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RIVERBEND PARK VEGETATION

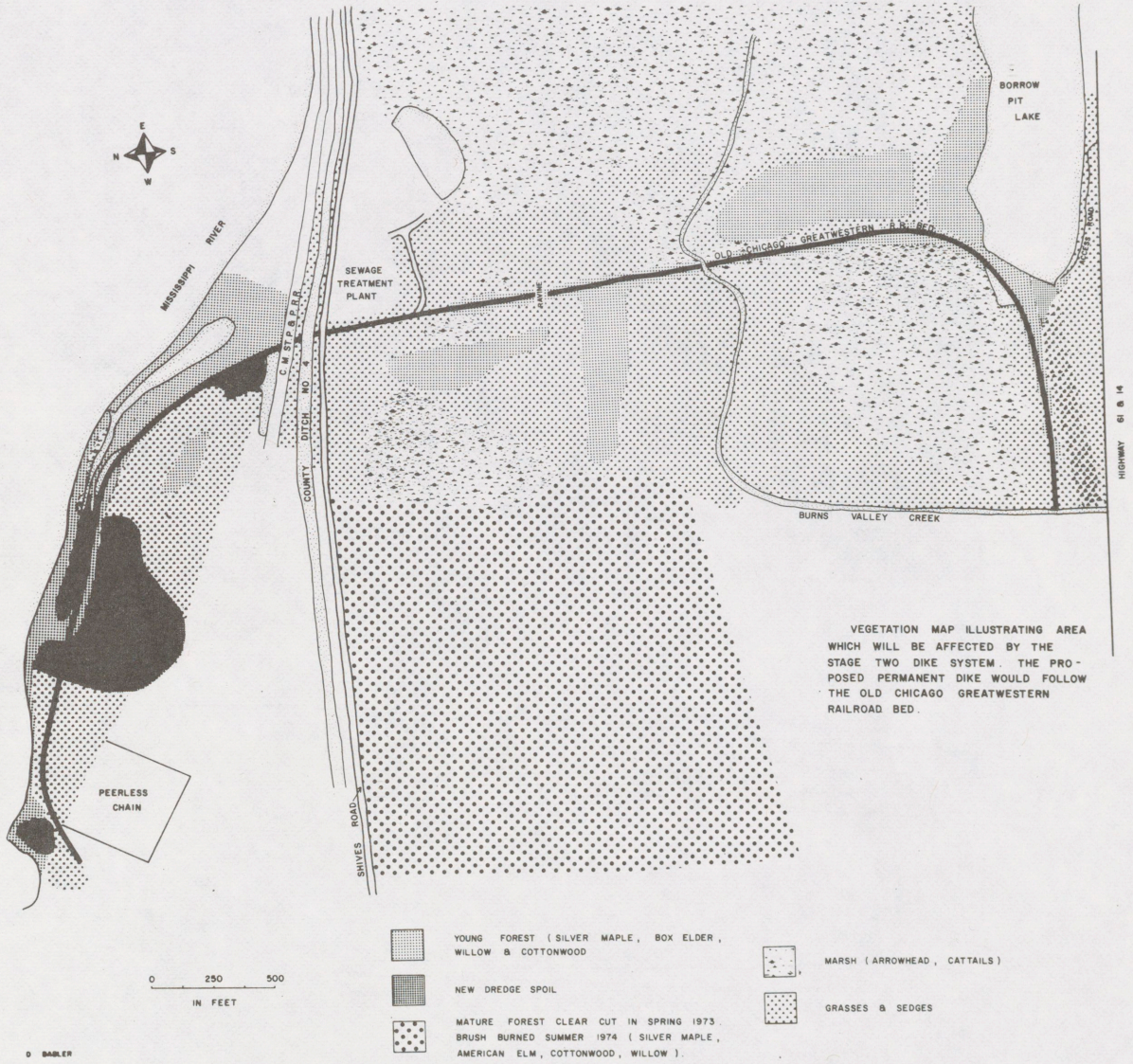


FIGURE 20

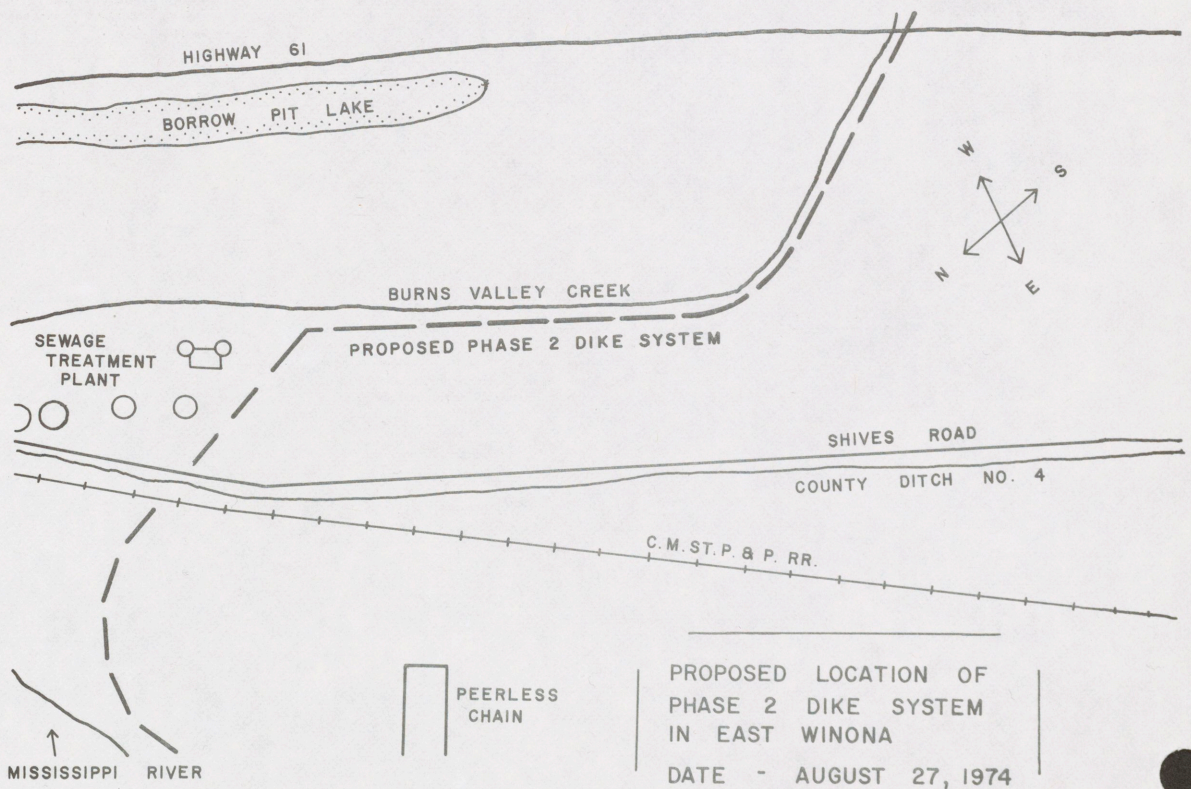


FIGURE 21

DOMINION

OF

CANADA

NORTH
DAKOTA

SOUTH
DAKOTA

GRAND FORKS

FARGO

NORTH
RIVER OF THE
RED

LAKE
SUPERIOR

DULUTH

SUPERIOR

MINNESOTA

WISCONSIN

ST. CLOUD

MINNEAPOLIS

ST. PAUL

EAU CLAIRE

MINNESOTA
RIVER

MISSISSIPPI
RIVER

ST. CROIX
RIVER

CHIPPEWA
RIVER

ZUMBRO
RIVER

WISCONSIN
RIVER

ROCHESTER

WINONA

LA CROSSE

IOWA

LEGEND

--- DRAINAGE AREA

INFORMATION FROM U.S. ARMY, CORPS OF ENGINEERS, ST. PAUL DISTRICT

CITY OF WINONA, MINNESOTA	
MISSISSIPPI RIVER AND ENVIRONS	
DRAINAGE AREA OF MISSISSIPPI RIVER ABOVE WINONA, MINNESOTA	
ROBERT J. BOLLANT	CITY ENGINEER
DRAWN BY - J. B. C.	SCALE -
CHECKED BY -	MAY 8, 1972
FILE NO. - M 98	JOB NO. - 7201

FIGURE 1

FINAL
ENVIRONMENTAL IMPACT STATEMENT
FLOOD CONTROL PROJECT AND
WATERFRONT DEVELOPMENT
WINONA, MINNESOTA

INTRODUCTION

The purpose of this statement is to assess the environmental impacts associated with all on-going or proposed projects on the Mississippi River floodplain in the vicinity of Winona, Minnesota (see figure 1, Location Map). The proposed Stage II Flood Control Project will be discussed in greatest detail because it is the largest and most complex of all of the proposed projects. Even though some of the other projects lie within Winona's present dike system, they may still pertain directly or indirectly to the flood problem at Winona. Several of the other projects would have obvious effects upon the river, the surrounding marshlands, and the city itself. Arbitrarily, the project list contains all projects which were being planned or worked on after 1 January 1972. The list of projects and their locations are shown on figure 2. Much of the information contained in this report has been drawn from an environmental assessment prepared by Winona State University, Winona, Minnesota, under contract with the Corps of Engineers. The principal investigator was Dr. Calvin R. Fremling (see also Bibliography). This report is on file at the St. Paul District Office.

1. PROJECT DESCRIPTION

PROJECT LOCATION

1.001 Winona, a city of 26,438, is located on the right bank of the Mississippi River, 725.5 miles above the mouth of the Ohio River, in the southeastern corner of Minnesota at 44° 03.2' N. latitude and 91° 38.5' W. longitude.

1.002 Because Winona developed as an early steamboat port and saw-mill center, much of the city lies within the floodplain of the river. Flooding has been a constant threat to the city.

PROJECT AUTHORIZATION

1.003 The project for flood damage reduction on the Mississippi River at Winona, Minnesota, described in House Document No. 92-152, 92d Congress, 1st Session, was authorized under Section 201 of the Flood Control Act of 1965. Resolutions were adopted by the Public Works Committees of the House of Representatives on 29 July 1971 and of the Senate on 18 November 1971. The project provides for extension of and modifications to the project authorized by the 1958 Flood Control Act, to complete a flood barrier along the riverfront and around the downstream portion of Winona.

1.004 The proposed riverfront development projects involve the removal of dredge material from the Mississippi River and floodplain, and, in accordance with Section 10 of the River and Harbor Act of 1899, permits must be secured from the Corps of Engineers. The proposed 24-Barge Fleeting Area Cleaning Facility and the Mississippi Development Consortium would require permits under Section 404 of the Federal Water Pollution Control Act Amendments.

Table XX

COST ESTIMATE STORM SEWER DIVERSION EAST LAKE WINONA 1990 PRICES

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u> <u>Cost</u>	<u>Total</u> <u>Cost</u>
1.	54" RCP - III	370 LF	190	70,300
2.	60" RCP - III	510 LF	210	107,100
3.	66" RCP - III	1,100 LF	250	275,000
4.	90" RCP - III	1,300 LF	360	468,000
5.	96" RCP - III	1,000 LF	400	400,000
6.	108" RCP - III	1,320 LF	530	699,600
7.	120" RCP - III	700 LF	600	420,000
8.	120" RCP V - Jacked	170 LF	850	144,500
9.	MH # 1-6	6 EA	6,000	36,000
10.	MH # 7-9	3 EA	16,000	48,000
11.	MH # 10-11	2 EA	23,000	46,000
12.	MH # 12-14	3 EA	30,000	90,000
13.	Head Wall - Outlet	1 EA	50,000	50,000
14.	Pavement Restoration Including Bike Path	400 SY	15	6,000
15.	Watermain Relocation	LS	4,000	4,000
16.	Contingency			141,500
Total Construction Cost				\$3,006,000
Engineering and Administration				297,000
				\$3,303,000

