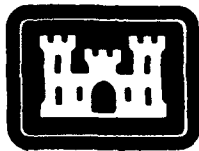


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Report No. COELMN/PD-92/02



**U.S. Army Corps
of Engineers
New Orleans District**

**CULTURAL RESOURCE SURVEY AND TESTING
OF THE EAST JEFFERSON PARISH LEVEE GAP
CLOSURE, JEFFERSON PARISH, LOUISIANA**

April 1992

FINAL REPORT

**R. Christopher Goodwin & Associates, Inc.
5824 Plaque Street
New Orleans, LA 70123**

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PREPARED FOR:

**U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267**

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This report presents the results of archeological survey and testing of a 15.2 x 285 m (1.1 ac) project area situated in southwestern Kenner, Jefferson Parish, Louisiana. Field work was conducted for the U.S. Army Corps of Engineers, New Orleans District, prior to planned construction of a levee gap closure along the Jefferson/St. Charles Parish boundary. Field work consisted of pedestrian survey augmented by the systematic excavation of 48 shovel tests. During survey, one previously unrecorded archeological site, Universal Match site (16JE219), was identified within the project area. This site consisted of remains associated with an early twentieth century house, and a contemporaneous train depot for the Orleans-Kenner Electric Railway Company. Two 1 x 1 m excavation units were placed within the site. Based on data collected during survey, it is apparent that the site has been damaged extensively; it lacks both archeological integrity and research potential. The site does not possess the quality of significance, as defined by National Register of Historic Places criteria. No additional testing of the Universal Match site (16JE219) is recommended.					
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NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

March 26, 1992

Planning Division
Environmental Analysis Branch

To The Reader,

This cultural resources effort was designed, funded, and guided by the U.S. Army Corps of Engineers, New Orleans District, as part of our cultural resources management program. The work documented in this report was a cultural resources survey of a proposed floodwall project designed to close an existing gap in the hurricane protection for east Jefferson Parish, Louisiana. This proposed floodwall is part of the Lake Pontchartrain and Vicinity Hurricane Protection Project.

We concur with the recommendations contained in this report. Therefore, no further archeological investigation of this project feature is planned.

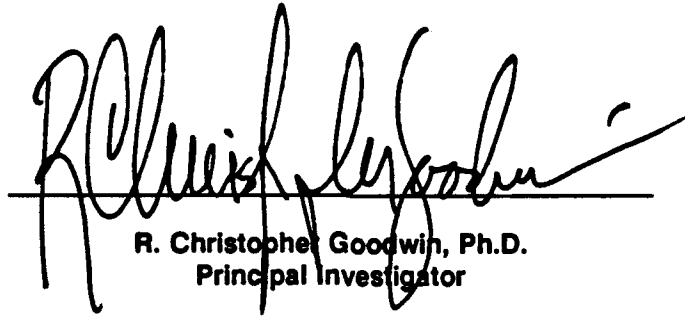
Michael E. Stout
Technical Representative

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of the Contracting Officer

R. H. Schroeder, Jr.
Chief, Planning Division

**CULTURAL RESOURCE SURVEY AND TESTING OF THE
EAST JEFFERSON PARISH LEVEE GAP CLOSURE,
JEFFERSON PARISH, LOUISIANA**

FINAL REPORT



R. Christopher Goodwin, Ph.D.
Principal Investigator

By

**Stephen Hinks, Susan Barrett Smith,
Jennifer Cohen, and William P. Athens**

**R. Christopher Goodwin & Associates, Inc.
5824 Plaquemine Street
New Orleans, LA 70123**

April 1992

For

**U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267**

Contract No. DACW29-90-D-0018, Delivery Order 07

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At R. Christopher Goodwin & Associates, Inc., William P. Athens served as Project Manager. Stephen Hinks directed field investigations, while archeological assistants included Jennifer Cohen, Ann Fleetwood, Christine Herman, Colby Child, and Bethany Usher. Susan Barrett Smith undertook the historical research and title search for the project. Shirley Rambeau prepared the graphic materials for inclusion in this report. Estella Bryans-Munson edited the report; and, it was produced by Christine Herman.

CHAPTER I

INTRODUCTION

This report presents the results of a cultural resources investigation of the East Jefferson Parish Levee Gap Closure, Jefferson Parish, Louisiana. The project area is situated along the southwestern edge of the east (left descending) bank of Jefferson Parish, between the Mississippi River, and the Illinois Central Gulf Railroad (Figure 1). This survey was conducted in August and September 1991 by R. Christopher Goodwin & Associates, Inc., for the U.S. Army Corps of Engineers, New Orleans District, pursuant to Delivery Order 07 of Contract DACW29-90-D-0018. This project was undertaken in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended.

The planned floodwall will be part of the East Jefferson Parish Levee System, one of several components that compose the Lake Pontchartrain and Vicinity Hurricane Protection Project. The project will fill a gap in the East Jefferson levee system between Jefferson and St. Charles parishes.

The entire 15.2 x 285 m (50 x 935 ft) project area was surveyed for cultural resources. This survey was designed to identify and to evaluate all archeological sites and pre-1945 standing structures situated within the project corridor. Archival research focused on the project area's historic development and land tenure history. These data were acquired to aid in interpretation of all identified historic archeological resources, and in assessment of their research potential.

Field work consisted of intensive pedestrian survey augmented by systematic shovel testing; approximately 1.1 ac were surveyed. One archeological site, Universal Match (16JE219), was located within the project area. This site contains remains of a twentieth century domestic residence, and a train depot. Two excavation units were placed within the site to ascertain its vertical and horizontal extent, archeological integrity, and cultural affiliation; and, to provide data for evaluating the site applying National Register of Historic Places criteria of significance [36 CFR 60.4 (a-d)].

Organization of the Report

The natural setting of the project area, including its geomorphological development, is discussed in Chapter II. A prehistoric overview of the area is contained in Chapter III. Previous archeological investigations and previously recorded archeological sites within the vicinity of the project area are summarized in Chapter IV. The historic development of the project area is reviewed in Chapter V. Field methods are presented in Chapter VI, while the results of the field investigations are contained in Chapter VII. Laboratory analyses of artifacts recovered during survey and testing of the 1.1 acre project area are discussed in Chapter VIII. Finally, a summary and cultural resources management recommendations are presented in Chapter IX.

