US Army Corps of Engineers
Buffalo District

Public Notice

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OPERATION AND MAINTENANCE DREDGING AND DREDGED MATERIAL PLACEMENT

CLEVELAND HARBOR

CUYAHOGA COUNTY,

OHIO

This Public Notice has been prepared and distributed in conformance with U.S. Army Corps of Engineers (USACE) regulation, "Practice and Procedure: Final Rule for Operation and Maintenance of Army Corps of Engineers Civil Works Projects involving the Discharge of Dredged Materials into Waters of the United States or Ocean Waters," 33 Code of Federal Regulations (CFR) 337.1. Its purpose is to specify what dredged/fill materials would be discharged into waters of the United States by implementation of the proposed action, and advise all interested parties of the proposed project and provide an opportunity to submit comments or request a public hearing.

The USACE anticipates the need to dredge and place material excavated from the Federal navigation channels of Cleveland Harbor, including the Cuyahoga River, Old River, Lake Approach Channels, and Outer Harbor Channels, in order to maintain sufficient depth for deep-draft commercial vessels. The attached maps (Figure 1a and 1b) show the authorized limits and depths of the Federal navigation channels. To insure that the minimum authorized depth in the Harbor is maintained throughout the navigation season, an additional four feet of shoal may be removed, including one foot of overdepth and three feet of advance maintenance dredging. Approximately 225,000 cubic yards of material will be dredged from Cleveland Harbor Federal navigation channels during the 2015 dredging operation. This dredging project involves the removal of typically uniform sediments that have contaminant levels that are similar to those in Lake Erie background sediments offshore of Cleveland. These sediments have accumulated in the channels since the last maintenance dredging; this dredging does not involve the removal of highly contaminated or sediments requiring environmental cleanup. Sediments will be removed from the channel bottom by mechanical dredge and placed aboard scows for transport to the dredged material placement areas. In previous years, clamshell bucket and hopper dredges have been used to complete this maintenance dredging. The 2015 dredging operation at Cleveland Harbor is tentatively scheduled to be performed between April 1

and December 31, and a contractor of the Federal government will accomplish this work.

In 2014, USACE dredged the Upper Cuyahoga River Channel (the reach of channel between Stations 799+00 [upstream Federal navigation channel limit] and 736+00 [Turning Basin]) (Figure 2) and proposed to discharge the associated dredged material at open-lake area CLA-1 (Figure 3) in Lake Erie. Open-water placement of suitable dredged material is a common dredged material management alternative employed throughout the Great Lakes and Nation. Sediments dredged from the Upper Cuyahoga River Channel reach of Cleveland Harbor have significantly improved in quality, and meet Clean Water Act Section 404(b)(1) Guidelines for open-lake placement. However, the Ohio Environmental Protection Agency (OEPA) did not grant Section 401 water quality certification (WQC) for the open-lake placement of the Upper Cuyahoga River Channel dredged material in 2014, and accommodation for that year was made by USACE to allow the dredged material to be placed in the existing confined disposal facility (CDF) No. 10B (Figure 4) which is approaching full capacity.

The USACE has been collaborating with the OEPA and Cleveland Harbor Dredging Task Force throughout 2014 in an attempt to reach consensus on whether Upper Cuyahoga River Channel dredged material should be placed in the open-lake. Currently feasible options include placement of the dredged material in a deep-water area or placement of coarse-grain (sandy) material dredged from this reach in the nearshore zone as littoral nourishment. Material dredged from the Upper Cuyahoga River Channel was previously placed in the open-lake when it formerly met Clean Water Act Section 404(b)(1) Guidelines. Between 1995 and 1993, OEPA issued Clean Water Act Section 401 WQCs for the discharge of sandy material dredged from this reach at two authorized nearshore areas in Lake Erie in the Cleveland Outer Harbor vicinity, for the purposes of littoral nourishment. Given this history, OEPA in cooperation with USACE recently explored options to again place sandy material dredged from the Upper Cuyahoga River Channel at the Perkins Beach nearshore area. However, OEPA decided that it could not execute this option in 2015.