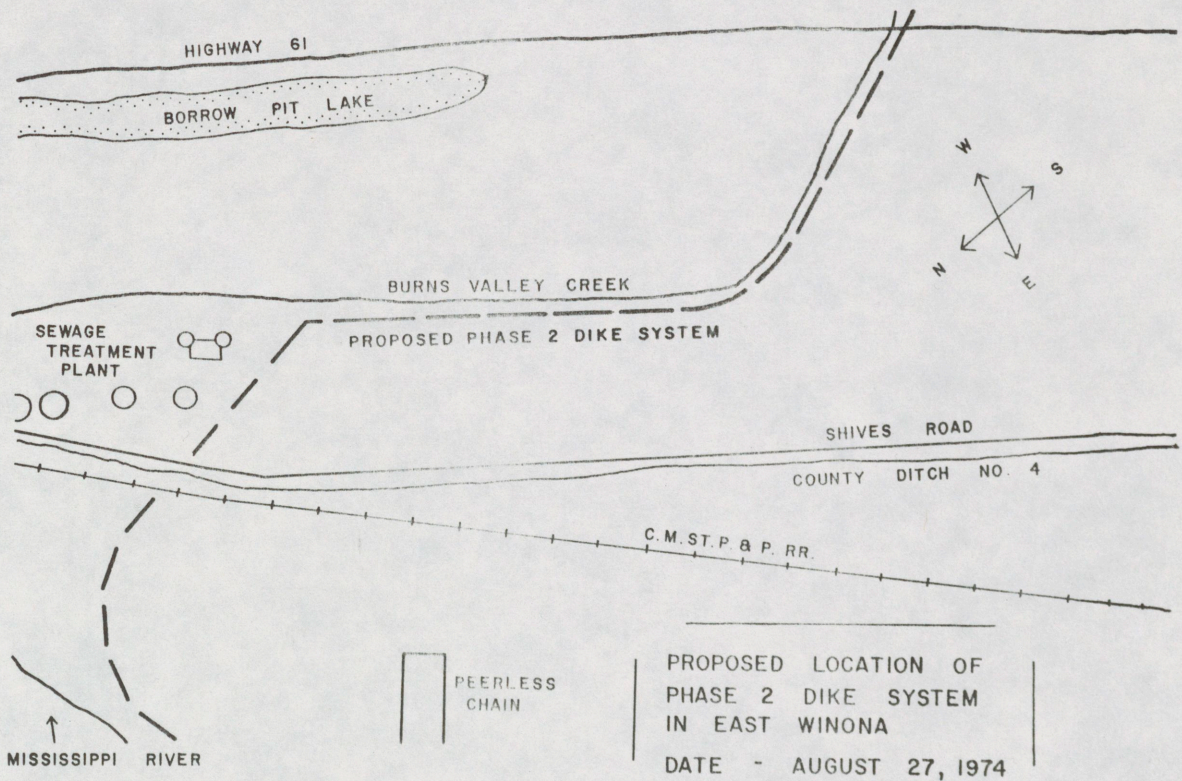


FIGURE 21

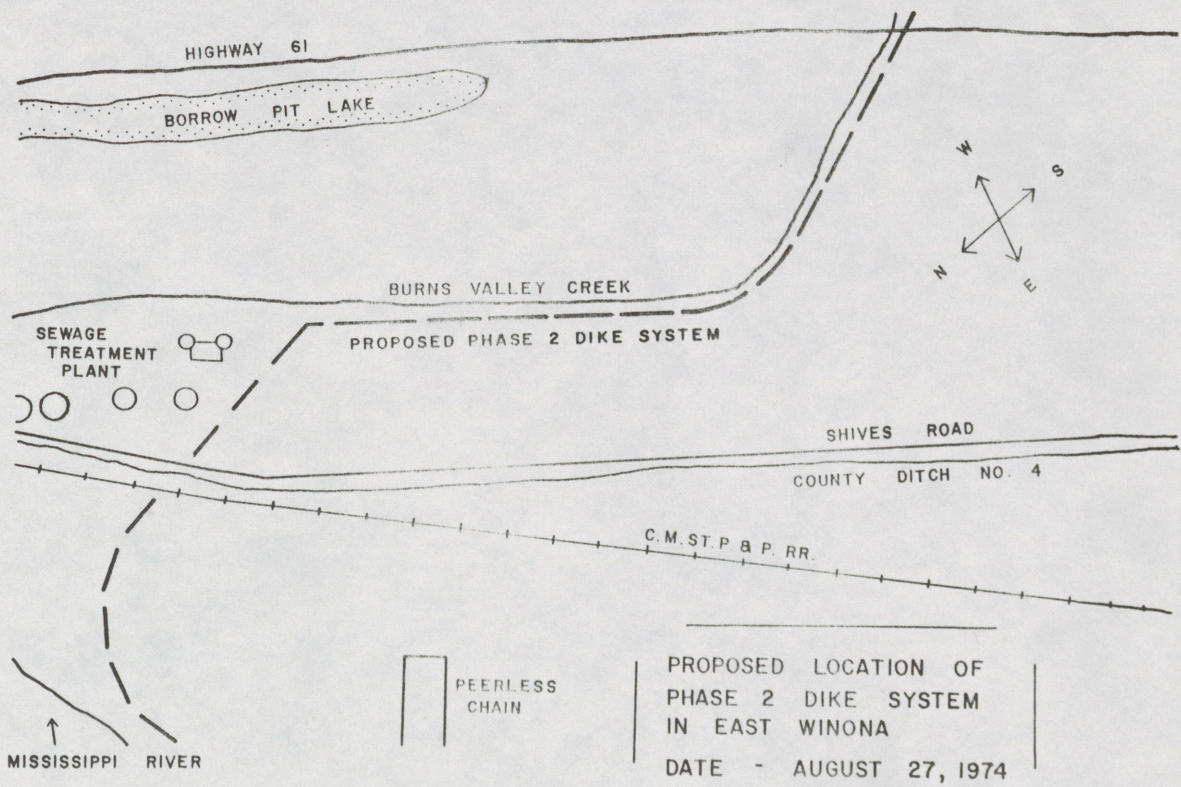


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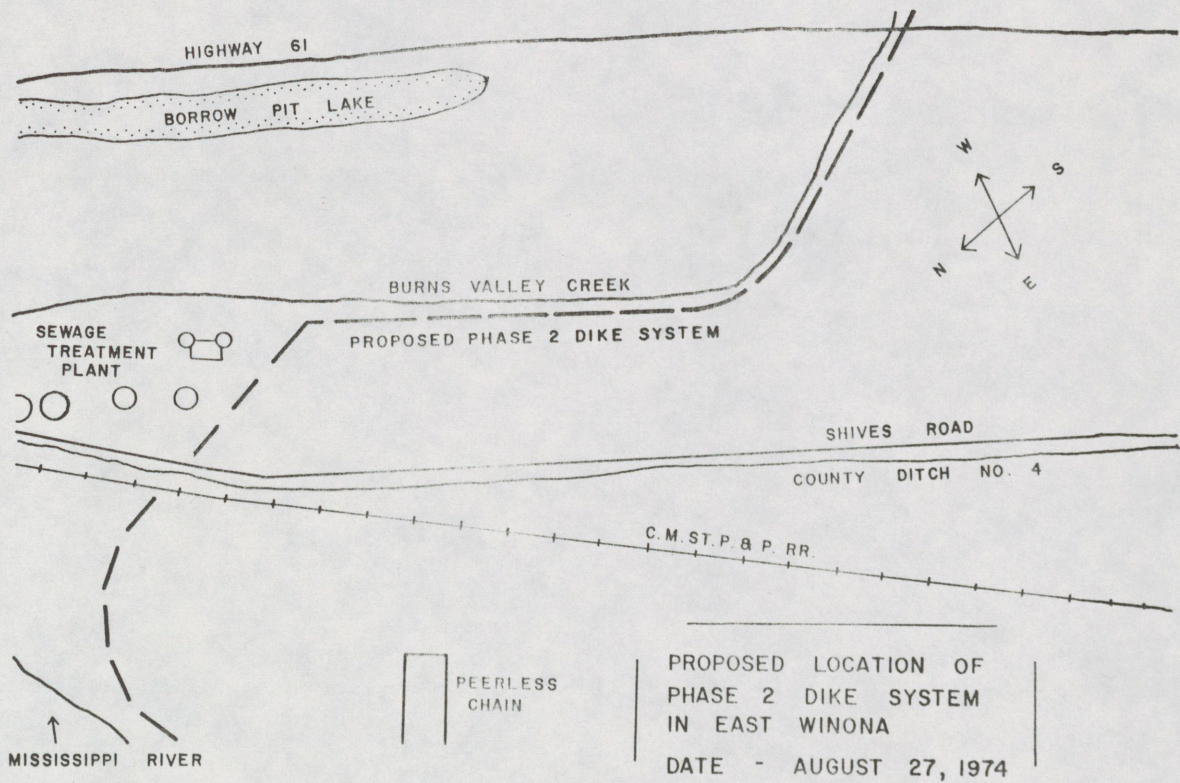


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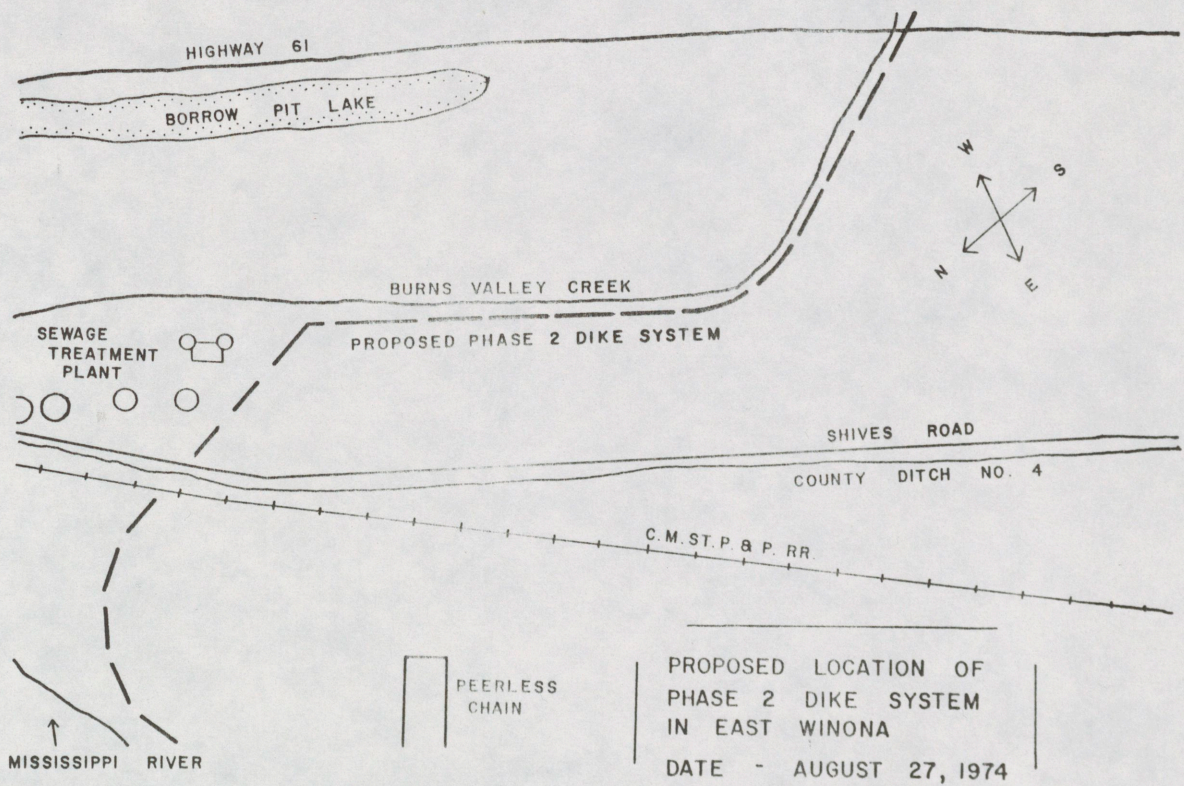


