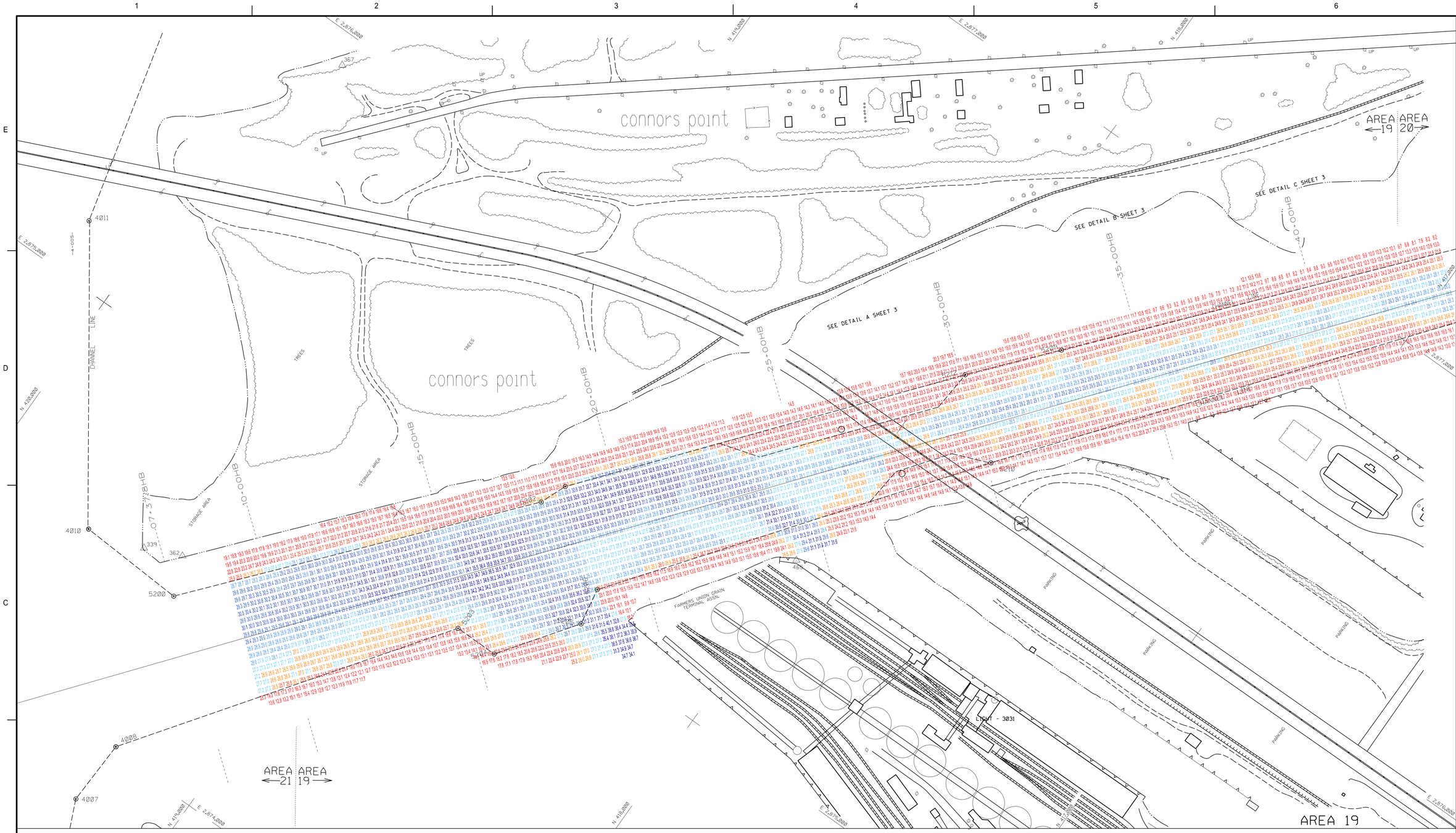
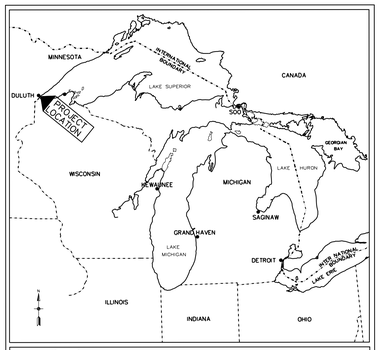
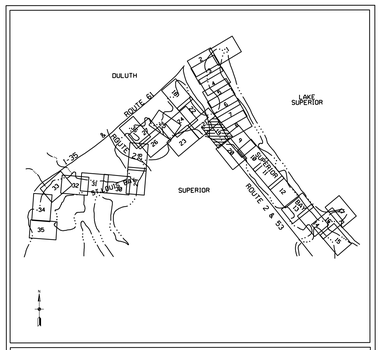