The material to be dredged from the Cleveland Harbor Federal navigation channels consists primarily of silts and clays, with some sands. Material to be dredged from the channels in the Lower Cuyahoga River (downstream of the Turning Basin at Station 736+00), Old River, Outer Harbor and Lake Approach has not yet been determined to meet Clean Water Act Section 404(b)(1) Guidelines for open-lake placement. Therefore, it will be placed in CDF No. 10B, which is located in the Cleveland Outer Harbor (Figure 4). With respect to the Upper Cuyahoga River Channel, an extensive sediment sampling and testing effort was completed in the spring of 2012 to evaluate the suitability of the dredged material for open-lake placement. The sediments sampled and analyzed represent approximately 80 percent of the material dredged from Cleveland Harbor on an annual basis. A comprehensive evaluation of these data and other relevant information was conducted in 2013 in accordance with the protocols and guidelines contained in the U.S. Environmental Protection Agency (USEPA)/USACE Great Lakes Dredged Material Testing and Evaluation Manual (1998) and Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S.—Testing Manual (1998). This evaluation evidenced a significant net improvement in the overall quality of these sediments

between 2007 and 2012, and concludes that the discharge of this dredged material into the open-lake would not culminate in contaminant-related, unacceptable adverse impacts to the aquatic ecosystem. Therefore, it has been determined that the Upper Cuyahoga River Channel dredged material meets Federal "contaminant determination" guidelines for open-lake placement (40 CFR 210.11[d]). Consequently, this material is proposed to be placed at an open-lake area referred to as CLA-1, which was used for the placement of Cleveland Harbor dredged material over 45 years ago (Figure 3).

Several general concerns have been raised with respect to the placement of Upper Cuyahoga River Channel dredged material in the open waters of Lake Erie over the last year and a half. A brief summary of how these concerns have been addressed is provided below:

1. *Potential impacts on public drinking water supplies*—The potential impacts from open-lake placement of the Upper Cuyahoga River Channel dredged material to the quality of water at the Crown, Morgan, Baldwin and Nottingham potable water intakes (PWIs) was investigated by the U.S. Army Engineer Research and Development Center (USAERDC). Placement of the dredged material at CLA-1 would not result in a release of dissolved contaminants that would present any significant risk to human health based on National Primary Drinking Water Regulation Maximum Contaminant Levels (MCLs) and Drinking Water Standards for Ohio Public Water Systems. Regardless, predominant lake currents at CLA-1 direct any total suspended solids (TSS) away from the PWIs during dredged material placement. In addition, water depths at CLA-1 are too deep for surface waves from storm winds to meaningfully cause erosion of the deposited dredged material such that it could be transported to these PWIs.

2. *Potential to influence Lake Erie harmful algal blooms (HABs)*—There has been public concern that the open-lake placement of dredged material causes or intensifies HABs in Lake Erie. This perception is not supported by existing science and engineering. While dredged material does contain phosphorus, only a very small fraction of that phosphorus is actually available for algal growth when it is released from the material to the water column during open-lake placement. The small amounts that are released rapidly dilute to concentrations that cannot measurably stimulate or increase algal growth. Very conservative predictions determined through standard sediment elutriate testing and water quality modeling performed by USAERDC showed that the extent and duration of released phosphorus from this dredged material would be very localized and short-lived. Consequently, such conditions would be inadequate to trigger or increase the occurrence of HABs, or to significantly impact water quality in the Central Basin of Lake Erie. The bulk of the dredged material and associated phosphorus content immediately deposits on the lake bottom. Subsequent release of phosphorus from the deposited dredged material is the same as or less than the existing lake sediments and would not represent any additional contribution of phosphorus to the aquatic ecosystem.

3. *Loading of sediments into Lake Erie and associated potential adverse impacts to aquatic life and human health*—There has been concern that the open-lake placement of dredged material loads the lake with sediment and results in adverse impacts to aquatic life and