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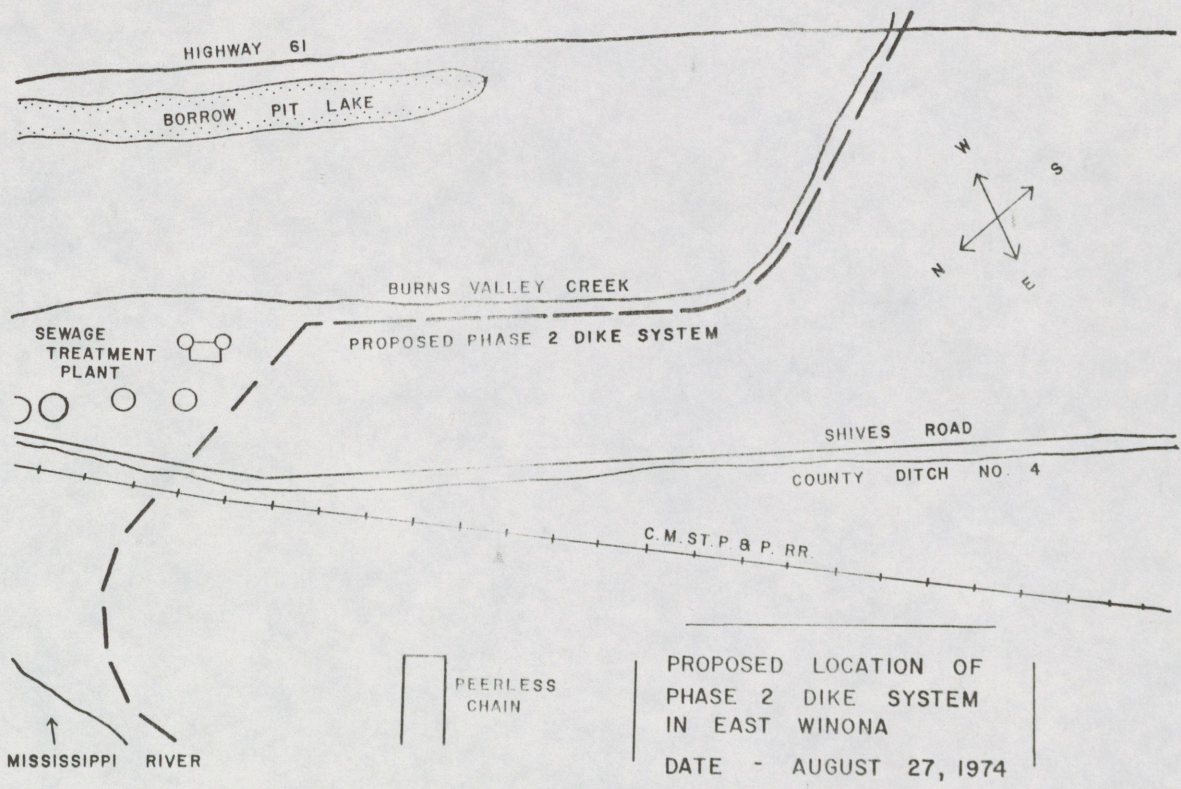


FIGURE 21

RIVERBEND PARK VEGETATION

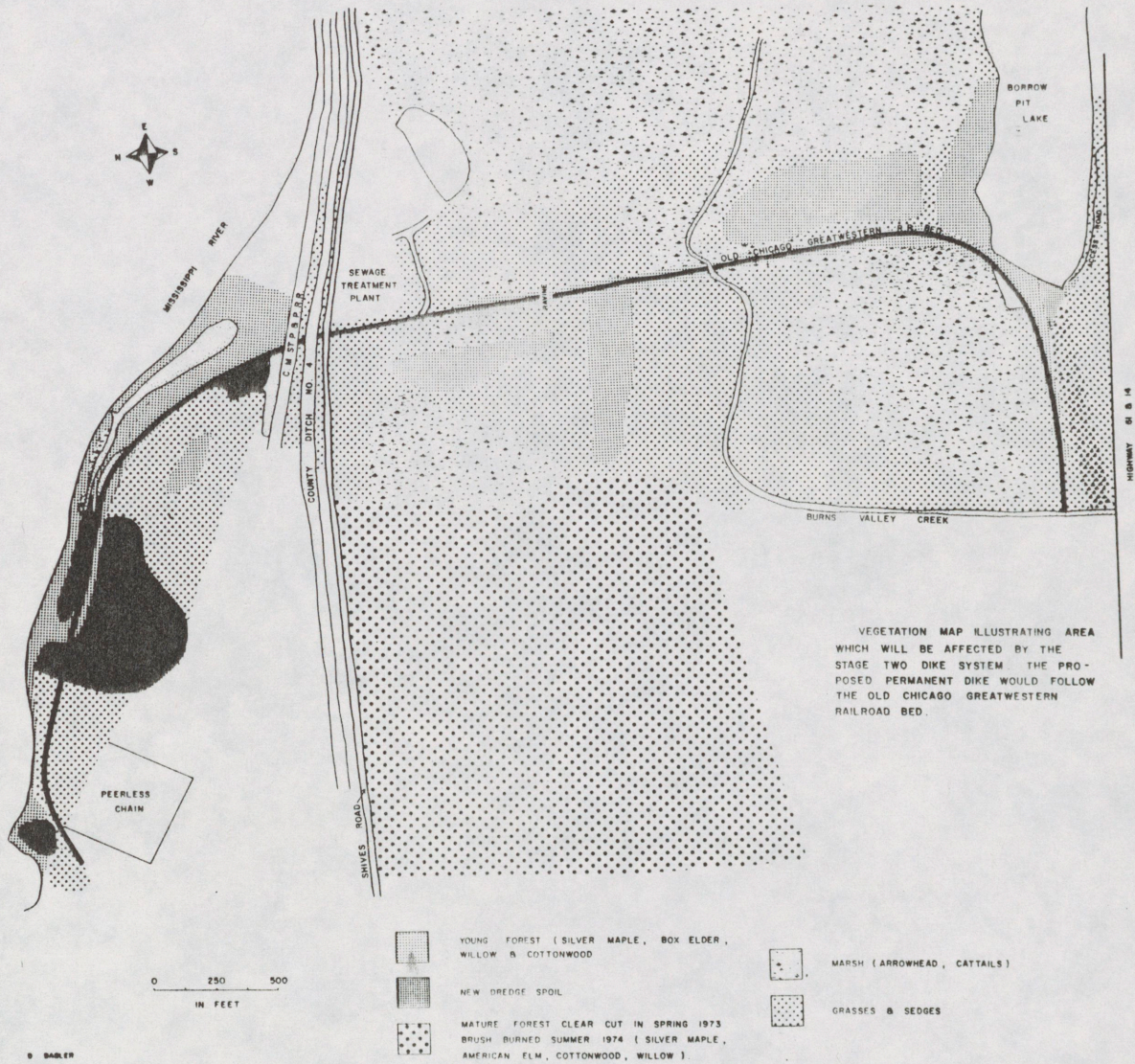


FIGURE 20

RIVERBEND PARK VEGETATION

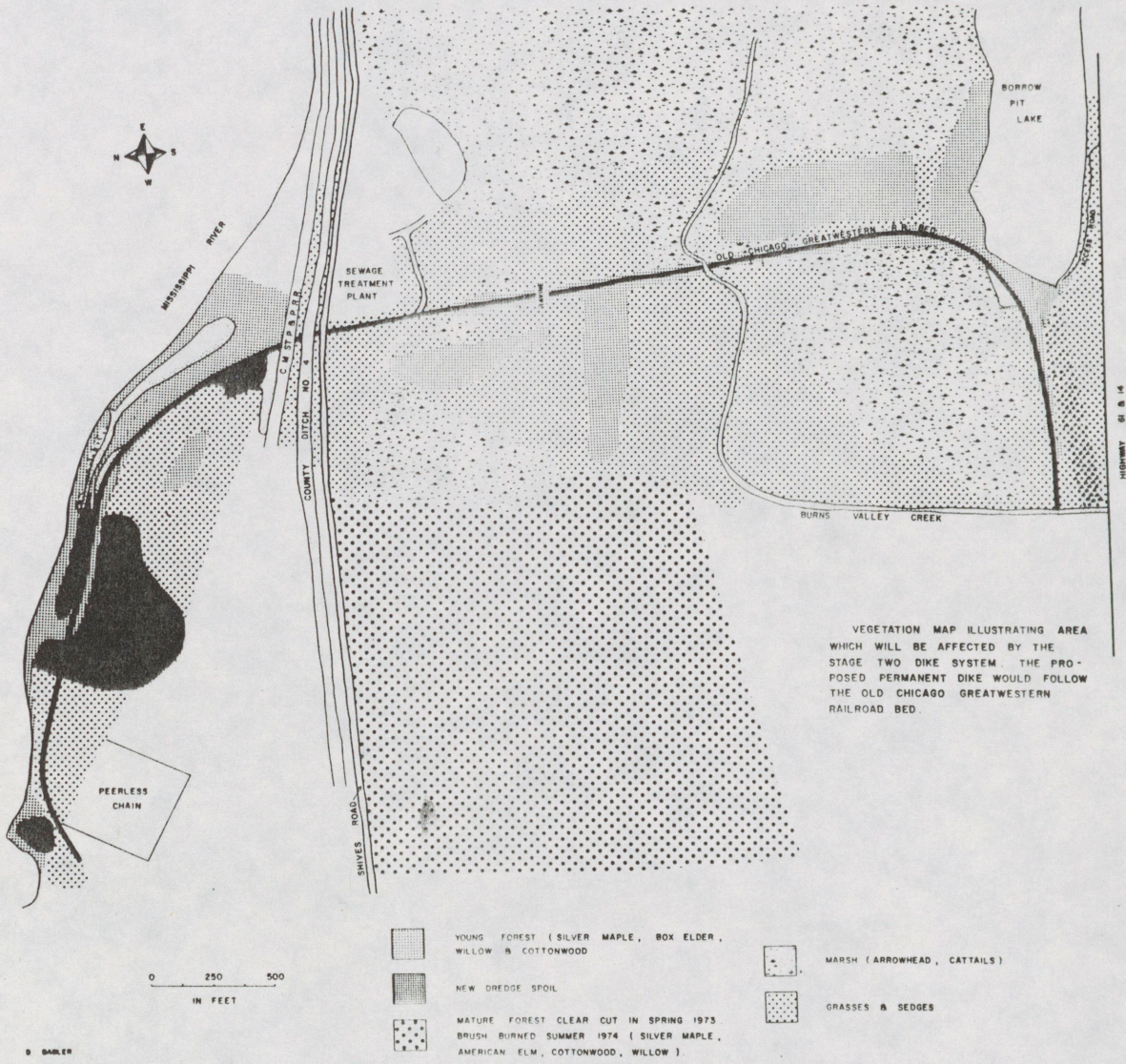


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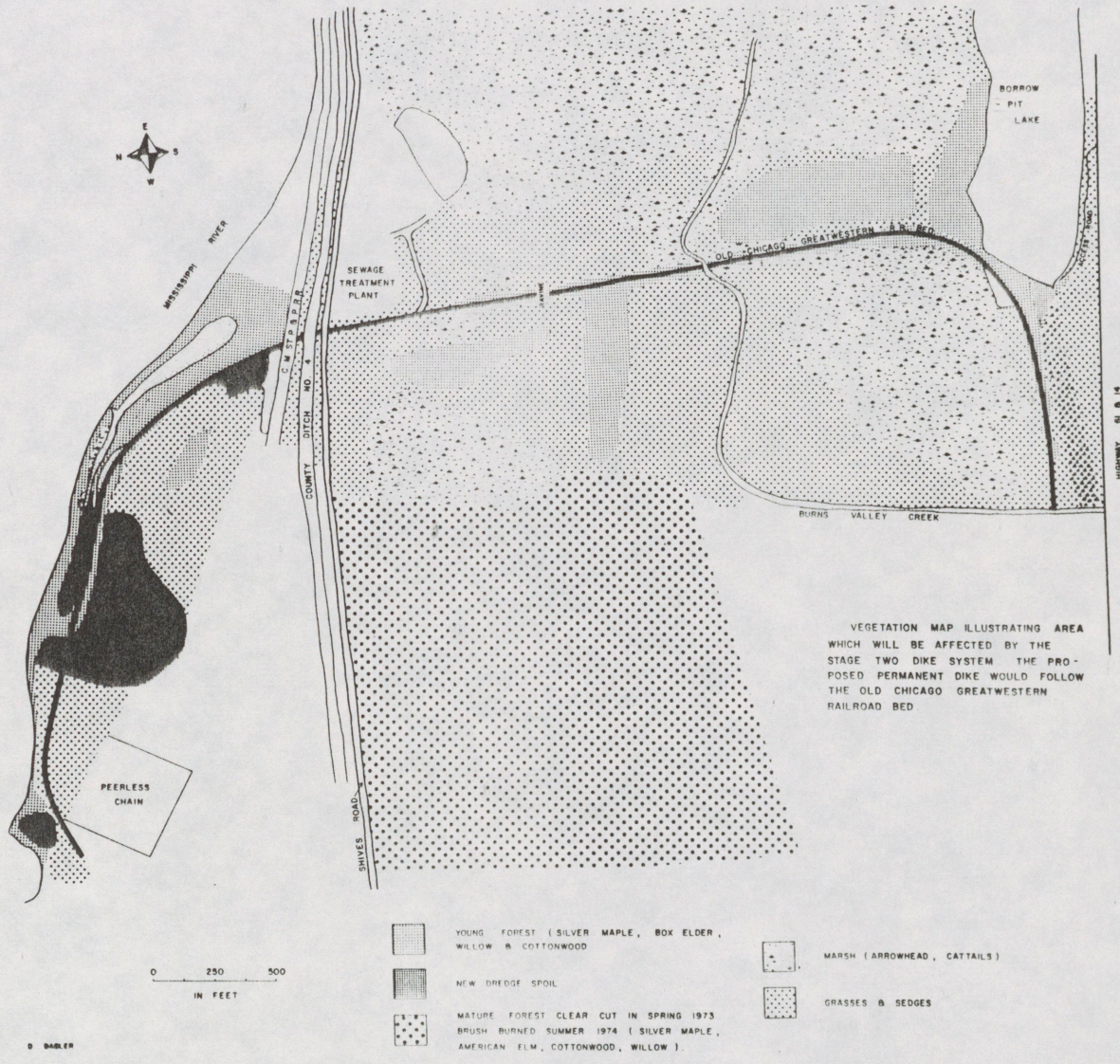