US Army Corps of Engineers
Detroit District

LOCATION MAP

0 25 50 75 100
SCALE OF MILES



US Army Corps of Engineers
Detroit District

SHEET INDEX

0 2000 4000 6000 8000
SCALE (FT)

GENERAL NOTES

1. THE SOUNDINGS INDICATED HEREON REPRESENT THE MINIMUM DEPTH FOUND IN THE 20 FOOT BY 20 FOOT AREA CENTERED AROUND THE TEXT. MINIMUM DEPTH DATA IS PRODUCED FOR STRIKE/SHOAL REMOVAL OPERATIONS AND NOTICE TO NAVIGATION INTERESTS
2. ELEVATIONS AND SOUNDING DEPTHS ARE REFERRED TO INTERNATIONAL GREAT LAKES DATUM 1985 (IGLD 85). LOW WATER DATUM (LWD) ZERO IS 601.1 FEET ABOVE MEAN WATER LEVEL AT POINT RIMOUSKI QUEBEC. WATER LEVEL READINGS ARE FROM AN AUTOMATED GAUGE LOCATED AT THE DULUTH VESSEL YARD (#9084). DEPTHS ARE MEASURED USING AN R2SONIC 2024 MULTIBEAM SONAR.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON AUGUST 10, 2016 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS PRESENT AT THE TIME.
4. HORIZONTAL POSITIONING IS DETERMINED USING REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM (RTK). CORRECTIONS ARE PROVIDED BY THE MINNESOTA CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS). THE CLOSEST BASE STATION IS USED AS THE DETERMINING FACTOR IN CORRECTION SELECTION. THE GPS RECEIVER IS MANUFACTURED BY APPLANIX MARINE POS/MV VER. 4.0.
5. GRID COORDINATES ARE BASED ON THE MINNESOTA STATE PLANE COORDINATE SYSTEM. LAMBERT PROJECTION. MINNESOTA NORTH ZONE (2201). NORTH AMERICAN DATUM (NAD83). ALL COORDINATES SHOWN ARE IN U.S. SURVEY FEET.
6. UNLESS OTHERWISE NOTED PROJECT DEPTH IS 27.0 FEET BELOW LOW WATER DATUM

LEGEND

△	horizontal control point
⊙ no.	channel line turning point
- - - - - - - -	channel line
	shoreline
	project depth contour
	Baseline
X+XXSF	Baseline Stationing for Superior Front Baseline

0 100' 200'

27.0' LEGEND

- 0.0'
- 25.0'
- 26.0'
- 27.0'
- 28.0'
- 29.0'
- 30.0'
- 31.0'
- 50.0'

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

SURVEYOR: OWNED BY: AT-ARDC
REVIEWED BY: RE
APPROVED BY:
PLOT SCALE: 1" = 100'
SIZE: ANSI E
DATE OF SURVEY: 10-Aug-16
SUBMITTED BY:
CONTRACT NO.:
IMAGE DATE:
IMAGE SOURCE:
DRAWING DATE: 24Jan19
FILE NAME:

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

DULUTH AREA OFFICE
600 LAKE AVENUE SOUTH
DULUTH, MN 55802

DULUTH SUPERIOR HARBOR
MINNESOTA / WISCONSIN

CONDITION OF CHANNEL
AUGUST 2016

SHEET IDENTIFICATION
DUL-19
SHEET 19 OF 35