



DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET, SUITE 1500
CHICAGO IL 60604

July 09, 2020

Planning Branch

Jenny Orsburn
Program Manager
Lake Michigan Coastal Program - IN DNR
Indiana Dunes State Park Annex Office
1600 N. 25 East
Chesterton IN 46304

Dear Ms. Orsburn,

The Chicago District is preparing a National Environmental Policy Act (NEPA) document on the impacts of a proposed modification to the Indiana Harbor Canal (IHC) Confined Disposal Facility (CDF). The proposed changes to the design and construction of the IHC CDF, include a second lift of dikes to maintain sufficient storage capacity for the intended project life. This Phase 2 construction will include a number of supplementary features to maintain the functionality of the facility. The proposed exterior dike expansion includes several features – an emergency overtopping area, chimney drain, methane venting, re-aligned ramps (Attachment 1) – which were not contemplated in the original design. The construction of the dike expansion will ensure that a proper disposal facility is available for IHC sediment for a number of years to come. Future operations are expected to be similar to current operations, including all regulatory and permitting requirements currently in place for the facility.

As part of the NEPA scoping process, the Chicago District would appreciate any comments or concerns you might have about potential impacts from this proposed project. This could include any impacts to various habitats, threatened and endangered species, or cultural and social resources. After receiving scoping input and conducting its environmental review, the Chicago District will release a draft NEPA document for formal public review.

Additional details on the proposed changes are described below.

Staged Dike Construction

To reach the original design capacity, the design calls for the exterior dike height to be increased by 11 feet. Increasing the height of the dikes requires the dikes to be widened at the base, to maintain the same interior and exterior slopes. The wider dikes will occupy a slightly larger footprint, still well within the original site boundaries. The perimeter road (also referred to as a “ring road”) will be relocated as needed to adjust for the dike widening, but again will be well within the same site boundaries. The interior of the dikes would be constructed of clay, with the exterior either clay or general clean fill material. Of the two existing concrete decant structures within the CDF, only one will be made taller; the other will be abandoned in place. Other existing features on the dikes - air monitors, groundwater discharge piping and piezometers for measuring groundwater levels – will be removed and then reinstalled on the taller dike. Access ramps will change and may require routing the perimeter road outside its current alignment at the ramps. The existing pump stations for groundwater pumping will receive new pumps and flowmeters. Electrical utilities will be upgraded for the various features.

Although the total dike height increase will be 11 feet, due to funding constraints and funding uncertainty (specifically, unknown future funding amounts and schedule), the CDF dike will be constructed in two lifts. The first lift will be 3 feet; this lift does not include widening the dike. The second lift would construct the remaining height and the full width of the dikes. Dependent on funding, all of the work may be completed at the same time, or there may be one or more years between the construction of the two lifts.

Dam Safety Measures

Because the IHC CDF holds water and saturated sediment, USACE considers the facility to be a “dam” and requires dam safety features. Four design features below are being incorporated into the expansion to address dam safety requirements.

1. Inclusion of a chimney filter and drain between the existing dike slope and new fill to collect potential seepage and direct the drainage out of the dike.
2. Provision of riprap on the upstream slopes to protect against erosion of the dikes.
3. Provision of a designated emergency overtopping location to safely channel overflow from the dam and back to the canal in the unlikely event of an extremely large precipitation event. A storm event greater than a 1000 year storm would be needed to overtop the existing berms and such a storm event has never been recorded for the project area. Although a storm of this magnitude is not expected to occur, the location of this feature was chosen to ensure that any overflow would be directed away from any residential or commercial areas, and would minimize human safety and property damage impacts.
4. The new groundwater discharge pipes would be double-walled pipe. If the primary pipe were to develop a leak, the leak would be contained by the outer pipe wall and prevent erosion of the dikes.

Site Methane

At the IHC site, petroleum hydrocarbon contamination exists in the subsurface soil, in groundwater, and as separate phase oil throughout the site subsurface. Under anaerobic (no oxygen) conditions such as in the ground, biodegradation of hydrocarbons can occur. Anaerobic biodegradation can generate a significant volume of methane. At the IHC site, methane has been identified in some areas. The methane is likely contained by the existing dikes and clay layer on the site. To prevent the build up of methane, a passive vent will be installed during the dike expansion. The vent system will consist of a permeable collection pipe embedded within open-graded gravel backfill and a pipe vent open to the atmosphere. Current gas monitoring will continue at the existing wells, and near the Administration Building (location of potential receptors) and at the offsite well.