human health. Unlike other discharges regulated under the Clean Water Act as external sources of pollutants (i.e., point source wastewater discharges), the origin of this dredged material is from within the aquatic ecosystem and therefore the material is from an internal source both prior to dredging and after being placed in the open-lake. In other words, the sediment is not new to the aquatic ecosystem. Under formal USEPA/USACE guidance pursuant to Section 404 of the Clean Water Act, the material is thoroughly sampled and tested to demonstrate that it presents no significant increased risk to aquatic life or human health in comparison to the lake bottom sediments on which it is proposed to be placed. In a mechanical dredging operation, the material is excavated from the channel using a clamshell bucket, put into a scow and transported to the designated open-lake area where it is then discharged from a scow and released to the lake environs. The physical composition of the bottom sediments at the open-lake area typically resembles that of the dredged material such that the lake bottom substrate would remain similar following placement of the dredged material. The dredged material falls as a cohesive mass through the water column coming to rest on the lake bottom, typically as a mound with a mild slope. Generally, more than 95 percent of the material remains in the cohesive mass while less than five percent of it is suspended in the water. This suspended sediment results in short-term, localized turbidity which rapidly dissipates in the water column due to dispersion and settling. The turbidity fades to background conditions within about one hour. This temporary increase in turbidity is limited in spatial extent and typically remains within close vicinity of the point of discharge, well within the boundaries of the open-lake placement area. The material is also thoroughly sampled and tested to ensure that contaminants are not released from the suspended sediments at concentrations that could be harmful to aquatic life and human health. Further, fish typically avoid these turbidity events and/or are tolerant of the suspended sediment concentrations because they are temporary and rapidly decline. After settling, the dredged material remains in-place along with the surrounding lake bottom sediments. While the newly deposited sediment is subject to lake bottom currents and waves, open-lake placement areas are selected to be relatively low-energy environments with low current velocities and low wave shear forces, offering little potential for erosion and resuspension. If the dredged material placed on the lake bottom were resuspended, it would still behave the same as the surrounding lake bottom sediments. Neither scenario results in any measureable increase in suspended sediment in the water column that is harmful to fish and other aquatic life. Placement of this dredged material on the lake bottom adversely effects or smothers some benthic (bottom-dwelling) organisms, but recovery of the benthic community is relatively rapid following the operation. This qualitative description of open-lake placement, based on extensive existing information and USACE experience in dredged material handling and management, demonstrates that open-lake placement of dredged material is not “toxic” and does not result in widespread, long-term turbidity or migration of sediments that is harmful to aquatic life in Lake Erie or a risk to human health.

Pursuant to Section 401 of the Clean Water Act, WQC, or waiver of WQC, from OEPA is required for the discharge of dredged material. Therefore, a copy of this Public Notice has been provided to OEPA requesting WQC (or waiver thereof) for the discharge of Upper Cuyahoga River Channel dredged material at CLA-1, and resultant discharge of effluent associated with the placement of all other Cleveland Harbor Federal navigation channel dredged material in CDF No. 10B. OEPA has previously issued WQC for the discharge of coarse-grain material

dredged from the Upper Cuyahoga River Channel at authorized nearshore areas in Lake Erie.

The environmental effects of the dredging operation are documented in the ***Final Environmental Impact Statement (FEIS), Operation and Maintenance, Cleveland Harbor, Ohio (1974); and FEIS, Harbor Maintenance and Confined Disposal Facility Site 10B, Cleveland Harbor, Ohio (1994).*** The environmental effects of open-lake placement of Upper Cuyahoga River Channel dredged material have been evaluated in the ***Finding of No Significant Impact and Environmental Assessment, and Section 404(B)(1) Evaluation, Operations and Maintenance, Open-Lake Placement of Material Dredged from Cleveland Harbor Federal Navigation Channels in the Upper Cuyahoga River, Cleveland Harbor, Cuyahoga County, Ohio.*** These documents are available from the Buffalo District office.

There are no listed historic properties or properties determined as being eligible for listing in the National Register of Historic Places that will be affected by this project. By this notice, the National Park Service is advised that currently unknown archaeological, scientific, prehistorical or historical data may be lost or destroyed by the work to be accomplished.

The USACE has determined that the proposed project will have No Effect upon any species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor will the proposed work result in an Adverse Modification of designated critical habitat for any such species. Therefore, unless new information indicates otherwise, no further consultation pursuant to Section 7 of the Endangered Species Act Amendments of 1978 will be undertaken with the U.S. Fish and Wildlife Service.

This work will be undertaken in a manner consistent, to the maximum extent practicable, with the State of Ohio Coastal Management Program. A Coastal Management Program Federal Consistency Determination will be submitted to the Ohio Department of Natural Resources (ODNR) documenting this determination.