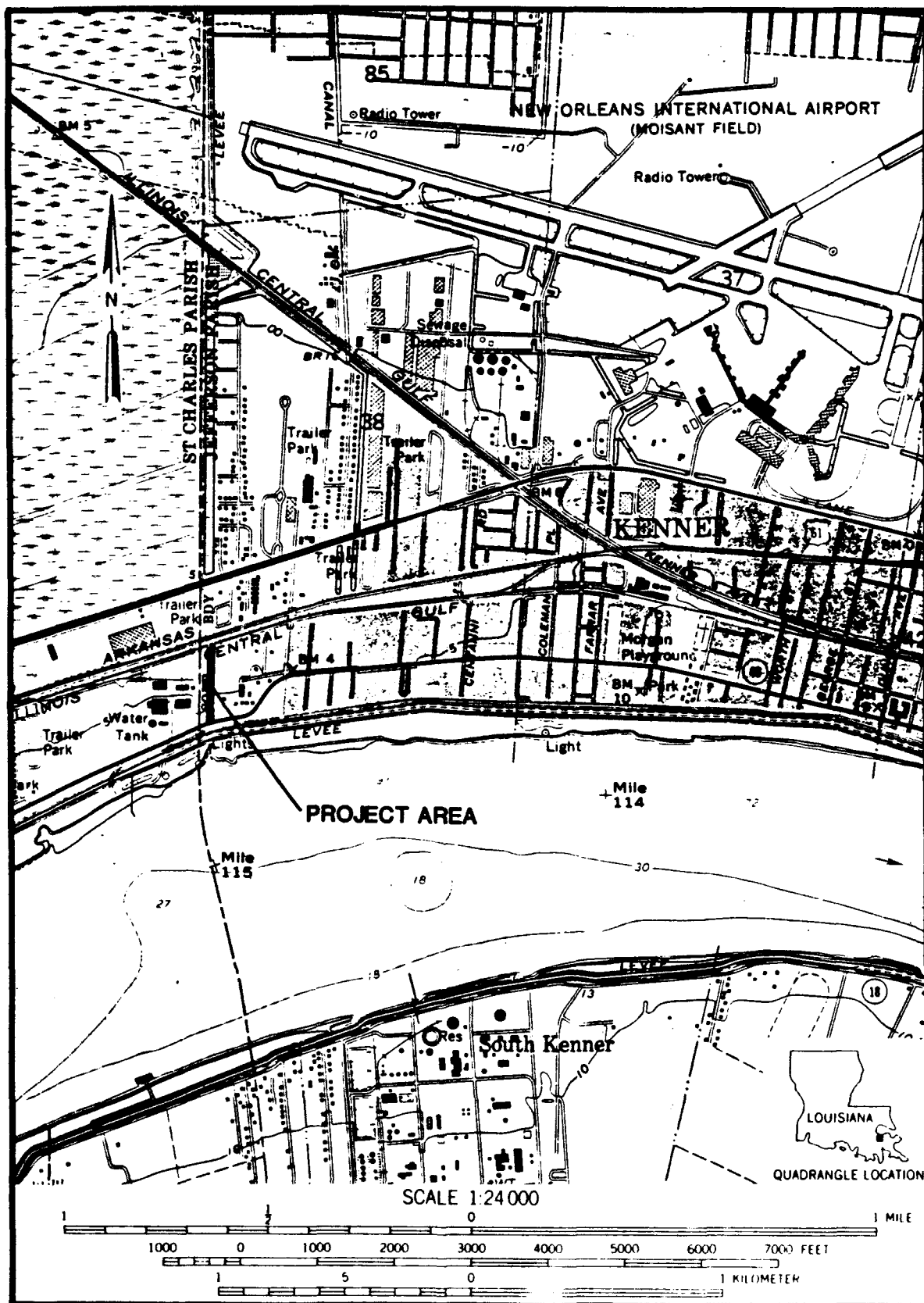


Figure 1. Excerpt from the 1967 (photorevised 1972 and 1979) USGS 7.5' series topographic quadrangle, Luling, Louisiana, showing the project area location.

CHAPTER II

NATURAL SETTING

The East Jefferson Parish Levee Gap Closure project area is situated along the east bank of the Mississippi River in Jefferson Parish, and adjacent to the Jefferson Parish/St. Charles Parish line (Figure 1). The 15.2 x 285 m (50 x 935 ft) parcel lies along the southwestern edge of the city of Kenner, Louisiana. This chapter examines the project area's geomorphological development, as well as the area's soil composition, climate, and dominant floral and faunal communities.

Geomorphology

The project area lies on the Mississippi River natural levee, and within the Mississippi River Deltaic Plain. In the vicinity of the project area, the natural levee typically is 1.5 to 2 km (.93 to 1.24 mi) wide; the crest of the natural levee near the Mississippi River rises approximately 3 m (9.8 ft) above mean sea level. The area was formed through two interrelated processes. The first formation process was the accumulation of alluvium deposited during annual overbank flooding of the Mississippi River and its distributaries. Overbank flooding forms natural levees adjacent to the waterways, which gradually slope downward into the nearby backswamps and marshes. The second process was the natural redirection of the Mississippi River into newer, more direct channels to the Gulf of Mexico. Historically, this redirection occurred every several hundred years, forming a series of definable, intertwined deltaic lobes (Figure 2) (Dobney et al. 1987:31, 35).

During the early Holocene Epoch, ca. 10,000 years Before Present (B.P.), sea level rose to approximately 30 m (98 ft) below modern sea level. Between 10,500 and 6400 B.P., the average rate of eustatic sea level rise within the Gulf of Mexico was approximately 8 mm per year (Coulombe and Bloom 1983). From 6400 B.P. to present, this rate decreased to an annual rate of approximately 1 mm per year. Sea level rose faster within the Mississippi Delta region than elsewhere within the Gulf of Mexico, since the relative rise in the sea level in the Delta region resulted from both subsidence and eustatic sea level rise (Coulombe and Bloom 1983; Frazier 1967; Suter et al. 1987:210-214).

The rising sea level resulted in the flooding of the southeastern Mississippi River Alluvial Valley, and in gradual movement of the pre-10,000 B.P. shoreline northwest towards Baton Rouge. As a result, a shallow brackish-water embayment occupied the project area; the maximum extent of this embayment occurred approximately 5000 to 4800 years B.P. (Saucier 1963). During this period of rising sea level, the Mississippi River formed the Maringouin, Teche, and older delta complexes west of the project area (Figure 2) (Frazier 1967; Goodwin et al. 1991).

About 4800 years B.P., the Mississippi River course shifted eastward, forming a new delta complex, called the "early St. Bernard Complex" by Frazier (1967), and the "Metairie Delta Complex" by Weinstein and Gagliano (1985). This complex extended eastward along Metairie Bayou along a meander course that branched off the modern Mississippi River approximately 3 km (1.9 mi) east of the project area. Metairie Bayou's course extended along Metairie Ridge, into New Orleans in the vicinity of Bayou St. John, where it branched into two courses. The main course along Unnamed Bayou formed a delta lobe that prograded approximately 70 km (43.5 mi) southeast of New Orleans into the Gulf of Mexico. The delta lobe formed by the other course along Bayou Sauvage prograded northeastward to connect with the New Orleans Barrier Island Trend, a chain of southwest-trending barrier islands attached to the mouth of the Pearl River. This merging formed a brackish-water bay that was ancestral to Lake Pontchartrain (Figure 2) (Goodwin et al. 1991; Saucier 1963).