Abandonment of Existing Center Dike

Early designs for the IHC CDF featured configurations which included multiple sediment management cells. CDFs with multiple cells allow for dewatering and settling to occur simultaneously as discharge of dredged material. However the CDF is operated as a ‘ponded’ facility to minimize potential for air emissions, and a minimum 2-foot of water is maintained over sediment at all times, preventing the need to dewater sediment. USACE revisited the model

utilized in designing the initial two-cell configuration. Under a variety of future dredging scenarios, it was found that there was little benefit to operation with having more than one cell. Low annual dredging volumes are anticipated for future years, and sediment management and compaction can be handled adequately with one cell. Abandoning the center dike and eliminating the need to raise it to a higher elevation during Phase 2 dike construction removes a variety of constructability concerns. The center dike will simply be covered in place as the IHC CDF is used over the next several years.

USACE is seeking a Federal Consistency Determination for this project. The proposed activity complies with Indiana's approved coastal management program and will be conducted in a manner consistent with such program. Construction activities will begin in 2021 and last through 2024.

Additional details on the design of these features will be included in the NEPA document that will be posted for public review.

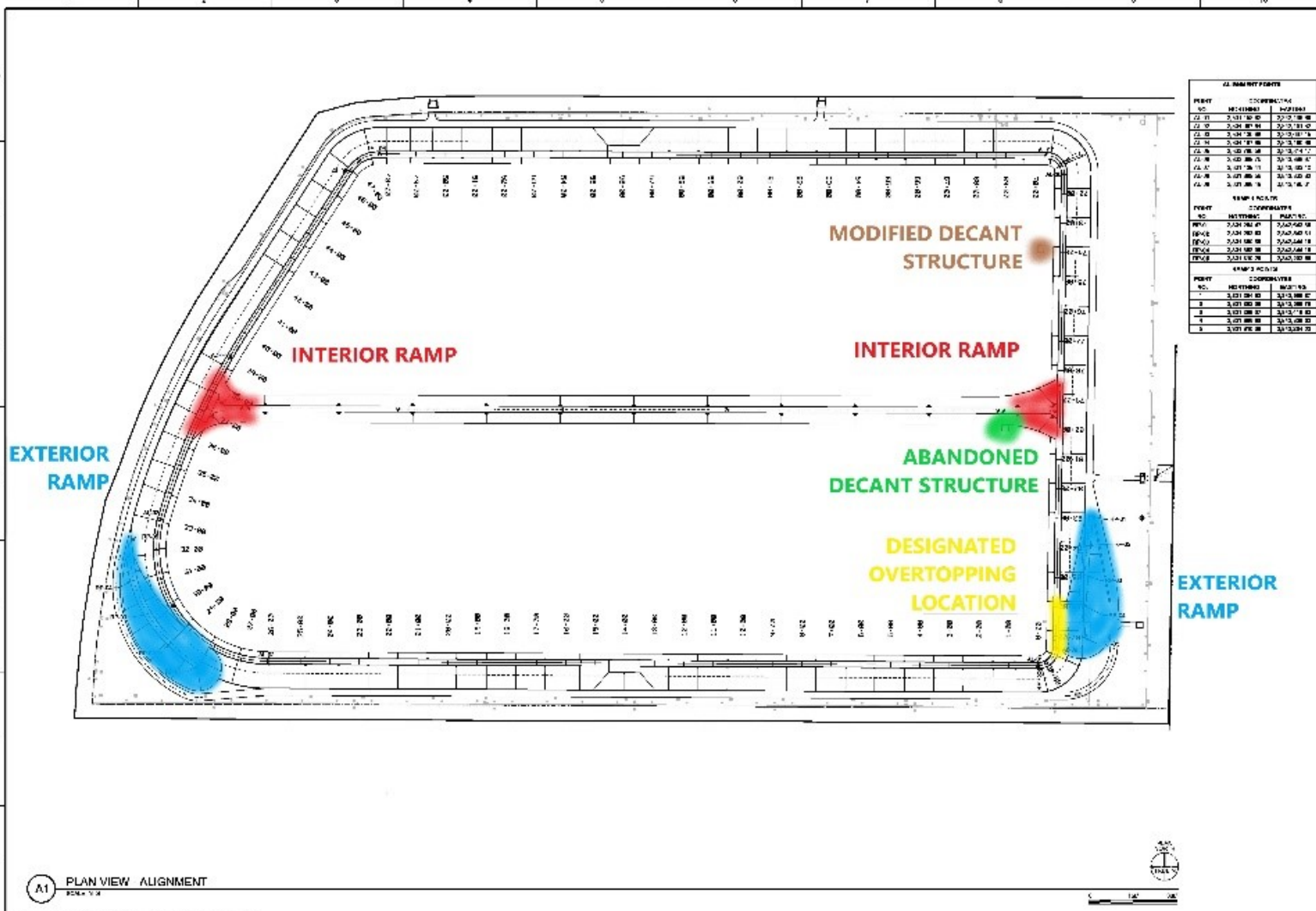
Comments should be sent to Mr. Jason Zylka, U.S. Army Corps of Engineers by email at jason.zylka@usace.army.mil. Questions should be directed to Mr. Zylka at (312) 846-5311.