The decision whether to perform dredging has been based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision reflects the national concern for both protection and utilization of important resources. The benefit which is reasonably expected to accrue from the proposal has been balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal have been considered including the cumulative factors thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

This activity is being coordinated with the following agencies, as well as other appropriate Federal, State and local agencies and organizations:

Ohio Department of Natural Resources

Ohio Environmental Protection Agency
Ohio Historic Preservation Office
U.S. Coast Guard
U.S. Department of the Interior, Fish and Wildlife Service
U.S. Environmental Protection Agency

Any interested parties and/or agencies desiring to express their views concerning these proposed discharges of dredged material may do so by filing their comments, in writing, no later than 30 days from the date of this notice. Any person who has an interest which may be affected by the discharge of this dredged material may request a public hearing. The request must be submitted in writing to the undersigned within 30 days of the date of this Public Notice. The request must clearly set forth the interest which may be affected, and the manner in which the interest may be affected, by this activity.

Interested parties are encouraged to contact the USACE with their comments regarding the proposed discharge of this Cleveland Harbor dredged material. Please review this Public Notice and send your comments in writing within 30 days to the following e-mail address:

ClevelandDredging@usace.army.mil

or via regular mail to:

U.S. Army Corps of Engineers - Buffalo District
1776 Niagara Street
Buffalo, NY 14207-3199
ATTN: Environmental Analysis - Cuyahoga River Dredging

This public notice is published in conformance with 33 CFR 337.1. All dredging and dredged material discharge will be performed in conformance with Sections 313 and 404 of the Clean Water Act (33 USC 1323 and 1344, respectively).