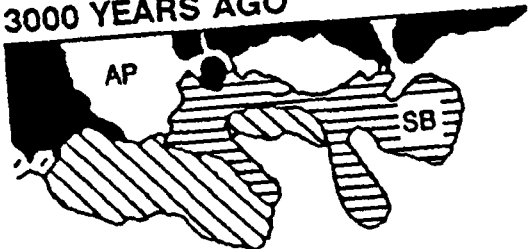
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1200 YEARS AGO



3000 YEARS AGO



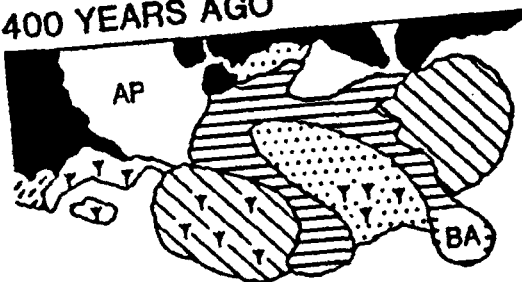
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400 YEARS AGO



AP = ALLUVIAL PLAIN
BA = BALIZE DELTA COMPLEX
LA = LAFOURCHE DELTA COMPLEX
MA = MARINGOUIN DELTA COMPLEX
ME = METAIRIE DELTA COMPLEX
PL = PLAQUEMINES DELTA COMPLEX
TE = TECHE DELTA COMPLEX
SB = ST. BERNARD DELTA COMPLEX

Prairie
Terrace

Active
Deltas

Subsiding
Deltas

Freshwater
Swamp

Salt
Marsh

Barrier
Islands

Chenier
Plain



PALEOGEOGRAPHY LOCATION

Figure 2. Paleogeography of the Mississippi River Delta (modified from Kusters 1987).

Between 3400 and 1600 years B.P., the Metairie Delta Complex developed into Frazier's (1967) St. Bernard Delta Complex, also called the La Loutre Delta Complex by Weinstein and Gagliano (1985). This complex was comprised of two major delta lobes. The dominant lobe, the La Loutre Delta Lobe, prograded eastward, forming most of St. Bernard Parish, and completing formation of Lake Pontchartrain. The smaller lobe, the des Familles Delta Lobe, prograded southward into the modern Barataria Basin; most of it has subsided into the swamps and marshes of the Barataria Interlobe Basin. Throughout this period, the course of the Mississippi River in the project area remained stable, and the natural levee expanded (Frazier 1967; Saucier 1963; Weinstein and Gagliano 1985).

Between 1800 and 600 years B.P., only the Bayou Sauvage delta of the St. Bernard Complex remained active (Frazier 1967:Figure 12). During that period, the main discharge of the Mississippi River flowed through the Lafourche Delta Complex to the west. Between 1000 and 600 years B.P., the Mississippi River gradually diverted back through the St. Bernard Complex region, forming the Plaquemine Delta Complex. This complex formed between the des Familles and La Loutre Delta Lobes; the approximate modern course of the lower Mississippi River was established approximately 600 years B.P. As the shallow-water Plaquemine Delta Complex prograded to the continental shelf edge, the shelf-margin Balize Delta formed (Weinstein and Gagliano 1985).

A section of the Mississippi River natural levee situated approximately 2 km (1.2 mi) east of the project area in Kenner, indicates natural levee deposits in the area are approximately 4 to 5 m (13.1 to 16.4 ft) thick, overlying the 2 to 2.5 m (6.6 to 7.4 ft) thick swamp and marsh deposits (Figure 3). The underlying interdistributary and prodelta deposits extend from 4.5 to 20 m (14.8 to 65.6 ft) below mean sea level; these rest on earlier Pleistocene deposits. The west bank portion of the section consists of natural levee deposits overlying point bar deposits. These deposits reflect the gradual migration of the Mississippi River in the project area, with the west bank the aggrading bank, and the east bank the cutting bank.

Soils

Two soil types are dominant in the project area. The southern approximately 170 m (558 ft) of the project area is comprised of Commerce silty clay loam. It is a nearly level, somewhat poorly drained soil situated on the proximal natural levee. Commerce silty clay loam typically is characterized by a 12 to 13 cm (4.7 to 5.1 m) thick surface deposit of dark grayish brown silty clay loam overlying approximately 1.8 m (6 ft) of grayish brown silty clay loam. The soil exhibits high fertility, and moderately slow permeability. The soil is well-suited for pasture, woodland, and cultivated crops such as vegetables, sugarcane, soybeans, and corn. American sycamore, sweetgum, eastern cottonwood, green ash, and pecan also grow well on this soil. Within the Jefferson Parish, most of the Commerce silty clay loam is in urban areas (U.S. Department of Agriculture, Soil Conservation Service [USDA, SCS] 1983).

The remaining approximately 115 m (377 ft) of the project area is comprised of Sharkey clay. Sharkey clay is a poorly drained, nearly level soil situated on the distal portion of the natural levee. It typically exhibits approximately 10 cm (4 in) of dark gray or very dark grayish brown clay overlying a subsoil of mottled dark gray clay. The soil is well-suited for pasture and woodland, and moderately well-suited for cultivation of crops such as vegetables, sugarcane, soybeans, grain sorghum, and rice. Most of the Sharkey clay acreage within Jefferson Parish is in urban uses such as buildings, roads, and parking lots even though Sharkey clay is poorly suited for these uses (USDA, SCS 1983).

Climate

The project area lies within a region with a humid subtropical climate featuring long, hot, rainy summers and short, mild winters. The average annual temperature is 68.0° Fahrenheit, with an average