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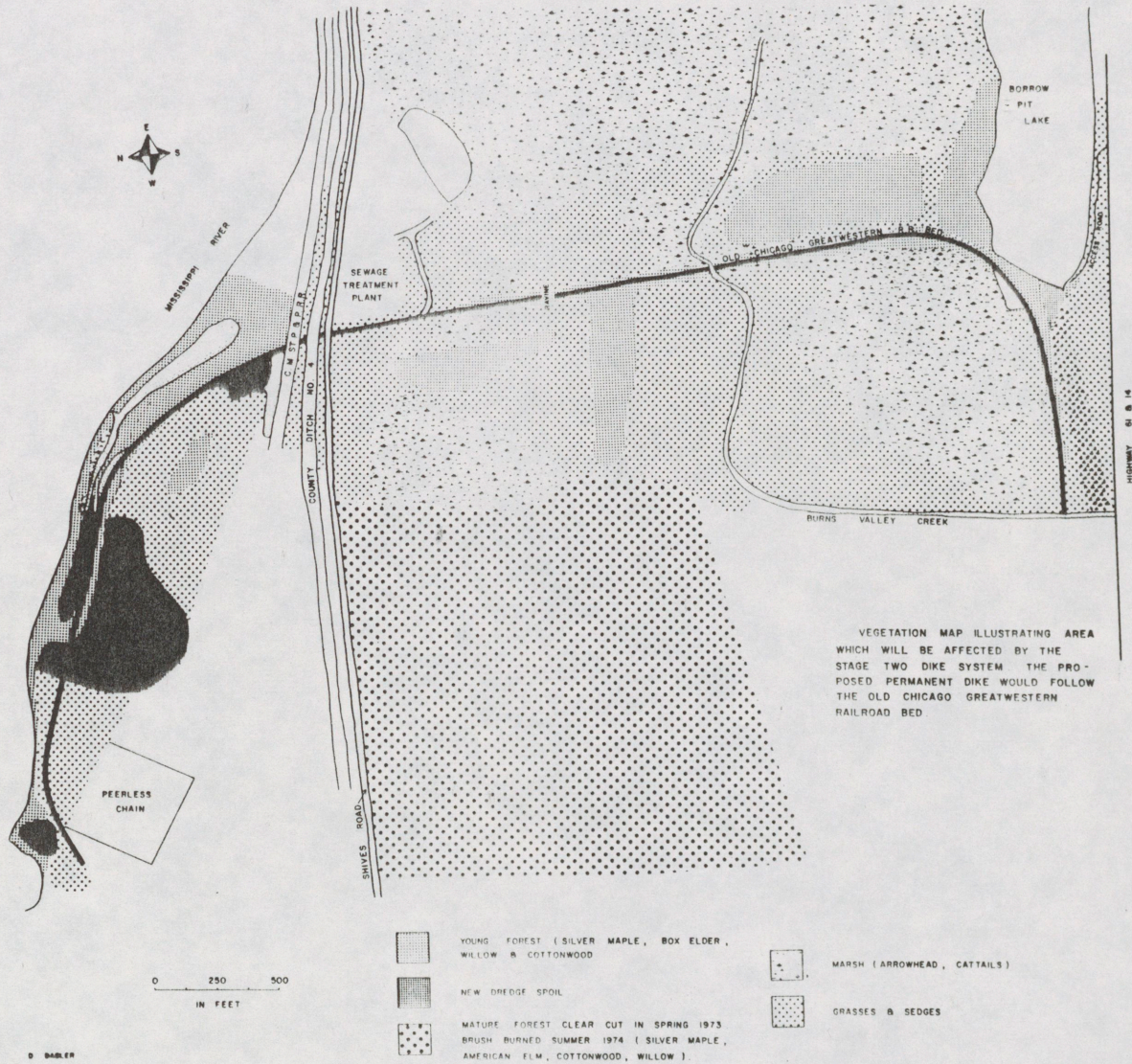
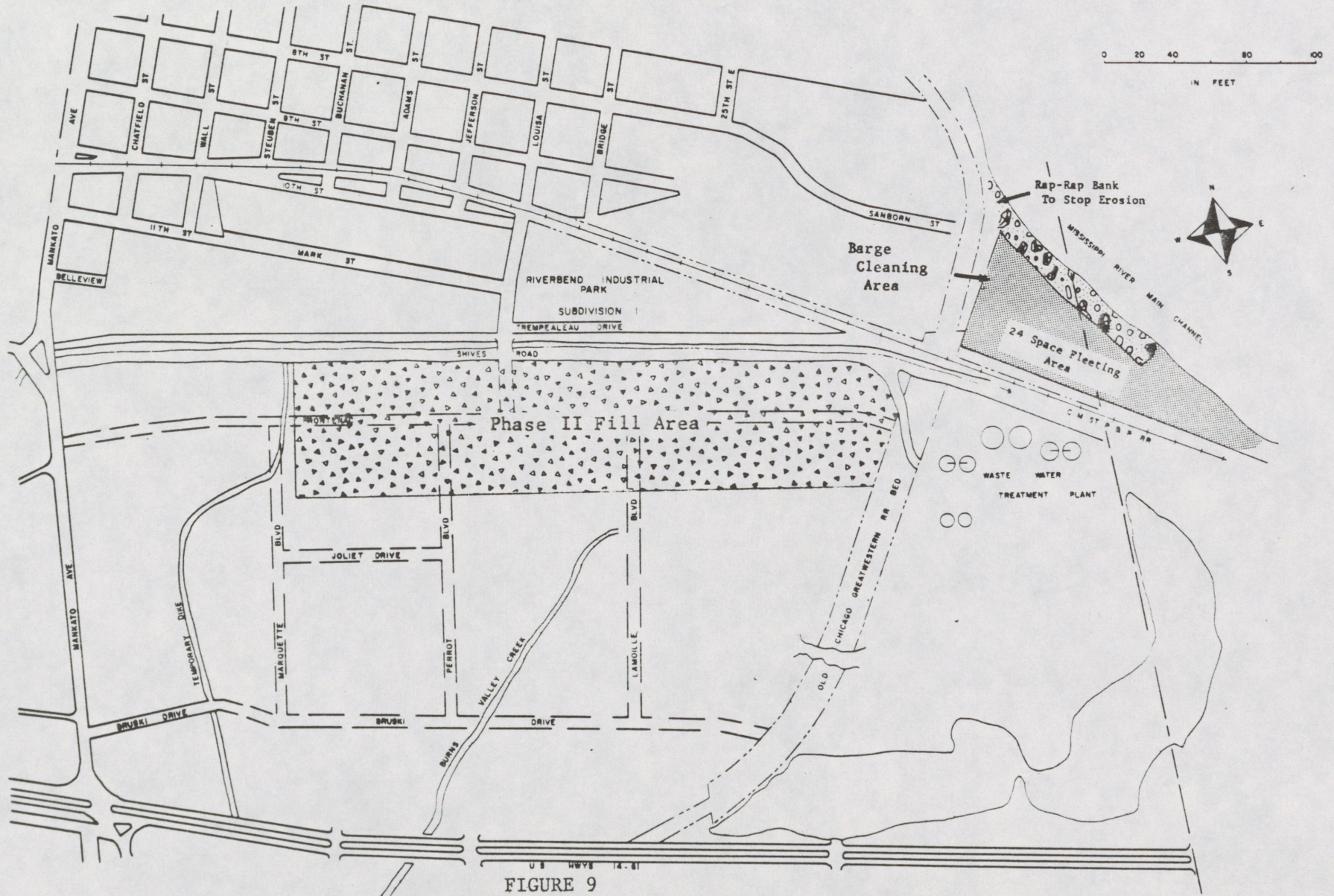
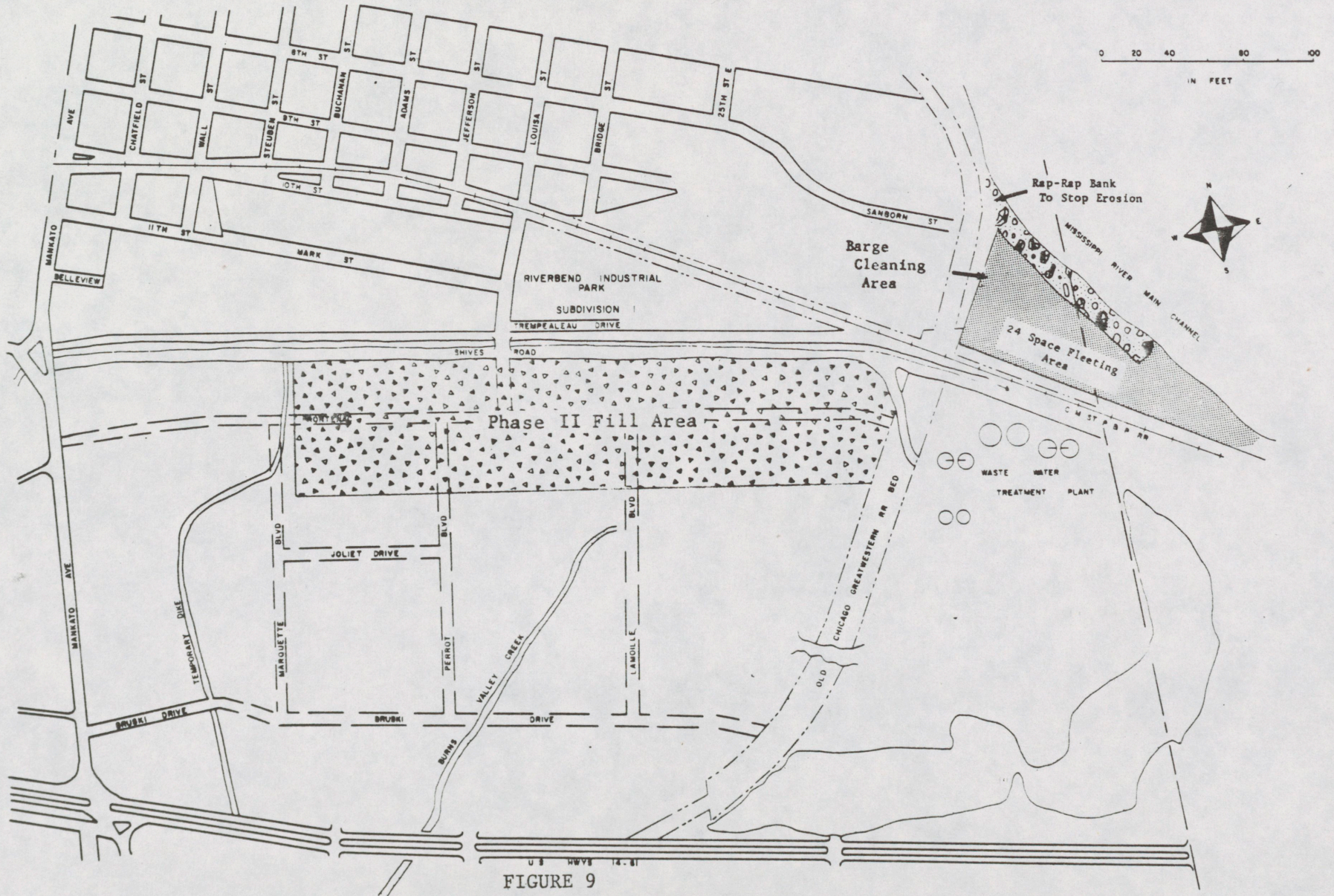