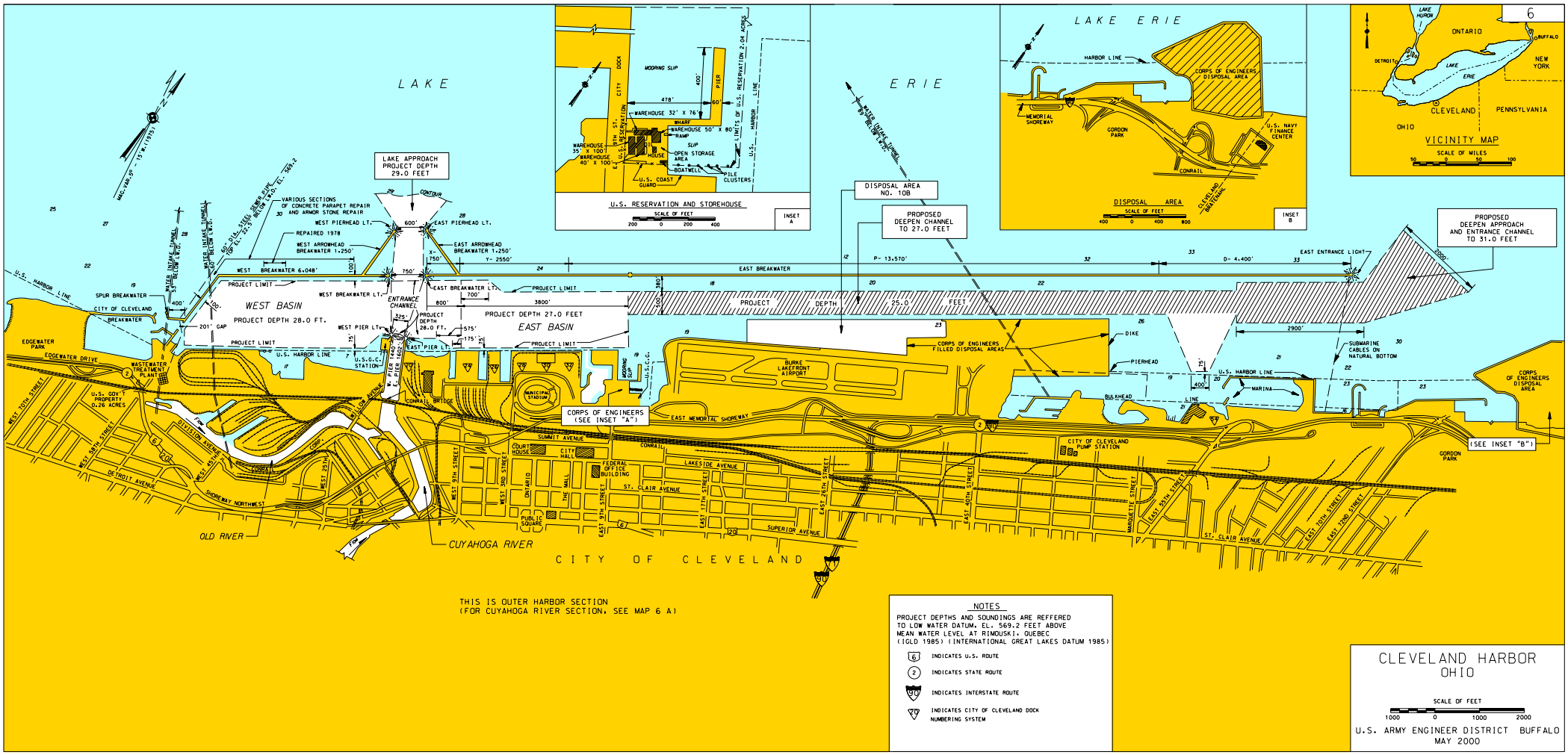
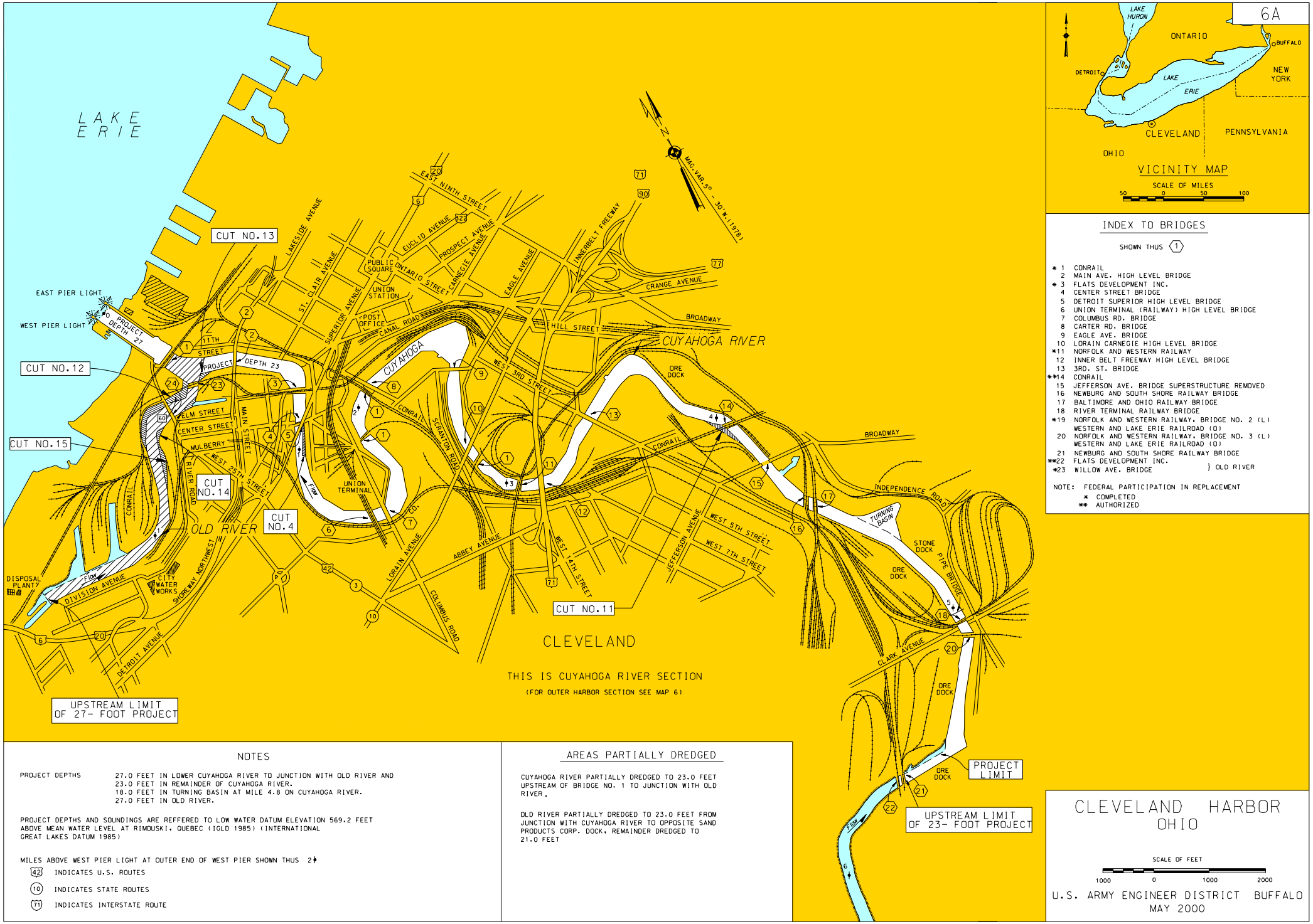