Sincerely,

A handwritten signature in black ink that reads "Susanne J. Davis". The signature is written in a cursive, flowing style.

Susanne J. Davis, P.E.
Chief of Planning Branch

Attachments



22 CORNER POINTS			
POINT	Easting	Northing	POINT
22-11	3,431,80.00	3,527,78.00	22-12
22-12	3,431,80.00	3,527,78.00	22-13
22-13	3,431,80.00	3,527,78.00	22-14
22-14	3,431,80.00	3,527,78.00	22-15
22-15	3,431,80.00	3,527,78.00	22-16
22-16	3,431,80.00	3,527,78.00	22-17
22-17	3,431,80.00	3,527,78.00	22-18
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22-20	3,431,80.00	3,527,78.00	22-21
22-21	3,431,80.00	3,527,78.00	22-22
22-22	3,431,80.00	3,527,78.00	22-23
22-23	3,431,80.00	3,527,78.00	22-24
22-24	3,431,80.00	3,527,78.00	22-25
22-25	3,431,80.00	3,527,78.00	22-26
22-26	3,431,80.00	3,527,78.00	22-27
22-27	3,431,80.00	3,527,78.00	22-28
22-28	3,431,80.00	3,527,78.00	22-29
22-29	3,431,80.00	3,527,78.00	22-30
22-30	3,431,80.00	3,527,78.00	22-31
22-31	3,431,80.00	3,527,78.00	22-32
22-32	3,431,80.00	3,527,78.00	22-33

A1 PLAN VIEW ALIGNMENT
SCALE: 1" = 4'

1. 10/1/2010 10:00:00 AM 10/1/2010 10:00:00 AM
 1. X:\Projects\101010000\101010000.dwg 10/1/2010 10:00:00 AM
 1. 10/1/2010 10:00:00 AM 10/1/2010 10:00:00 AM