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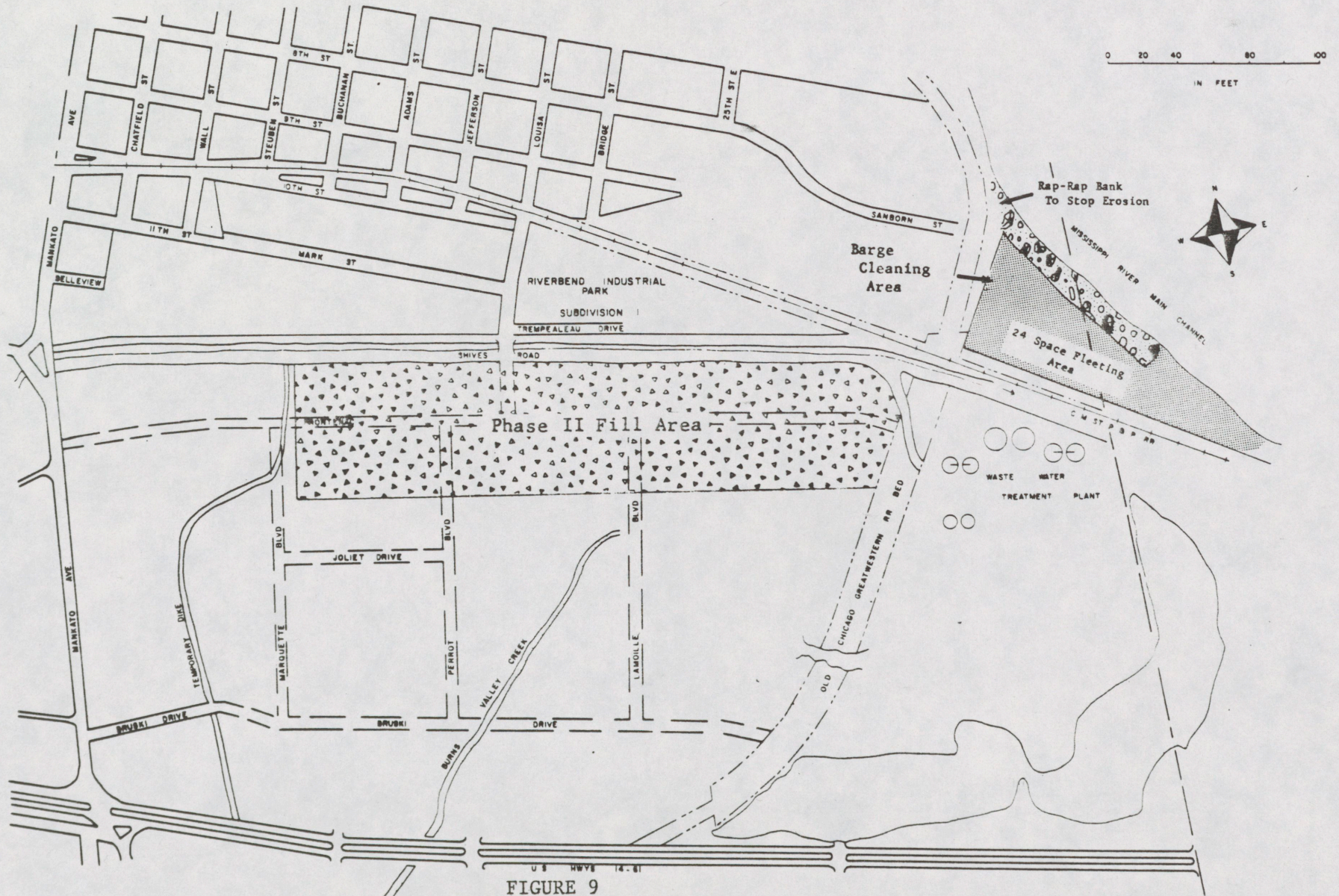


