL: MICHIGAN STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE 12113, NORTH AMERICAN DATUM (NAD) OF 1983.
VERTICAL: INTERNATIONAL GREAT LAKES DATUM (IGLD) OF 1985.
 - 3) THE ABOVE SURVEY WAS CONDUCTED USING THE U.S.A.C.E. SURVEY VESSEL WHEELER EMPLOYING THE FOLLOWING COMPONENTS:
POSITIONING: APPLANIX POS-HV4 W/RS-RTK
MOTION COMPENSATION: APPLANIX POS-MV4
SONAR: R2 SONIC 2024
SOFTWARE: HYPACK 2016
 - 4) TIDE CORRECTION VALUES DERIVED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) WATER LEVEL STATION(S) AS FOLLOWS:
ESEXVILLE, MI (#9075035), L.W.D. = 577.50
 - 5) THE EDITED DATA WAS SORTED INTO A 20FT BY 20FT MINIMUM DEPTH DATASET, WITH THE RESULTING POINTS POSTED.

| | |
|---|---------------------------------|
| U.S. ARMY CORPS OF ENGINEERS DETROIT DISTRICT 477 MICHIGAN AVE DETROIT, MI 48226 | DATE OF SURVEY: 09/30/2018 |
| SOUGHT BY: CNO BY: QOB BY: | CONTRACT NO.: |
| SWN BY: CNO BY: QOB BY: | FILE NUMBER: |
| DETROIT AREA OFFICE 6309 WEST JEFFERSON AVE DETROIT, MI 48209 | FLIGHT DATE: 11/1/2018 |
| | FLIGHT TIME: 2:00 PM |
| | FLIGHT ALTITUDE: 1000 FT |
| | FLIGHT SPEED: 100 KNOTS |
| | FLIGHT DIRECTION: NORTH |
| | FLIGHT AREA: DETROIT |
| | FLIGHT AREA SIZE: 1000 SQ FT |
| | FLIGHT AREA COLOR: GREEN |
| | FLIGHT AREA SHAPE: RECTANGLE |
| | FLIGHT AREA TEXT: DETROIT |
| | FLIGHT AREA IMAGE: DETROIT |
| | FLIGHT AREA VIDEO: DETROIT |
| | FLIGHT AREA AUDIO: DETROIT |
| | FLIGHT AREA OTHER: DETROIT |

**SAGINAW RIVER
MICHIGAN
AFTER DREDGE SURVEY
09 OCT 2018**

SHEET IDENTIFICATION