US Army Corps of Engineers

PROJECT INFORMATION

PROJECT: 101010000
 NO. 101010000
 DATE: 10/1/2010

DESIGNER INFORMATION

DESIGNER: 101010000
 NO. 101010000
 DATE: 10/1/2010

REVISIONS

NO. DATE DESCRIPTION



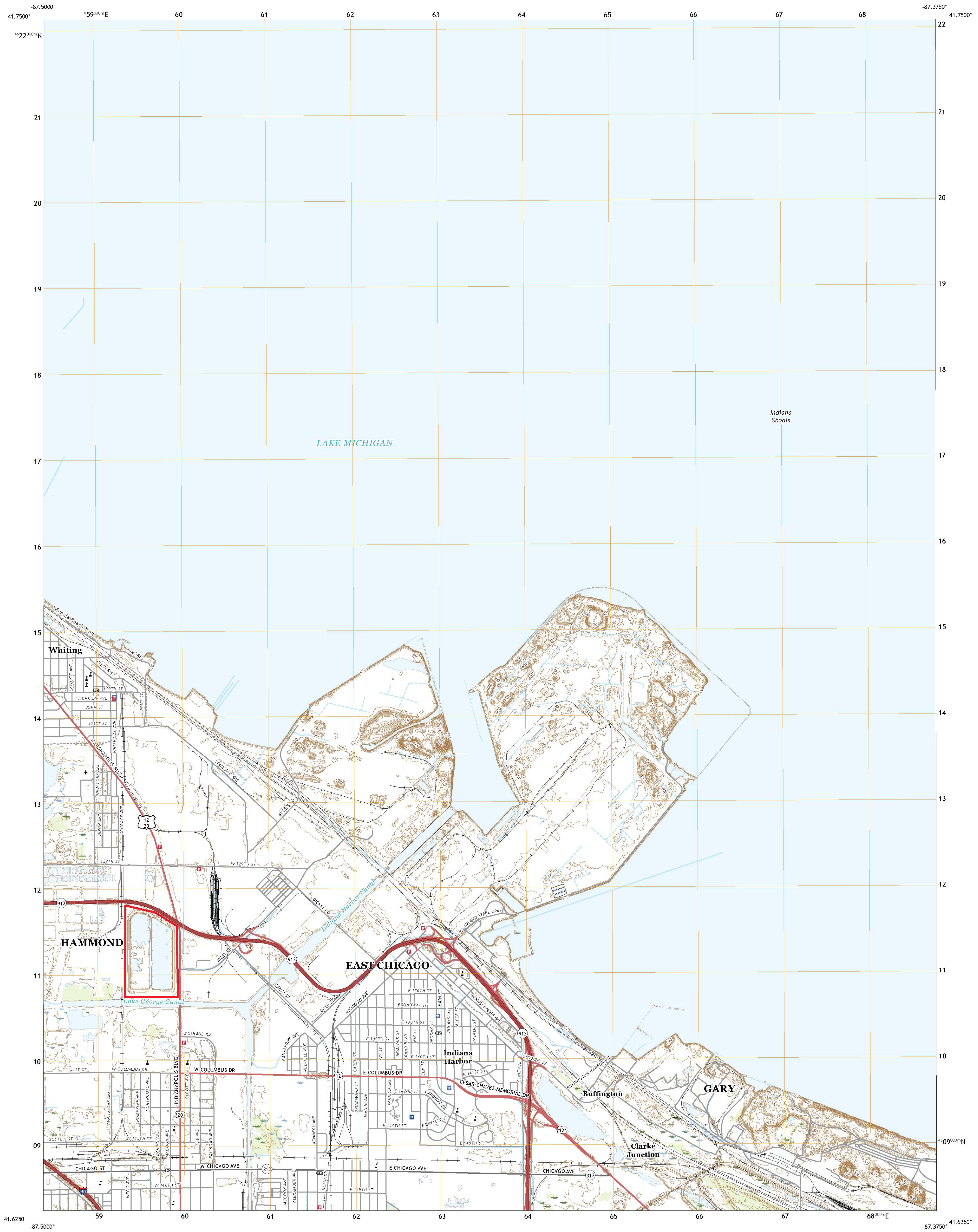
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

USACE Chicago District
Indiana Harbor CDF Supplemental EA
Project Location

Project Location

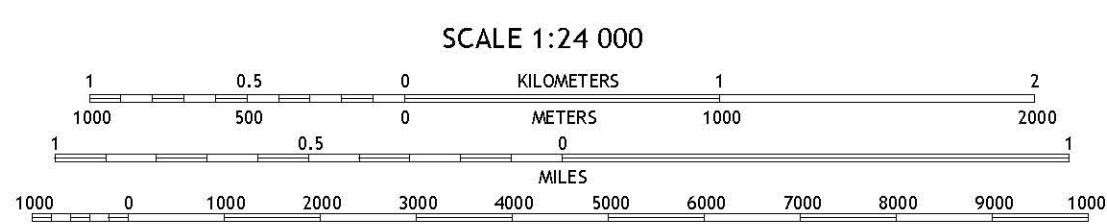
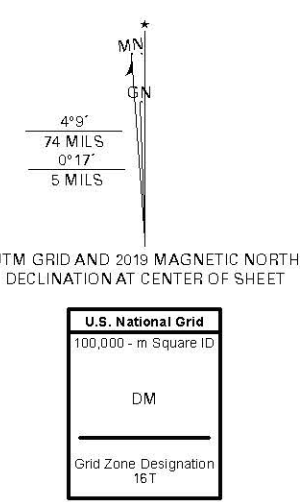


WHITING QUADRANGLE
INDIANA - LAKE COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1994 (WGS84). Projection and
1 000-meter grid/Universal Transverse Mercator, Zone 16T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery.....N.A.I.P., September 2016 - September 2017
Roads.....U.S. Census Bureau, 2016 - 2019
Names.....GAS, 1979 - 2019
Hydrography.....National Hydrography Dataset, 2004 - 2019
Contours.....National Elevation Dataset, 2013 - 2016
Boundaries.....Multiple sources; see metadata file 2017 - 2018
Public Land Survey System.....BLM, 2018
Wetlands.....FWS National Wetlands Inventory 1980



ADJOINING QUADRANGLES

1	2	3
4	5	6

- 1 Jackson Park
- 2 Lake Calumet
- 3 Gary DE N
- 4 Calumet City
- 5 Highland
- 6 Gary

ROAD CLASSIFICATION

	Expressway		Local Connector
	Secondary Hwy		Local Road
	Ramp		4WD
	Interstate Route		US Route
			State Route

WHITING, IN
2019