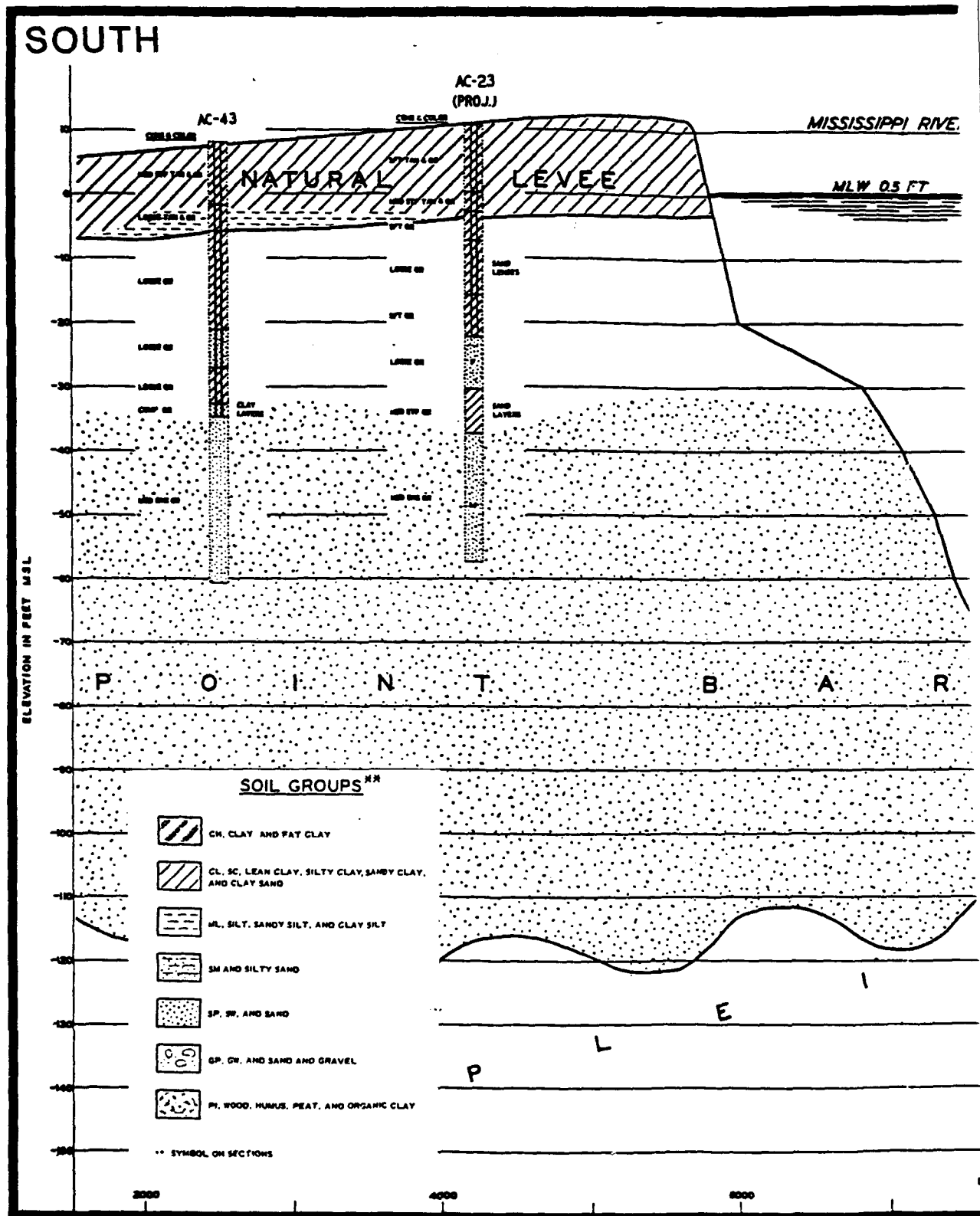


Figure 3. Section of the Mississippi River natural levee in Kenner, Louisiana (modified from Kolb 1962:Plate 25).

APPROXIMATE SETTING
OF PROJECT AREA

NORTH

MISSISSIPPI RIVER

MLW 0.5 FT

NATURAL

LEVEE

SWAMP MARSH

INTERDIST RIBUTARY

P R O D E L T A

A R

SURVEY OF 28 SEPT 1890

S

T

O

C

E

N

E

DISTANCE IN FEET
0000

10,000

12,000

(Kolb 1962:Plate 25).

maximum temperature of 77.4° Fahrenheit, and an average minimum temperature of 58.5° Fahrenheit. The warmest month is July, which features an average daily maximum temperature of 90.4° Fahrenheit. The lowest average daily minimum temperature of 42.6° Fahrenheit occurs in January. Winter months are mild; average daily minimum temperatures drop below 45° Fahrenheit only in December, January, and February. The highest recorded temperature, which occurred at Moisant Field in Kenner on August 22, 1980, was 102° Fahrenheit. The lowest recorded temperature in New Orleans, 6.8° Fahrenheit, occurred February 13, 1899 (Magill 1990; National Weather Service, New Orleans, personal communication 1991; USDA, SCS 1983).

The average annual precipitation in Jefferson Parish is 150 cm (59 in). July, August, and September are the wettest months; average precipitation varies from 15.7 to 16.0 cm (6.19 to 6.32 in). October is the driest month, with an average precipitation of 7.21 cm (2.84 in). The heaviest recorded 24-hour rainfall was 32.16 cm (12.66 in), which occurred November 6 - 7, 1989. Rainfall and hurricane storm surge are the primary causes of flooding within the region. Rainfall-associated flooding results from either near-stationary cold fronts or from hurricanes. Both causes can produce rainfall at a rate in excess of one inch per hour (National Weather Service, New Orleans, personal communication 1991; USDA, SCS 1983).

Flora and Fauna

A wide variety of flora are present within the vicinity of the project area. These include: black willow (*Salix nigra*), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), sweet gum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvanica*), box elder (*Acer negundo*), persimmon (*Diospyros virginiana*), white mulberry (*Morus alba*), oak (*Quercus* sp.), and honey locust (*Gleditsia triacanthos*). Willows, cottonwoods, ash, sycamore, and mulberry are more prevalent in areas close to the river, while oak, hickory, box elder, hackberry, and sweet gum are prominent along the crest of the natural levee. Dominant understory vegetation includes grasses, poison ivy, grape, and blackberry. Considerable ragweed was present within the southern half of the project area, while the northern half was covered with mixed hardwoods.

Important faunal species in the area include cottontail rabbit (*Sylvilagus floridanus*), swamp rabbit (*Sylvilagus aquaticus*), raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), nutria (*Myocastor coypus*), nine-banded armadillo (*Dasypus novemcinctus*), white-tailed deer (*Odocoileus virginianus*), squirrel (*Sciurus* sp.), and otter (*Lutra canadensis*). In addition to the above mentioned mammalian species, several species of birds, fish, and reptiles are common to the project area (Gosselink 1984; Lowery 1974).

CHAPTER III

PREHISTORIC SETTING

Introduction

Louisiana's Comprehensive Archaeological Plan (Smith et al. 1983) divides the state into six management units. The project area is situated at the southwestern edge of the east bank of Jefferson Parish, one of 14 parishes contained within Management Unit V. This management unit is dominated by the Mississippi River Alluvial Valley; it extends southeastward from Pointe Coupee Parish to the mouth of the Mississippi River in Plaquemines Parish. Six cultural units form the prehistoric sequence of this management unit: Poverty Point, Tchefuncte, Marksville, Troyville-Coles Creek, Plaquemine, and Mississippian.

Poverty Point Culture (2000 - 500 B.C.)

Poverty Point (16WC5), the type site for Poverty Point culture, is located in northeastern Louisiana, adjacent to Bayou Maçon, and near several major rivers -- the Mississippi, Tensas, Ouachita, and Boeuf. During Poverty Point occupation, the Arkansas River flowed a short distance west of Site 16WC5. This site's riverine location made it ideal for exploiting the flow of trade goods from other regions (Muller 1983; Neitzel and Perry 1978; Neuman 1984; Smith et al. 1983). Evidence of long distance trade at Poverty Point includes ceramics from the St. Johns River region of northeastern Florida; lithic materials from deposits in Arkansas, Illinois, Indiana, Missouri, Ohio, Oklahoma, and Tennessee; and, native copper from the Lake Superior region (Neuman 1984). Poverty Point culture may represent the first chiefdom-level society to develop in the eastern United States (Muller 1983; Smith et al. 1983).

Poverty Point (16WC5) primarily is distinguished by its large earthworks and its complex microlithic industry. The earthworks include six segmented ridges, 50 to 150 ft wide, that form five sides of an octagon, and several other Poverty Point mounds scattered throughout the immediate site area. The largest mound, Mound A, may be a large bird effigy. At the time of its construction, Poverty Point was the largest earthwork in the Americas (Neuman 1984).

Poverty Point culture exhibited an elaborate lapidary technology that typically utilized exotic lithic materials such as red jasper, quartzites, quartz crystals, magnetite, hematite, talc, various slates, galena, limonite, feldspar, fluorite, amethyst, and various translucent stones. Many of these materials were imported from throughout the central United States. The majority of the lapidary items consisted of a variety of well-formed and decorated beads and pendants (Neuman 1984).

Vessel fragments occasionally are recovered from Poverty Point sites. These include both fragments from steatite vessels and fiber-tempered pots. While its use was not widespread, fiber-tempered pottery marked the initial manufacture and utilization of pottery in the region. Numerous clay cooking balls, called Poverty Point objects, also are recovered from sites associated with the Poverty Point culture. These balls, which exhibit a variety of shapes, sizes, and decorations, apparently were heated in fire and used to cook food (Neuman 1984; Smith et al. 1983).