RIVERBEND INDUSTRIAL PARK

FIGURE 9



RIVERBEND INDUSTRIAL PARK



RIVERBEND INDUSTRIAL PARK

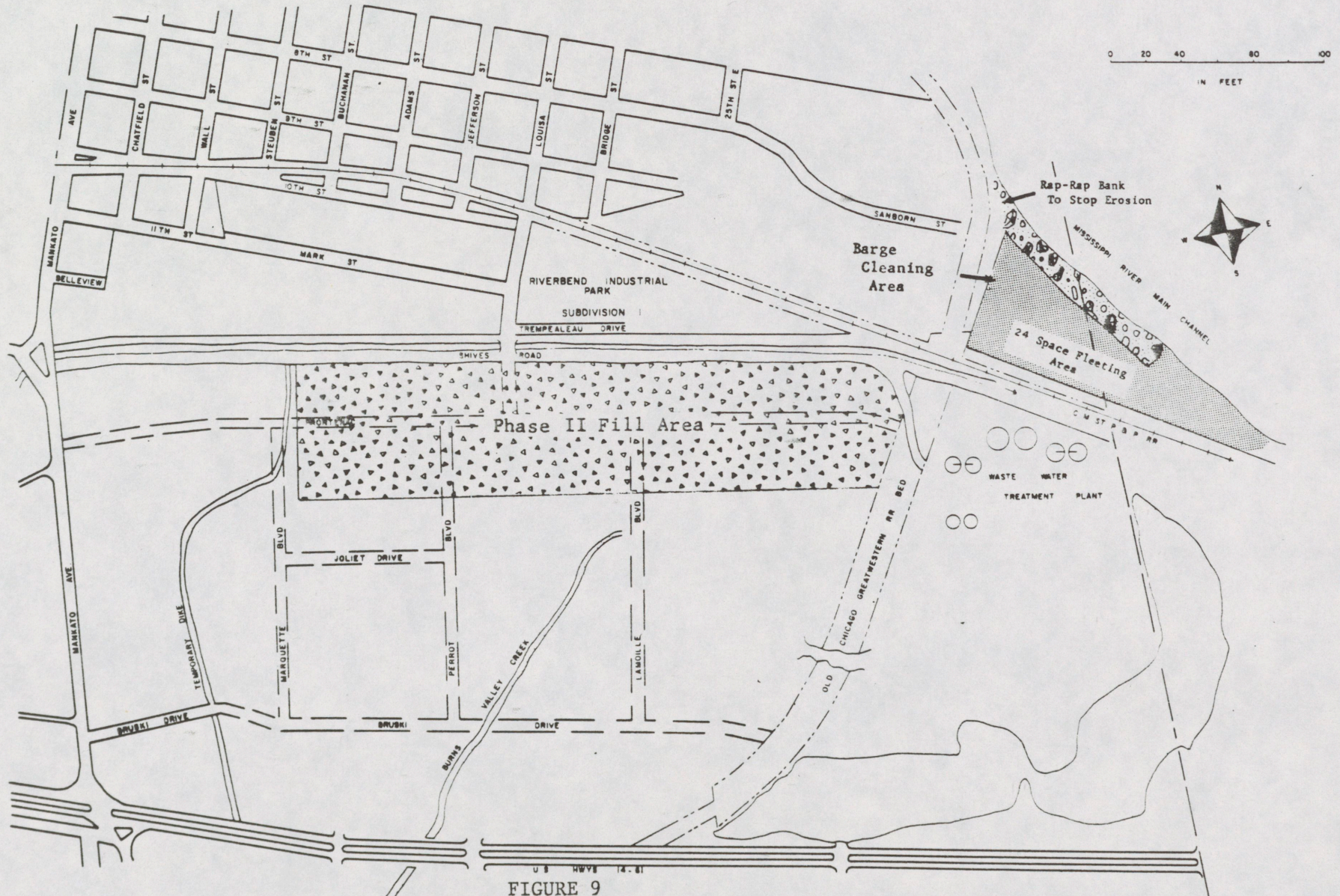


FIGURE 9

RIVERBEND INDUSTRIAL PARK

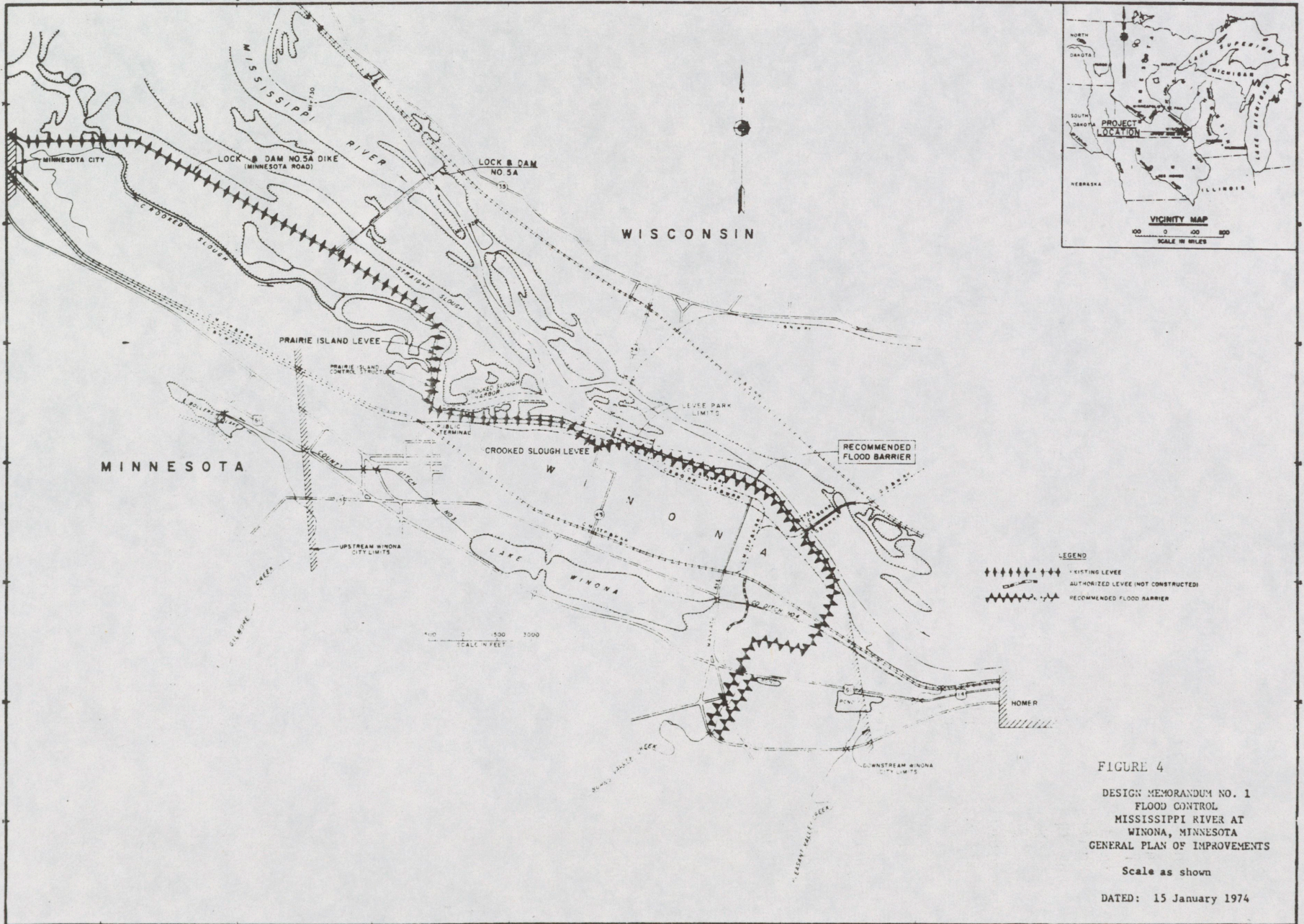


FIGURE 4
 DESIGN MEMORANDUM NO. 1
 FLOOD CONTROL
 MISSISSIPPI RIVER AT
 WINONA, MINNESOTA
 GENERAL PLAN OF IMPROVEMENTS

Scale as shown

DATED: 15 January 1974

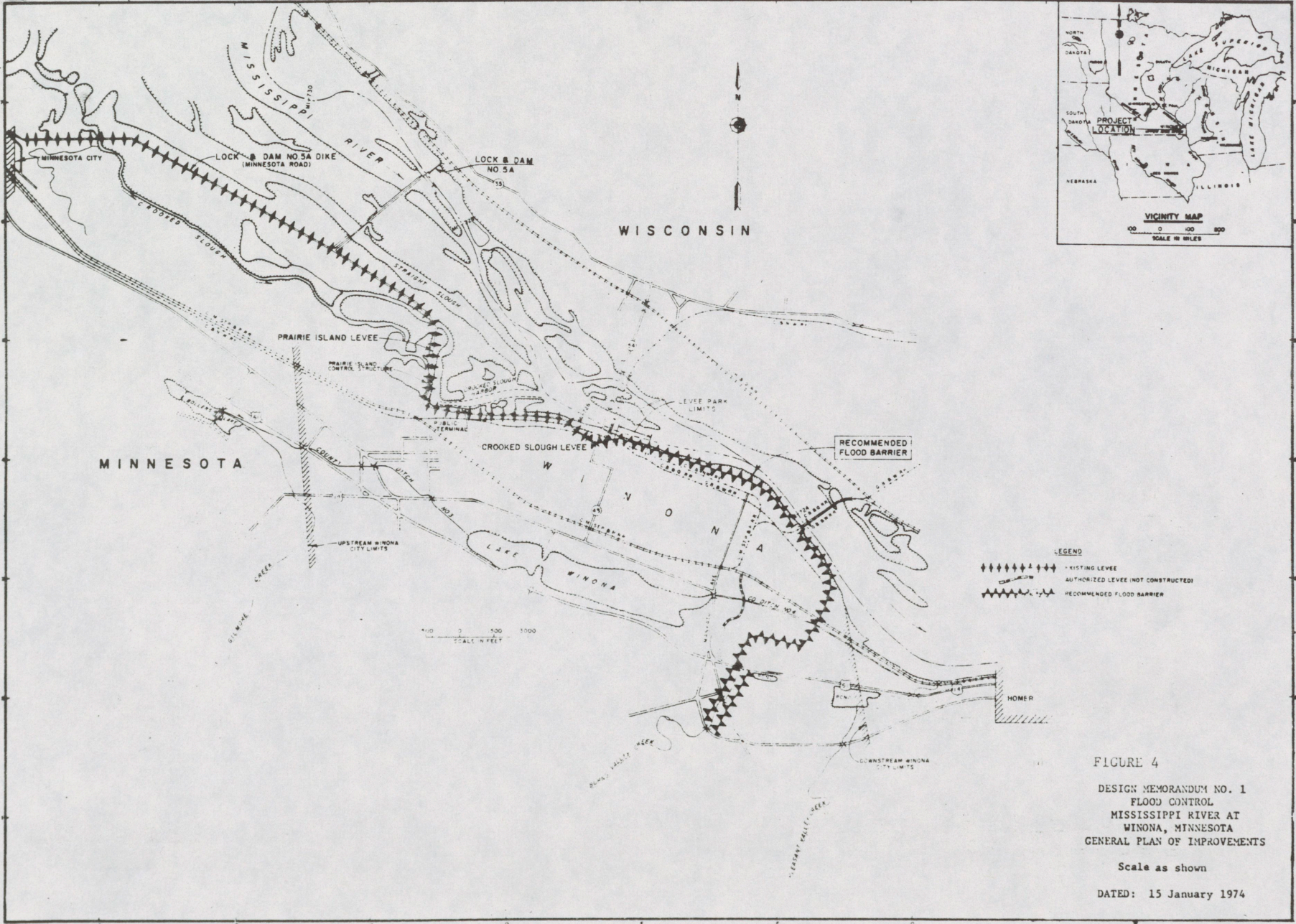


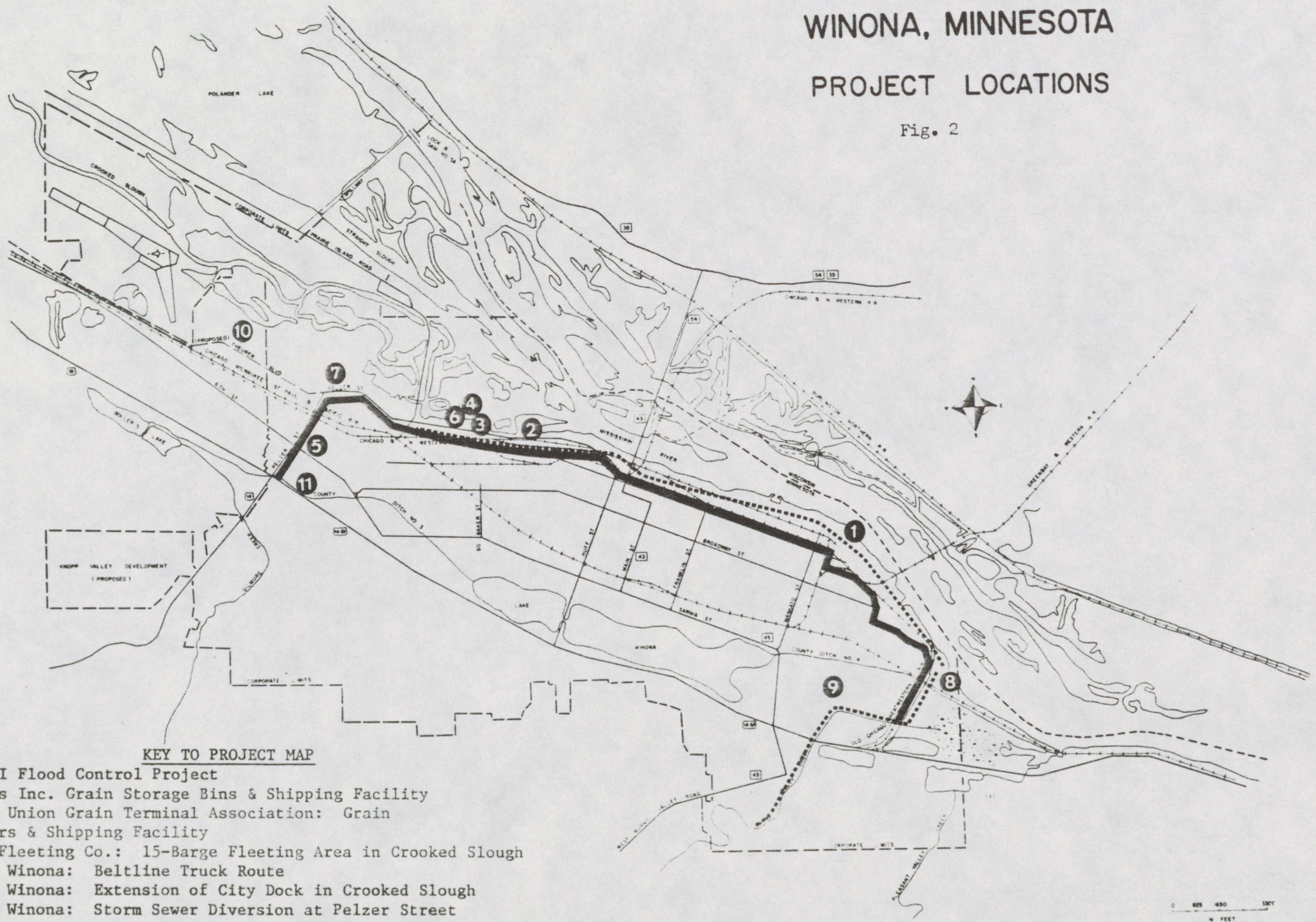
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Scale as shown

DATED: 15 January 1974

WINONA, MINNESOTA PROJECT LOCATIONS

Fig. 2

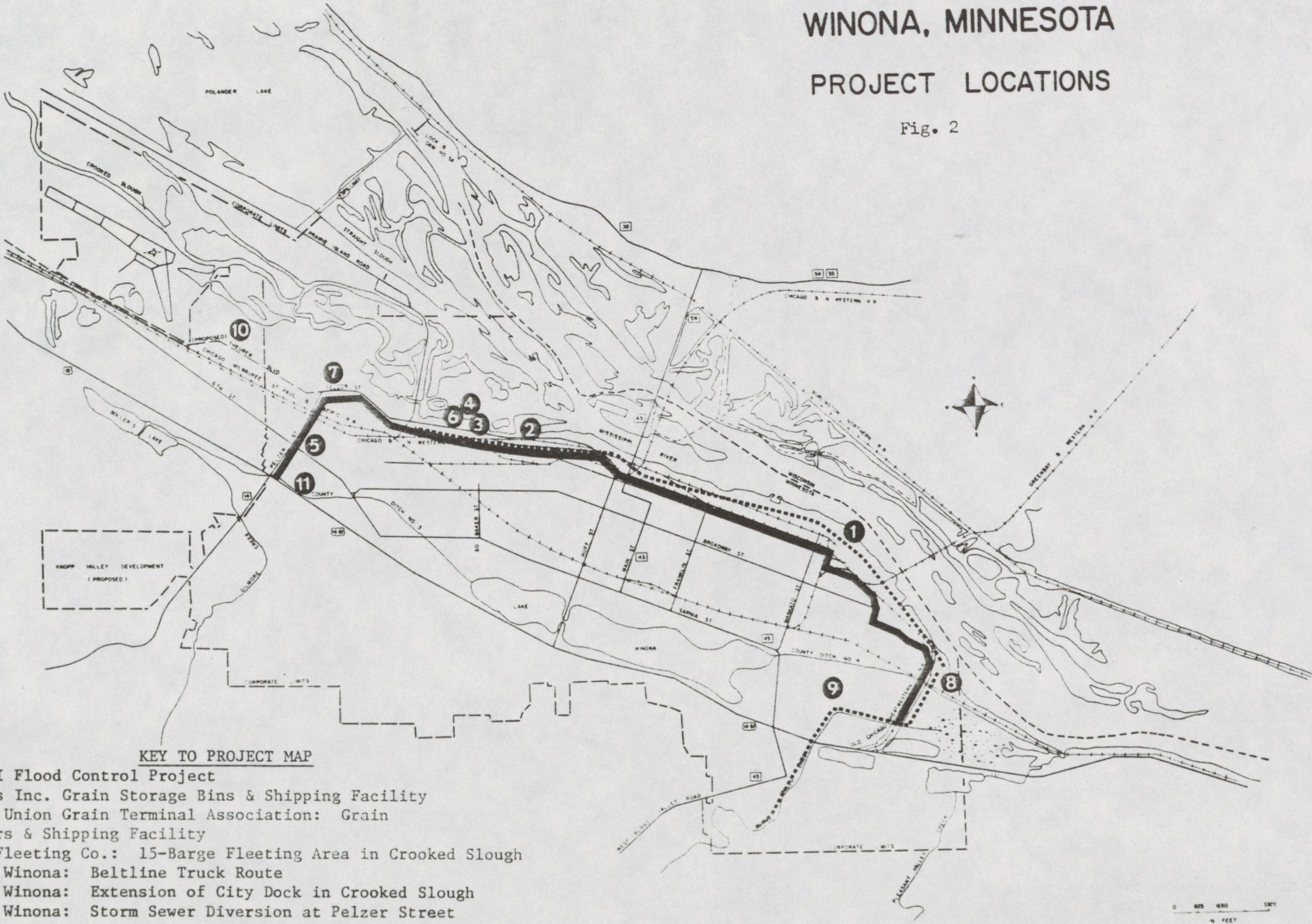


KEY TO PROJECT MAP

1. Stage II Flood Control Project
2. Fronings Inc. Grain Storage Bins & Shipping Facility
3. Farmers Union Grain Terminal Association: Grain Elevators & Shipping Facility
4. Winona Fleeting Co.: 15-Barge Fleeting Area in Crooked Slough
5. City of Winona: Beltline Truck Route
6. City of Winona: Extension of City Dock in Crooked Slough
7. City of Winona: Storm Sewer Diversion at Pelzer Street
8. Winona Port Authority: 24-Barge Fleeting Area near River Bend
9. Winona Port Authority: River Bend Industrial Park - Phase II
10. Mississippi Development Consortium: Industrial Park
11. City of Winona, Winona County & State of Minnesota: Enclosing of County Ditch No. 3