Figure 1a. Cleveland Harbor (Cuyahoga River), Cuyahoga County, Ohio (Outer Harbor)



INDEX TO BRIDGES

SHOWN THUS (1)

* 1	CONRAIL
2	MAIN AVE. HIGH LEVEL BRIDGE
* 3	FLATS DEVELOPMENT INC.
4	CENTER STREET BRIDGE
5	DETROIT SUPERIOR HIGH LEVEL BRIDGE
6	UNION TERMINAL (RAILWAY) HIGH LEVEL BRIDGE
7	COLUMBUS RD. BRIDGE
8	CARTER RD. BRIDGE
9	EAGLE AVE. BRIDGE
10	LORAIN CARNEGIE HIGH LEVEL BRIDGE
*11	NORFOLK AND WESTERN RAILWAY
12	INNER BELT FREEWAY HIGH LEVEL BRIDGE
13	3RD. ST. BRIDGE
**14	CONRAIL
15	JEFFERSON AVE. BRIDGE SUPERSTRUCTURE REMOVED
16	NEWBURG AND SOUTH SHORE RAILWAY BRIDGE
17	BALTIMORE AND OHIO RAILWAY BRIDGE
18	RIVER TERMINAL RAILWAY BRIDGE
*19	NORFOLK AND WESTERN RAILWAY, BRIDGE NO. 2 (L) WESTERN AND LAKE ERIE RAILROAD (O)
20	NORFOLK AND WESTERN RAILWAY, BRIDGE NO. 3 (L) WESTERN AND LAKE ERIE RAILROAD (O)
21	NEWBURG AND SOUTH SHORE RAILWAY BRIDGE
**22	FLATS DEVELOPMENT INC. } OLD RIVER
*23	WILLOW AVE. BRIDGE

NOTE: FEDERAL PARTICIPATION IN REPLACEMENT
* COMPLETED
** AUTHORIZED

NOTES

PROJECT DEPTHS
27.0 FEET IN LOWER CUYAHOGA RIVER TO JUNCTION WITH OLD RIVER AND 23.0 FEET IN REMAINDER OF CUYAHOGA RIVER.
18.0 FEET IN TURNING BASIN AT MILE 4.8 ON CUYAHOGA RIVER.
27.0 FEET IN OLD RIVER.

PROJECT DEPTHS AND SOUNDINGS ARE REFFERED TO LOW WATER DATUM ELEVATION 569.2 FEET ABOVE MEAN WATER LEVEL AT RIMOUSKI, QUEBEC (IGLD 1985) (INTERNATIONAL GREAT LAKES DATUM 1985)

MILES ABOVE WEST PIER LIGHT AT OUTER END OF WEST PIER SHOWN THUS 2

(42) INDICATES U.S. ROUTES
(10) INDICATES STATE ROUTES
(71) INDICATES INTERSTATE ROUTE

AREAS PARTIALLY DREDGED

CUYAHOGA RIVER PARTIALLY DREDGED TO 23.0 FEET UPSTREAM OF BRIDGE NO. 1 TO JUNCTION WITH OLD RIVER.