Poverty Point sites typically are found on Quaternary terraces or older land masses overlooking major stream courses, along major river levees of active or relict river channels, at river-lake junctions, and along coastal estuaries or older land surfaces located within a coastal marsh area. These sites appear to be located in areas that were ideal for exploiting forest-edge resources. Settlement typically consisted of

large regional centers surrounded by a cluster of small hamlets (Neitzel and Perry 1978; Neuman 1984; Smith et al. 1983).

Small shell middens located along Lake Pontchartrain exhibit Poverty Point traits and suggest seasonal and specialized adaptation to the marsh environment. Sites located along the western shore exhibit Poverty Point traits exclusively; those along the eastern shore contain both bone tool and microlithic industries (Gagliano and Saucier 1963). These sites represent two phases of Poverty Point culture: the Bayou Jasmine phase, and the Garcia phase. Bayou Jasmine phase sites are located on the western shore of the lake and along natural levee ridges of the Mississippi River distributaries. Garcia phase sites are located along the eastern shore of Lake Pontchartrain. The Garcia site (16OR34), the type site for the Garcia phase, contained a beach deposit of *Rangia* shell and midden debris. Carbon dates from Bayou Jasmine phase components cluster around 1470 B.C., while Garcia phase sites date about 1000 years later (Gagliano 1963; Gagliano and Saucier 1963). No Poverty Point sites have been identified along the Mississippi River in the vicinity of the project area.

Tchefuncte Culture (500 B.C. - A.D. 100)

Tchefuncte culture is characterized by the first widespread use of pottery, although within the context of a Late Archaic-like hunting and gathering tradition, and with a Late Archaic-like tool inventory (Neuman 1984; Smith et al. 1983). Tchefuncte culture was identified at the Tchefuncte site (16ST1), on the northern shore of Lake Pontchartrain (Ford and Quimby 1945; Weinstein and Rivet 1978). Originally, Tchefuncte culture was thought to be an adaptation to the southwestern Louisiana coast and to the central portion of the Vermilion River in south central Louisiana. Tchefuncte or Tchefuncte-like ceramics now have been found in southeastern Missouri, northwestern Mississippi, the Yazoo Basin, coastal Alabama, and northeastern and southeastern Texas (Neuman 1984; Smith et al. 1983). These sites were occupied during the Tchula period.

Most Tchefuncte sites are classified as coastal middens, or as inland villages or hamlets. Settlements usually occurred along slack water environments of slow secondary streams that drained bottomlands, floodplain lakes, and littoral zones (Neuman 1984; Smith et al. 1983).

Six coastal Tchefuncte and Tchefuncte-like phases have been identified in Louisiana and eastern Texas, including the Pontchartrain, Beau Mire, Lafayette, Grand Lake, Sabine Lake, and Clear Lake phases. Only one, the Pontchartrain phase, has been identified in the project area. The Pontchartrain phase is characterized by the presence of deeply stratified *Rangia cuneata* shell middens. The Tchefuncte site (16ST1) contained two shell middens, each approximately 45 to 75 m long and 30 m wide. Other dominant Pontchartrain phase sites excavated in the region include the Little Woods Middens (16OR1 through 16OR5), Big Oak Island (16OR6), and Little Oak Island (16OR7). Bayou Jasmine (16SJB82) also contained a Pontchartrain phase component (Weinstein 1986).

The Pontchartrain phase is defined primarily by its distinctive ceramic assemblage. These sandy paste and sand-tempered wares reflect the Alexander Series wares identified in the Tennessee and Tombigbee Valleys to the northeast. Identified types and varieties include Mandeville Stamped var. *Mandeville*, Tchefuncte Plain var. *Mandeville*, Tchefuncte Stamped var. *Lewisburg*, Tchefuncte Incised var. *Abita Springs*, Tammany Punctated var. *Cane Bayou*, and Lake Borgne Incised var. *Ponchitolawa*. Other wares regularly recovered from Pontchartrain phase sites include several varieties of the types Tchefuncte Incised, Tchefuncte Red, Tchefuncte Plain, Tchefuncte Cord Impressed, Tchefuncte Stamped, Tchefuncte Bold Check Stamped, Tammany Punctated, Orleans Punctated, and Lake Borgne Incised (Weinstein 1986; Weinstein and Rivet 1978). Other artifacts include clay tubular pipes, socketed bone points, Pontchartrain and Kent points, and some Poverty Point objects.

A number of burials have been excavated from Pontchartrain phase sites such as Tchefuncte and Big Oak Island. The burials generally are located in shallow pit graves, and include flexed and bundle burials. Grave goods usually are not recovered from these burials (Smith et al. 1983; Weinstein 1986).

Tchefuncte subsistence systems continued to rely on hunting, gathering, and utilization of marine resources. Faunal remains recovered from the Tchefuncte site (16ST1) included deer, opossum, muskrat, fox, otter, raccoon, bear, wildcat, dog, a variety of birds, alligator, alligator gar, catfish, drum, clam, oyster, and marine conch. Flora recovered from other Tchefuncte sites included squash, gourd, hickory nuts, persimmons, wild plum, and grapes (Smith et al. 1983).

Marksville Culture (A.D. 100 - 400)

Marksville culture, named for the Marksville site (16AV1) in Avoyelles Parish, often is viewed as a localized version of the elaborate midwestern Hopewell culture. Marksville peoples apparently used a hunting, fishing, and gathering subsistence strategy much like those utilized by earlier cultures. A more highly organized social structure is implied by the complex geometric earthworks, conical burial mounds, and unique mortuary ritual systems that characterize Marksville culture. Some items, such as elaborately decorated ceramics, were manufactured primarily as funerary objects. Burial items also included pearl beads, carved stone effigy pipes, copper ear spools, copper tubes, galena beads, and carved coal objects. Towards the end of the Marksville period, as Hopewellian influences waned, mortuary practices became less and less complex (Neuman 1984; Smith et al. 1983).

Ceramic decorative motifs associated with Marksville culture including cross-hatching, U-shaped incised lines, zoned dentate rocker stamping, cord-wrapped stick impressions, stylized birds, and bisected circles were shared by Marksville and Hopewell cultures (Smith et al. 1983). Additional Marksville traits included a chipped stone assemblage of knives, scrapers, celts, drills, ground stone atlatl weights and plummetts, bone awls and fishhooks, baked clay balls, and medium to large stemmed projectile points. A variety of exotic artifacts commonly found at Marksville sites suggested extensive trade networks and possibly a ranked, non-egalitarian society. Some commonly found exotic items included imported copper earspools, panpipes, platform pipes, figurines, and beads (Neuman 1984; Smith et al. 1983). The utilitarian material culture remained essentially unchanged, reflecting overall continuity in the subsistence system (Smith et al. 1983:172).