WINONA, MINNESOTA PROJECT LOCATIONS

Fig. 2

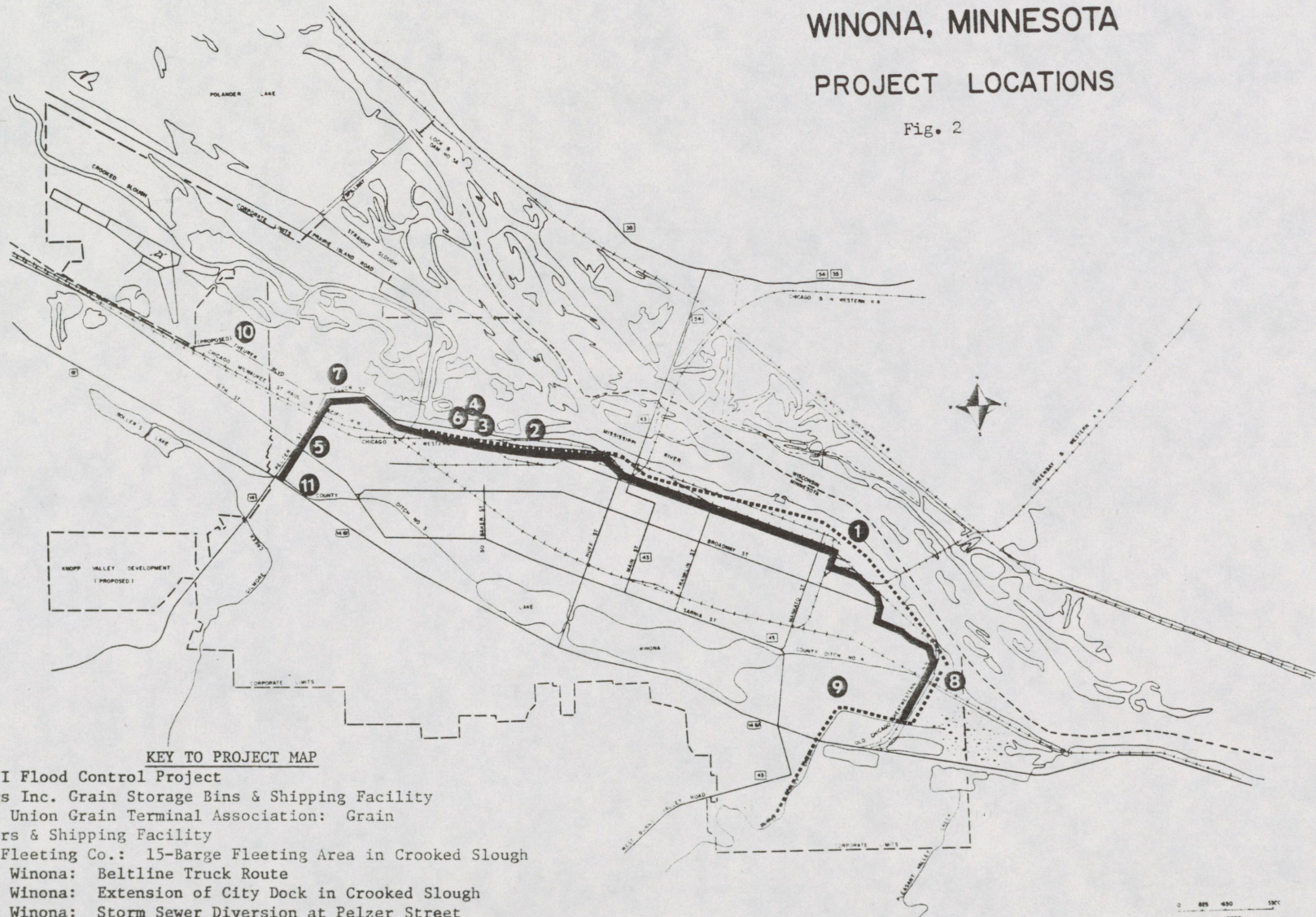


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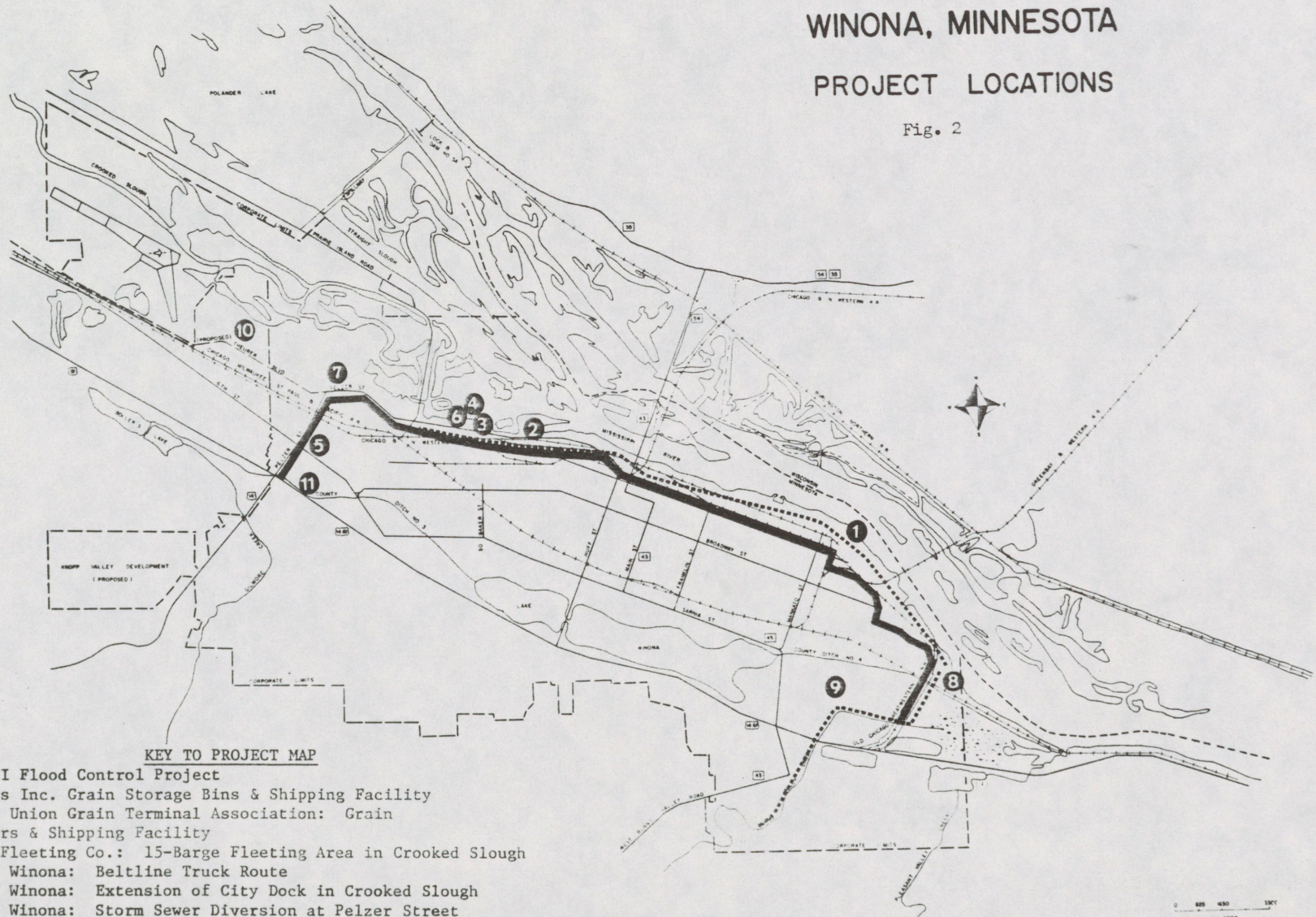


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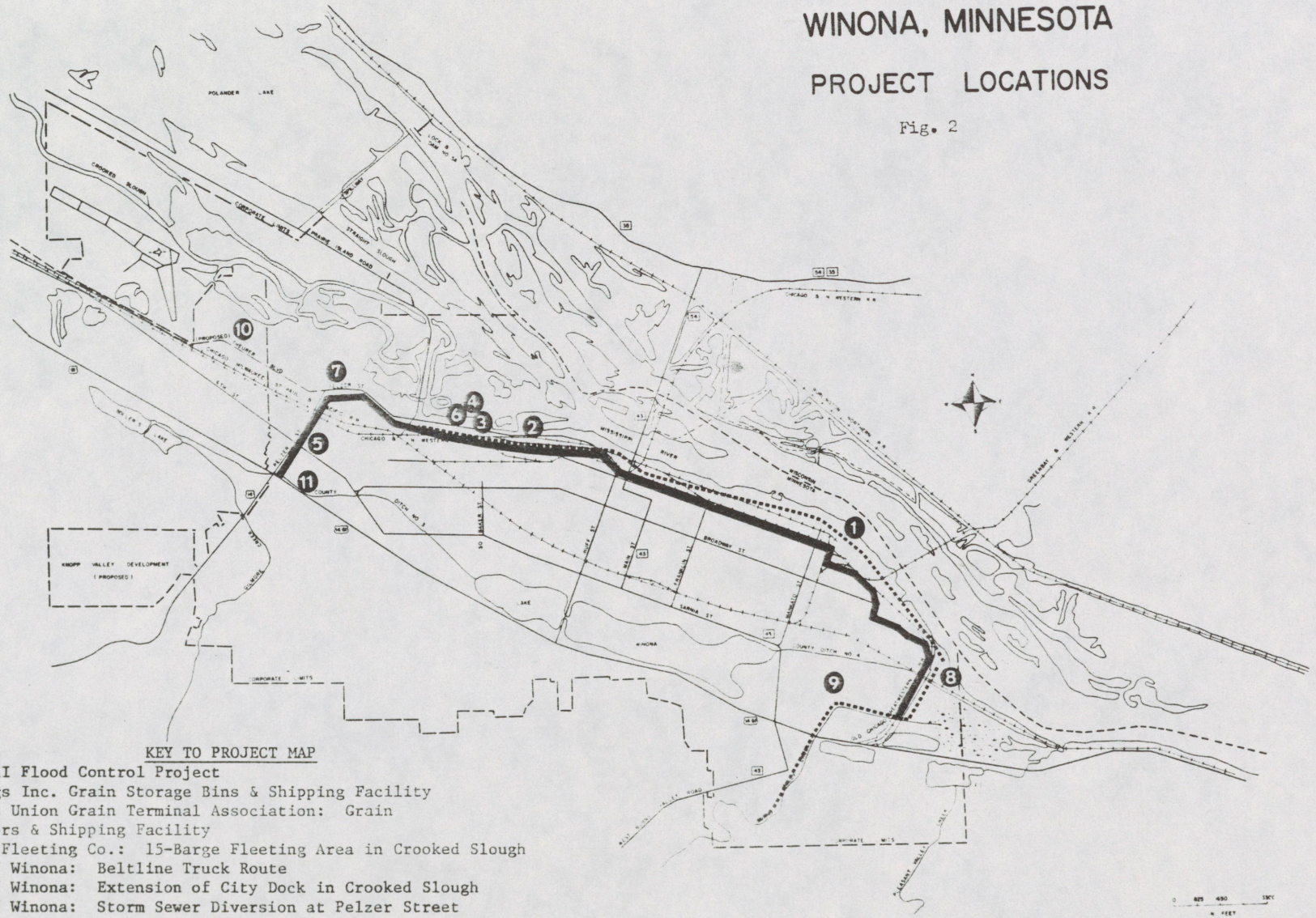


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WINONA, MINNESOTA PROJECT LOCATIONS