OLD RIVER PARTIALLY DREDGED TO 23.0 FEET FROM JUNCTION WITH CUYAHOGA RIVER TO OPPOSITE SAND PRODUCTS CORP. DOCK, REMAINDER DREDGED TO 21.0 FEET

CLEVELAND HARBOR
OHIO

SCALE OF FEET
1000 0 1000 2000

U.S. ARMY ENGINEER DISTRICT BUFFALO
MAY 2000

Figure 1b. Cleveland Harbor (Cuyahoga River), Cuyahoga County, Ohio (River)

Figure 2:Upper Cuyahoga River Sample Locations and DMMU Boundaries

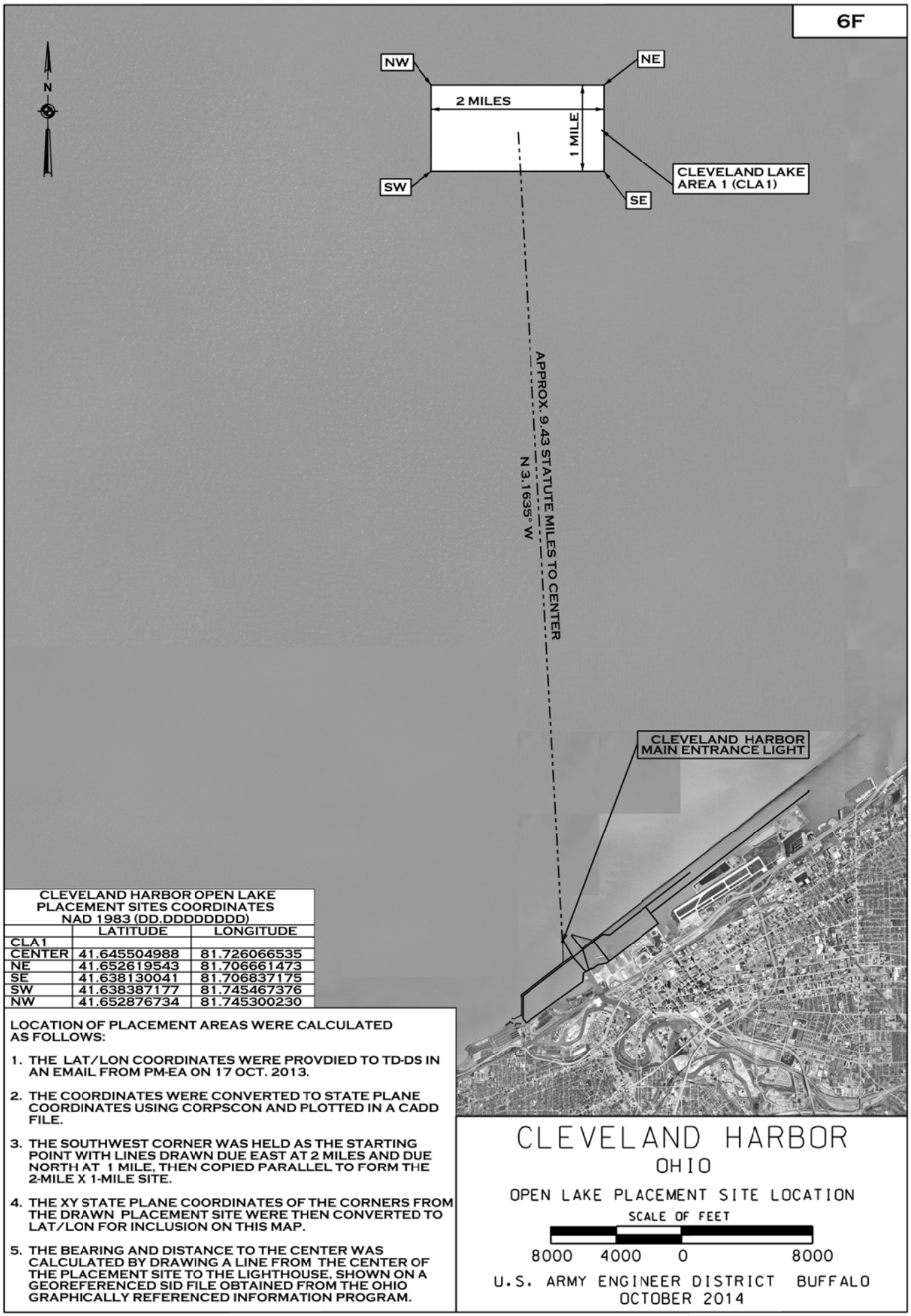


Figure 3 - Location of open-lake area CLA-1

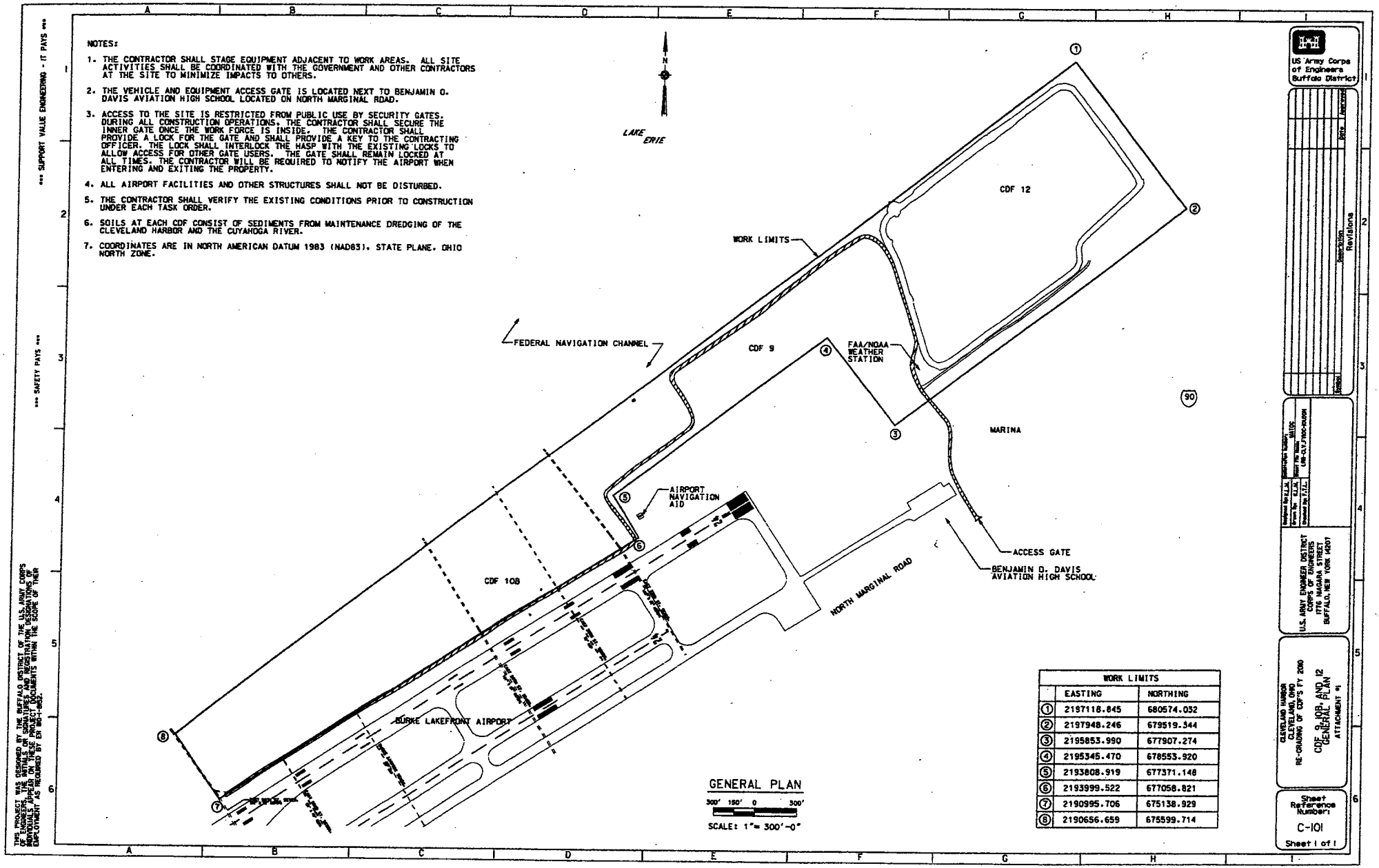


Figure 4 - Cleveland Harbor Confined Disposal Facility (CDF)