Troyville-Coles Creek Culture (A.D. 400 - 1100)

Troyville culture, named after the Troyville mound group (16CT7) in Jonesville, Louisiana, represents a transitional culture that culminated in Coles Creek culture around A.D. 700 (Smith et al. 1983). Both subsistence agriculture and the bow and arrow developed during this time, and radically altered subsequent prehistoric lifeways. Troyville artifact assemblages reflect these changes through larger vessel size and differing vessel shapes (i.e., for food storage), the appearance of shell hoes and other cultivational implements, and the utilization of smaller arrow points as opposed to spears. During Troyville times, maize, beans, and squash agriculture became widespread, which resulted in more complex settlements, subsistence patterns, and social organization.

Coles Creek culture emerged from Troyville around A.D. 700. Coles Creek sites appear to be larger, more numerous, and more complex than those of their predecessors. Platform and ceremonial mound construction, and the complex layout of some Coles Creek sites, imply the emergence of a chiefdom-like society (Muller 1983; Smith et al. 1983). These social changes reflect the stable food supply fostered by adoption of agriculture and the bow and arrow during the preceding Troyville period.

The Coles Creek peoples continued to use Troyville wares, with some elaborations. Both Churupa Punctate and Mazique Incised designs are characteristic of Troyville culture, and were used by both Coles Creek and Plaquemine pottery makers (McIntire 1958). Similarly, French Fork Incised, which formed the basis for many Troyville classifications, continued to be used by Coles Creek peoples (Phillips 1970).

A new ceramic complex that included larger vessels and a wider range of decorative motifs, usually situated on the upper half of the vessel, was utilized by Coles Creek culture (Neuman 1984). Coles Creek Incised, Beldeau Incised, Mazique Incised, and Pontchartrain Check Stamped characterize the culture. A distinctive decorative type, Coles Creek Incised, contains a series of incised lines near the rim of the vessel, and often is accompanied underneath by a row of triangular impressions (Smith et al. 1983). Some ceramic motifs suggest outside cultural influences. For example, zoned rocker stamping, incised lines, and curvilinear motifs are representative of decorative styles associated with the Florida Gulf Coast; cord marking and red filming were popular traits commonly associated in the central Mississippi area (Smith et al. 1983).

The majority of Coles Creek sites were situated along stream systems where soil composition and fertility were favorable for agriculture. Natural levees, particularly those situated along old cutoffs and inactive channels, appear to have been the most desirable locations (Neuman 1984). Larger Coles Creek sites are characterized by large flat-topped pyramidal mounds; at larger, multiple mound sites, mounds typically were constructed around an open plaza. While burials at times are located within them, these mounds primarily served as building platforms. Wattle and daub "temple" structures surmounted these earthworks. At some Coles Creek sites, mounds are connected by low, narrow causeways.

The complexity of Coles Creek mound systems suggests a more intricate social structure; a centralized authority and sizable labor force must have existed to build, maintain, and utilize these mounds. The centralized authority most likely represents a special religious class; the general population occupied the region surrounding the large ceremonial centers (Neuman 1984; Smith et al. 1983).

Small Coles Creek sites consist mostly of hamlets and shell middens; they normally do not contain mounds. Coles Creek shell middens commonly occur in the coastal region on higher portions of natural levees (Springer 1974).

Plaquemine Culture (A.D. 1100 - 1600)

The Plaquemine culture represents an indigenous development that emerged from Coles Creek. The Medora site, 16WBR1, described by Quimby (1951), typifies Plaquemine culture. Plaquemine peoples continued the settlement patterns, economic organization, and religious practices established by the Coles Creek cultures; however, agriculture, sociopolitical structure, and religious ceremonialism intensified. Plaquemine sites are characterized as ceremonial sites with multiple mounds surrounding a central plaza, and dispersed villages and hamlets (Smith et al. 1983).

While derived from the Coles Creek tradition, Plaquemine ceramics display distinctive features that mark the emergence of a separate culture. Plaquemine ceramics were tempered with a variety of materials, including shell. Brushing became the dominant decorative technique, although earlier techniques such as incising and punctating continued. Engraving vessels after firing also became popular (Smith et al. 1983). Plaquemine Brushed appears to have been the most widespread ceramic type. Other ceramic types utilized by Plaquemine culture include Evansville Punctate, Hardy Incised, Harrison Bayou Incised, L'Eau Noire Incised, Leland Incised, Manchac Incised, and Mazique Incised. Decorated wares and plain wares (e.g., Anna Burnished Plain and Addis Plain) were well-made. Vessel shapes remained similar to earlier ceramic types.

Mississippian Culture (A.D. 1100 - 1700)

Late in the prehistoric period, the indigenous Plaquemine culture was influenced by neighboring Mississippian cultures. Mississippian influence radiated from the middle Mississippi River Valley to southern Louisiana, into central North Carolina, and north into the Great Lakes region (Haag 1971). Mississippian culture was characterized by large urban centers associated with mound groups, lavish burials with grave goods, and shell-tempered pottery. Mississippian sites in Louisiana typically are located along the extreme southeastern coast and in an isolated pocket situated in the northeastern part of the state. Mississippian culture continued to influence lifeways of southern Louisiana until contact with European cultures.

Mississippian subsistence was based on the cultivation of maize, beans, squash and pumpkins; collection of local plants, nuts and seeds; and, fishing and hunting. Major Mississippian sites were located on fertile bottomlands of major river valleys; sandy and light loam soils usually composed these bottomlands. A typical Mississippian settlement consisted of an orderly arrangement of village houses, surrounding a truncated pyramidal mound. These mounds served as platforms for temples or as houses for the elite. A highly organized and complex social system undoubtedly existed in order to plan these intricate communities.

Mississippian pottery is characterized by shell tempering, an innovation that enabled potters to create larger vessels (Smith et al. 1983). Ceramic vessels included short and tall globular jars, deep and shallow bowls, footed vessels, plates, stirrup-handled bottles, effigy vessels, and gourd forms. Decorative techniques include applique, brushing, engraving, incising, negative painting, punctating, pinching, and polishing. Modelled animal heads and anthropomorphic images also adorned ceramic vessels. Other Mississippian artifacts included chipped and ground stone tools; shell items such as hairpins, beads, and gorgets; and, mica and copper items (Neuman 1984).

CHAPTER IV

PREVIOUS INVESTIGATIONS

Previous Cultural Resources Surveys in the Project Area Vicinity

Several previous cultural resources surveys have been conducted in the vicinity of the project area, i.e., the Mississippi River natural levee between St. Rose, Louisiana, and the downriver end of Kenner, Louisiana. Weinstein (1980) surveyed six proposed levee closures in St. Charles Parish, including five locations along the Lake Pontchartrain shoreline, and a sixth location under Interstate 10, at the St. Charles/Jefferson Parish line. Two previously recorded shoreline shell middens, 16SC16 and 16SC17, were reported in Weinstein's Location 5, along Lake Pontchartrain at the mouth of Bayou Piquant. During survey, Weinstein found no evidence of these two previously recorded sites, suggesting that the sites either were destroyed prior to 1980, or that their locations were inaccurately plotted. A possible archeological site (Y16 SC E) was situated within Location 2. A few prehistoric sherds and historic artifacts were collected from eroding modern levee fill. No materials were observed within Location 6, situated under I-10, approximately 3.2 km (2 mi) north of the current project area. Weinstein (1980) recommended no additional archeological testing of the six project areas.