Fig. 2



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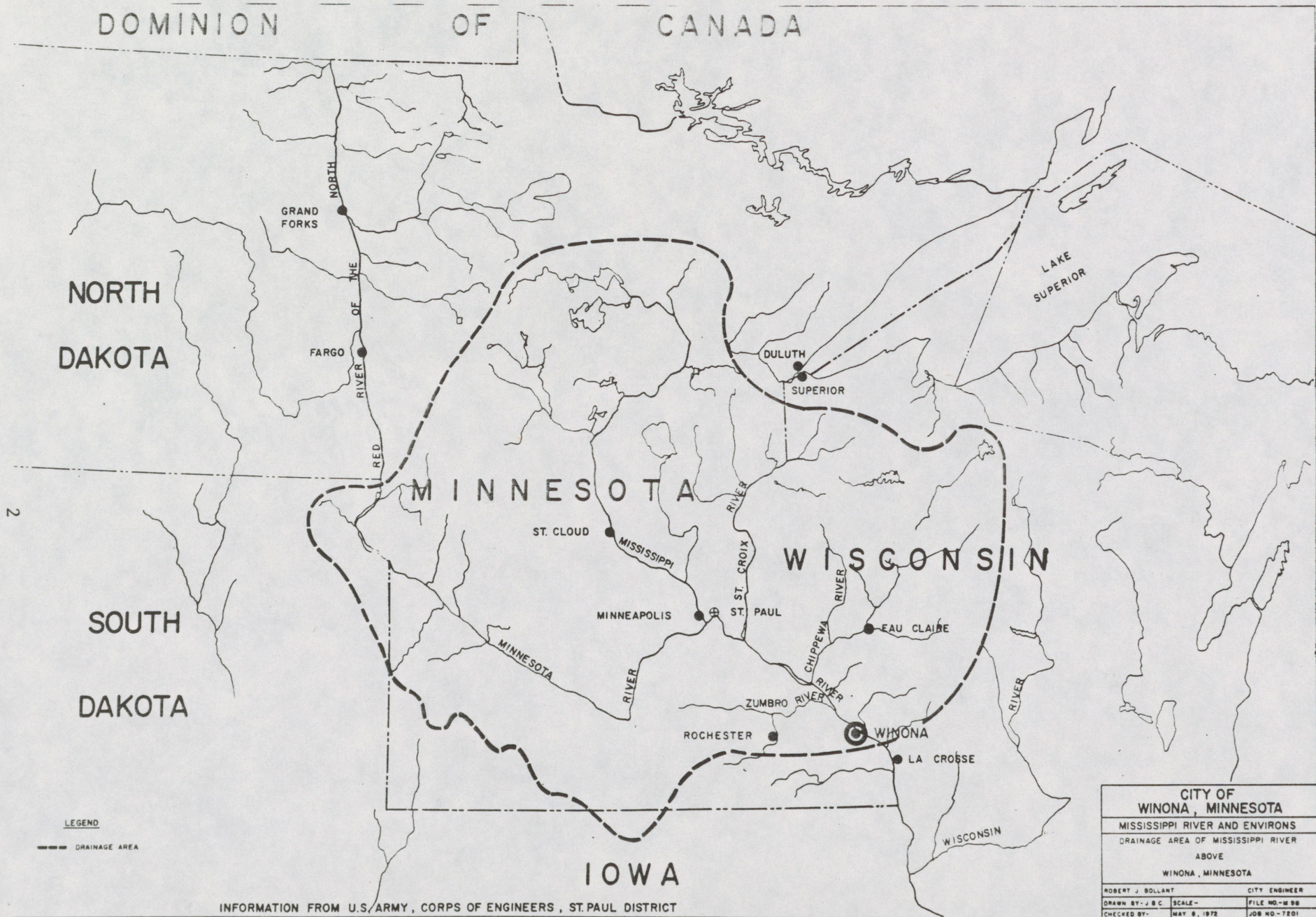
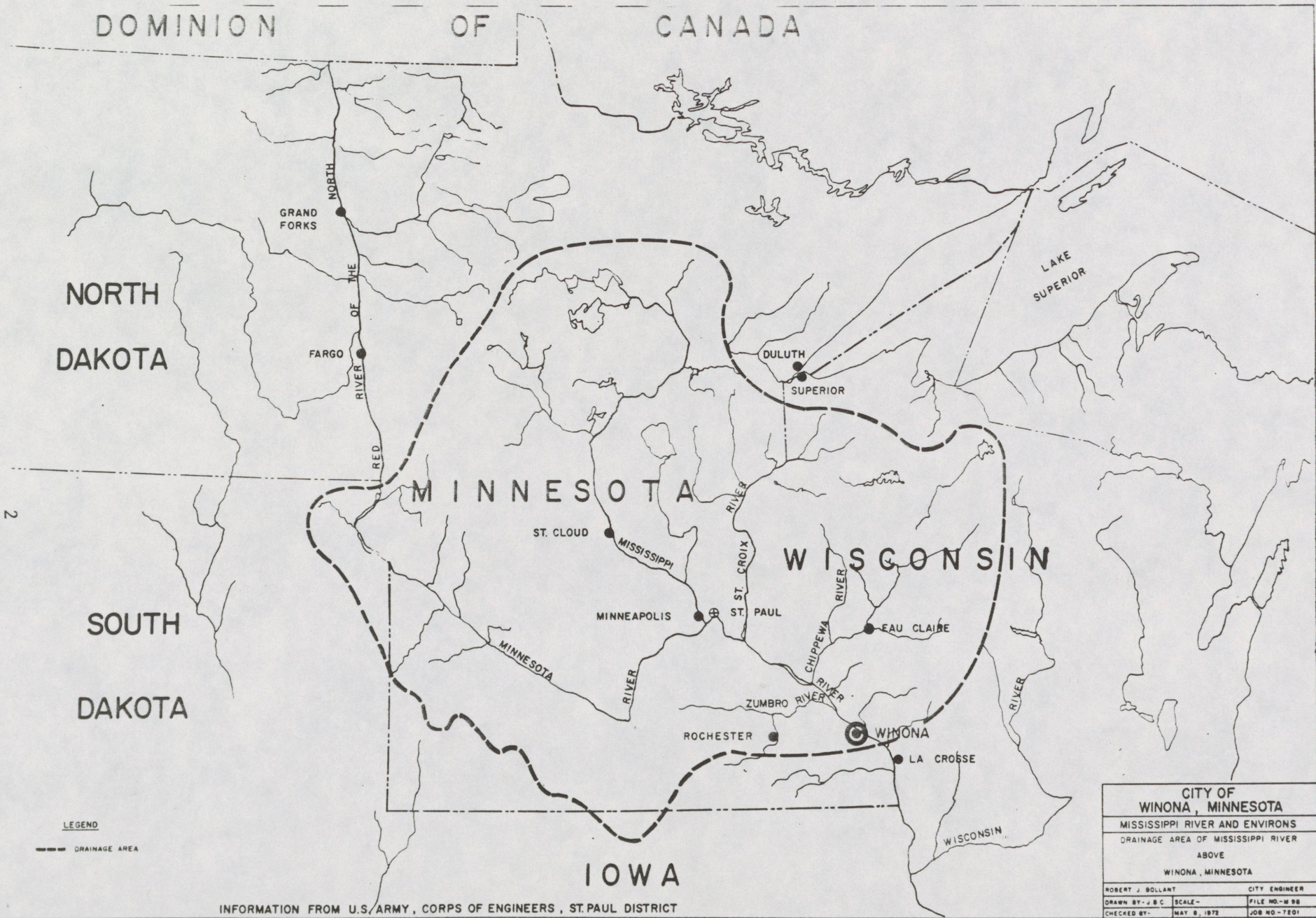


FIGURE 1



INFORMATION FROM U.S. ARMY, CORPS OF ENGINEERS, ST. PAUL DISTRICT

FIGURE 1



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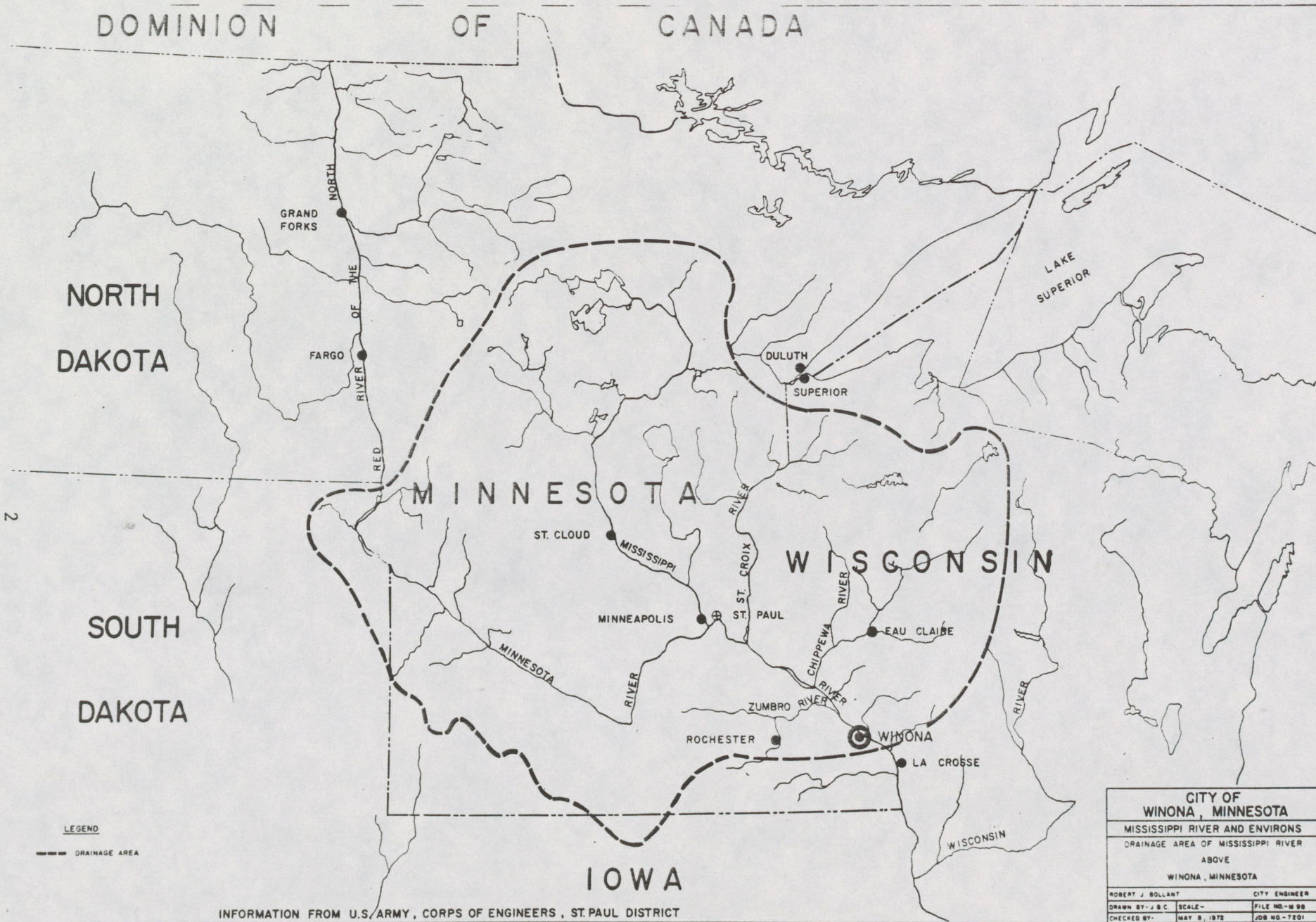
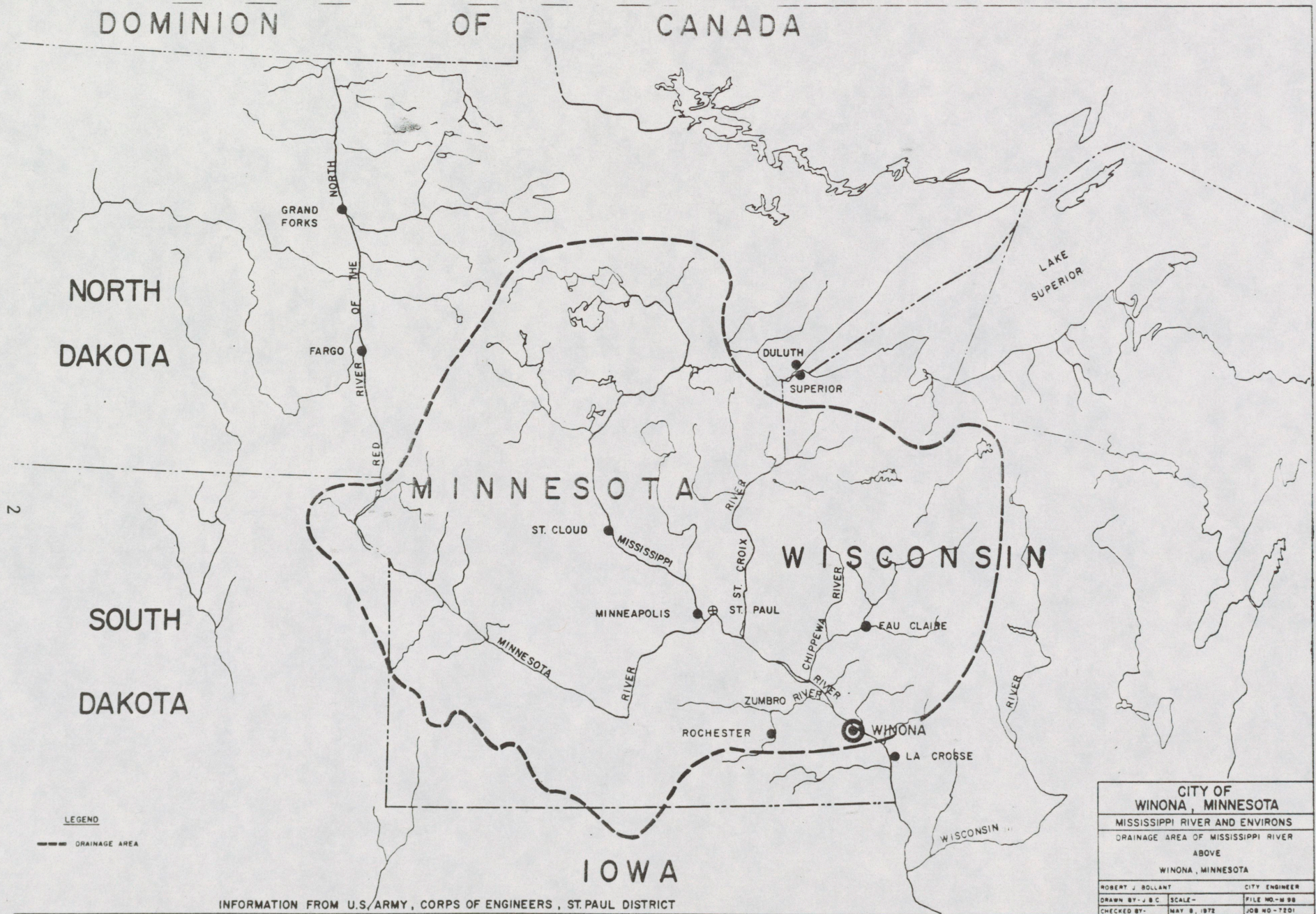


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