Goodwin et al. (1981) conducted an archeological survey of a proposed sewer system alignment on the east bank in St. Charles Parish, between U.S. Highway 61 and the Mississippi River. Survey consisted of vehicular and pedestrian reconnaissance, augmented by the excavation of shovel tests in areas of the survey corridor exhibiting a high probability for containing archeological sites. Collected data demonstrated that most of the project area was disturbed extensively by modern construction activity. No archeological sites were recorded during survey, and no additional archeological testing was recommended.

Iroquois Research Institute (1982) examined six revetment and levee project areas above New Orleans for the U.S. Army Corps of Engineers, New Orleans District, including one within the vicinity of the project area. Their survey of the Kenner Revetment (Levee Stations 6119+00 to 6301+00), situated on the east bank of the Mississippi River in Jefferson Parish, resulted in identification of two archeological sites and two additional cultural resources locations. Site 16JE136 consisted of a nineteenth and early twentieth century scatter of brick, glass, and nails; no evidence of in situ deposits was observed. Site 16JE137 consisted of the remains of a large wooden hulled vessel; only a damaged portion of the hull remained. Based on its size and morphology, the vessel may have been constructed in the nineteenth century. The two identified cultural resources locations included WP3-1, a historic and modern trash dump located along the bank of the Mississippi River, and WP3-3, a modern concrete foundation slab. These resources were non-significant resources and were not eligible for inclusion on the National Register of Historic Places; no additional testing of the four cultural resources locations was recommended.

In 1982, New World Research, Inc. (1983) surveyed terrestrial and off-shore portions of the Lake Pontchartrain and Vicinity Hurricane Protection Project, for the U.S. Army Corps of Engineers, New Orleans District. While most of their project area was situated along Lake Pontchartrain and the Gulf Intracoastal Waterway in St. Charles, Jefferson, and Orleans parishes, Segment E extended from Lake Pontchartrain to the Mississippi River along the St. Charles/Jefferson Parish line. While the areas surveyed along Segment E are inadequately described, the authors imply that the current project area was tested through pedestrian survey augmented by shovel testing. New World Research, Inc. (1983) found no evidence of archeological resources within Segment E, including the current project area; no further work was recommended.

Three archeological surveys were conducted in the vicinity of the project area during 1983. Goodwin et al. (1983) examined the planned Riverview Estates subdivision property near St. Rose, in St.

Charles Parish. Survey consisted of pedestrian reconnaissance supplemented by systematic shovel testing throughout the project area; two 1 x 2 m test units also were excavated to ascertain the stratigraphic sequence of the project area. No substantive cultural resources were located during survey.

Stuart and Greene (1983a, 1983b) surveyed two overlapping project areas along the Mississippi River for the U.S. Army Corps of Engineers, New Orleans District: the proposed Destrehan-Kenner Levee Enlargement (River Miles [RM] 121.1 to 109.9-L), and the proposed Kenner Revetment (RM 117.2 to 108.6-L). Both areas were examined visually for cultural resources; no subsurface testing was conducted. Other than the previously recorded modern concrete slab (WP3-3) recorded by Weinstein (1980), no cultural resources were located by Stuart and Greene.

Finally, Hahn and Pearson (1988) surveyed portions of the planned St. Charles Parish Hurricane Protection Levee in 1987. Two archeological sites were recorded near the current project area. The Almedia Plantation drainage machine (16SC66) and the Fairview Plantation drainage machine (16SC67) both consisted of the brick foundation remains of mid-nineteenth to early twentieth century plantation steam-powered waterwheel drainage machines. Site 16SC66 was damaged extensively, while the foundation at 16SC67 largely was intact. Hahn and Pearson evaluated both sites as not eligible for inclusion on the National Register; no additional testing was recommended for either site.

Previously Recorded Archeological Sites Located near the Project Area

Six previously recorded archeological sites are situated in the vicinity of the project area (Table 1). Five of these are associated with nineteenth and early twentieth century plantations in Jefferson and St. Charles parishes. Both 16JE136 and Oakland Plantation (16JE142) are nineteenth and twentieth century artifact scatters situated along the Mississippi River batture. The La Garconniere site (16SC25) consists of a former nineteenth and twentieth century brick and stucco structure associated with Barbara Plantation; this structure has been destroyed. The previously mentioned Almedia Plantation and Fairview Plantation drainage machines (16SC66 and 16SC67) are situated at the distal edge of the Mississippi River natural levee, adjacent to the backswamp. All five sites were evaluated as not eligible for inclusion on the National Register of Historic Places.

The sixth site, 16JE137, consists of the remains of a large wooden hulled vessel. In 1980, it lay adjacent to the Mississippi River, near a marine repair yard. At that time, the remains consisted of an approximately 20 x 30 m fragment of a wooden hull, as well as numerous iron plates and pins. The exterior and ceiling planks apparently were secured to the floor frames with cut nails, bolts, and treenails. Based on the presence of red anti-fouling paint on the vessel's exterior, the good preservation of the wood, and inconclusive informant interviews, Iroquois Research Institute (1982:51) suggested the vessel was "probably not of great age," and evaluated the site as not significant. However, the vessel apparently dates from the postbellum period. Based on its stated width of approximately 20 m, the original vessel probably was at least 120 m (394 ft) long, based on a normal 1:6 to 1:7 beam to length ratio. Vessels of this size were not constructed prior to the postbellum period; by the twentieth century, virtually all large ships were constructed with iron or steel hulls. If the vessel remains at 16JE137 have survived, they should be re-evaluated to further assess the type, function, and age of the vessel.

Table 1. Previously Recorded Archeological Sites near the Project Area.¹

SITE NUMBER	NAME	SITE DESCRIPTION	LOCATION	TESTING	NRHP ELIGIBILITY	REFERENCES
16JE136	None	Late nineteenth and twentieth century brick and artifact scatter on the Mississippi River baffle; largely destroyed by riverine cutting	Along east bank baffle of the Mississippi River, in Kenner, LA	Surface collection; shovel testing	Not eligible	Hartley 1980 ² ; Iroquois Research Institute 1982
16JE137	None	Wooden hull remains of apparent nineteenth century vessel	Along east bank baffle of the Mississippi River, in Kenner, LA	Surface reconnaissance	Unknown	Garson 1980 ² ; Iroquois Research Institute 1982
16JE142	Oakland Plantation	Nineteenth and early twentieth century historic scatter on the Mississippi River baffle	Along east bank baffle of the Mississippi River, near southwestern end of Kenner, LA	Unknown	Not eligible	Clemensen 1983 ²
16SC25	La Garconniere Site	Nineteenth and twentieth century brick and stucco structure associated with Barbara Plantation; structure destroyed	East bank of the Mississippi River, east of St. Rose, LA, near LA Highway 626	Surface collection	Not eligible	Coastal Environments, Inc. 1978 ²
16SC66	Almedia Plantation drainage machine	Mid-nineteenth to early twentieth century steam powered plantation drainage water wheel remains; damaged extensively	In backswamp northwest of Almedia, LA	Surface reconnaissance, shovel testing, probing	Not eligible	Hahn 1988 ² ; Hahn and Pearson 1988
16SC67	Fairview Plantation drainage machine	Mid-nineteenth to early twentieth century steam powered plantation drainage water wheel remains	In backswamp northeast of Almedia, LA	Surface reconnaissance; probing	Not eligible	Hahn 1988 ² ; Hahn and Pearson 1988

¹Data from the State Site Files, Louisiana Division of Archaeology, Department of Culture, Recreation and Tourism, Baton Rouge, Louisiana.

²Site recorder and date.

CHAPTER V

LAND TENURE HISTORY

Introduction

The project area is located east of the St. Charles/Jefferson Parish line in the southwestern corner of Section 38, T12S, R9E, municipality of Kenner, Jefferson Parish, Louisiana. The property lies on the east bank of the Mississippi River within the bounds of the former Oakland sugar plantation. The plantation once belonged to the Kenner family and, later, to Louisiana railroad magnate, William Edenborn. The early twentieth century brought tremendous population growth to the Kenner area; the Orleans-Kenner Electric Railway was constructed from Orleans Parish through the project area and to the St. Charles/Jefferson Parish line to accommodate "rural" travel to New Orleans. With improved transportation, new industries developed to support the growing community. The purpose of this chapter is to reconstruct the land tenure history of the project area from its early agricultural usage through its role today as part of the Jefferson Parish industrial corridor centered along the Mississippi River. Figure 4 depicts the ownership of the project area through those years.

French Exploration

Following Sieur de la Salle's claim of "this country of Louisiana" for France in 1682, the lower Mississippi River valley was explored by Pierre le Moyne, Sieur d'Iberville, and his brother, Jean Baptiste le Moyne, Sieur d'Bienville. Their expedition entered the mouth of "La Salle's River" on March 2, 1699, then traveled upriver past the site of present-day Baton Rouge, probably to the mouth of the Red River (Bezou 1973:4-6; Davis 1971:8, 29, 39-40). André Pénicaut, ship's carpenter for Iberville, kept a record of this and subsequent explorations between 1699 and 1721. On a 1708 expedition, Pénicaut recorded an area along the Mississippi, approximately the site of present-day Kenner, where "its banks are covered with canes." He further noted that the Indians set fire to such canebrakes along the river "either to drive out the game or to obtain better access to aim and shoot at us." The area observed by Pénicaut in 1708 became known as *Cannes Brûlées* [Burnt Canes], a name cartographers retained for the area into the early nineteenth century (Figure 5) (Bezou 1973:7-8; Whitbread 1977:7).

Colonial Era

French Colonial Period

Within a few years of Iberville's first exploration, the French government began granting land concessions along the Mississippi River to colonists. In 1720, Pénicaut recorded two concessions at *Cannes Brûlées*, one belonging to M. D'Artagnan, with 80 men, and the other to M. Diron D'Artaguiette [D'Artaguiette], with a population of 45 (Swanson 1975:66). Captain Bernard Diron Dartaguiette was Inspector General of Louisiana troops and militia in the early 1720s (Ditchy, transl. 1930:214; Meyers 1976:10-12). In his report of the provincial census on November 24, 1721, Diron listed both concessions at "The Village of Cannes Bruslees [sic] five leagues from New Orleans going up the river." An early map of the French concessions along the Mississippi, ca. 1723, depicted the D'Artagnon concession as the larger of the two; the 1721 census listed a population of 78 -- 47 men, 8 women, 3 children, and 20 Negro slaves. Inspector General Diron's [sic] concession was situated adjacent to and east of D'Artagnon's land, and held a populace of 63 -- 1 man, 6 women, 1 child, 20 French servants, 20 Negro slaves, and 2 Indian slaves, plus

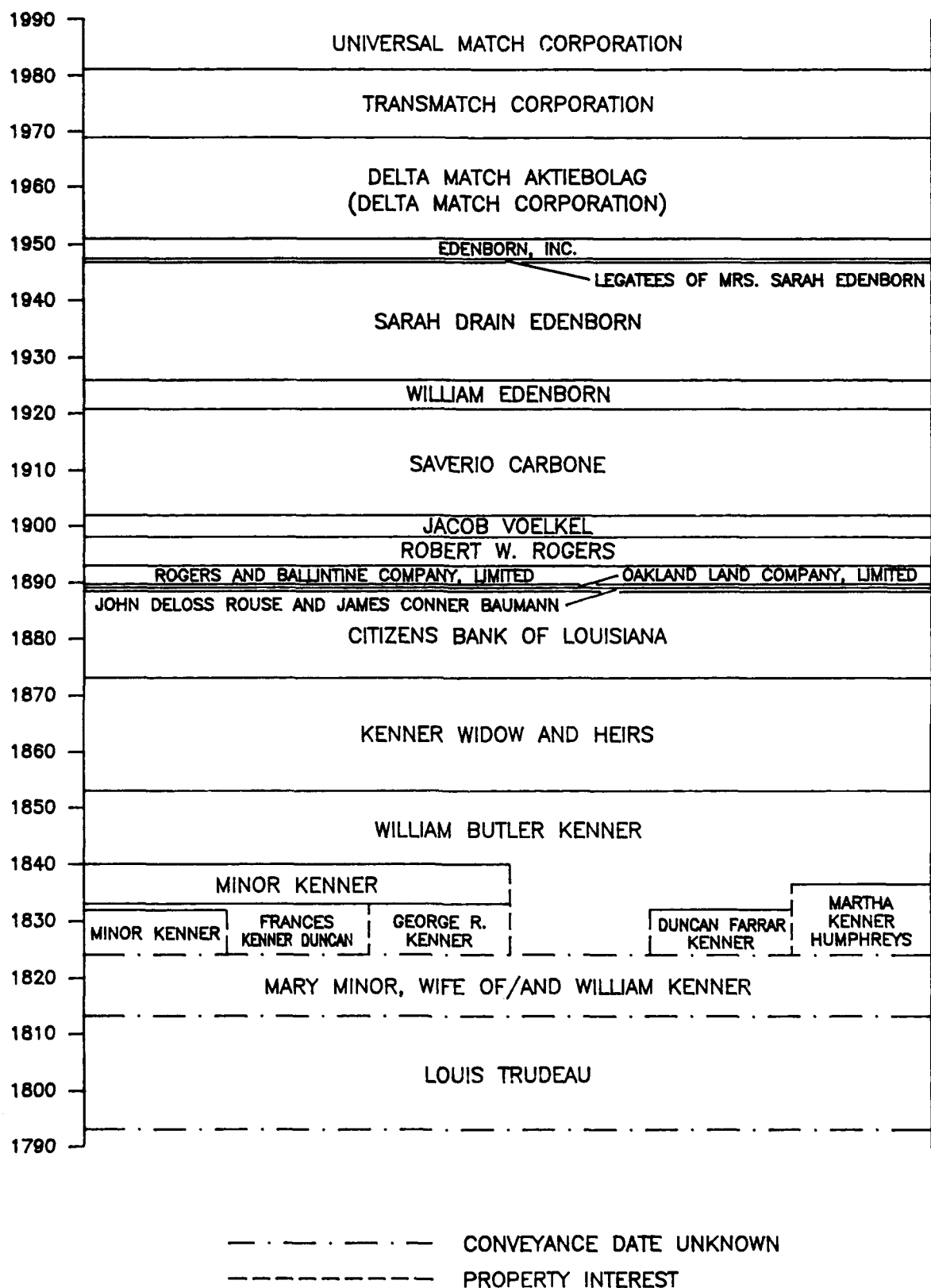
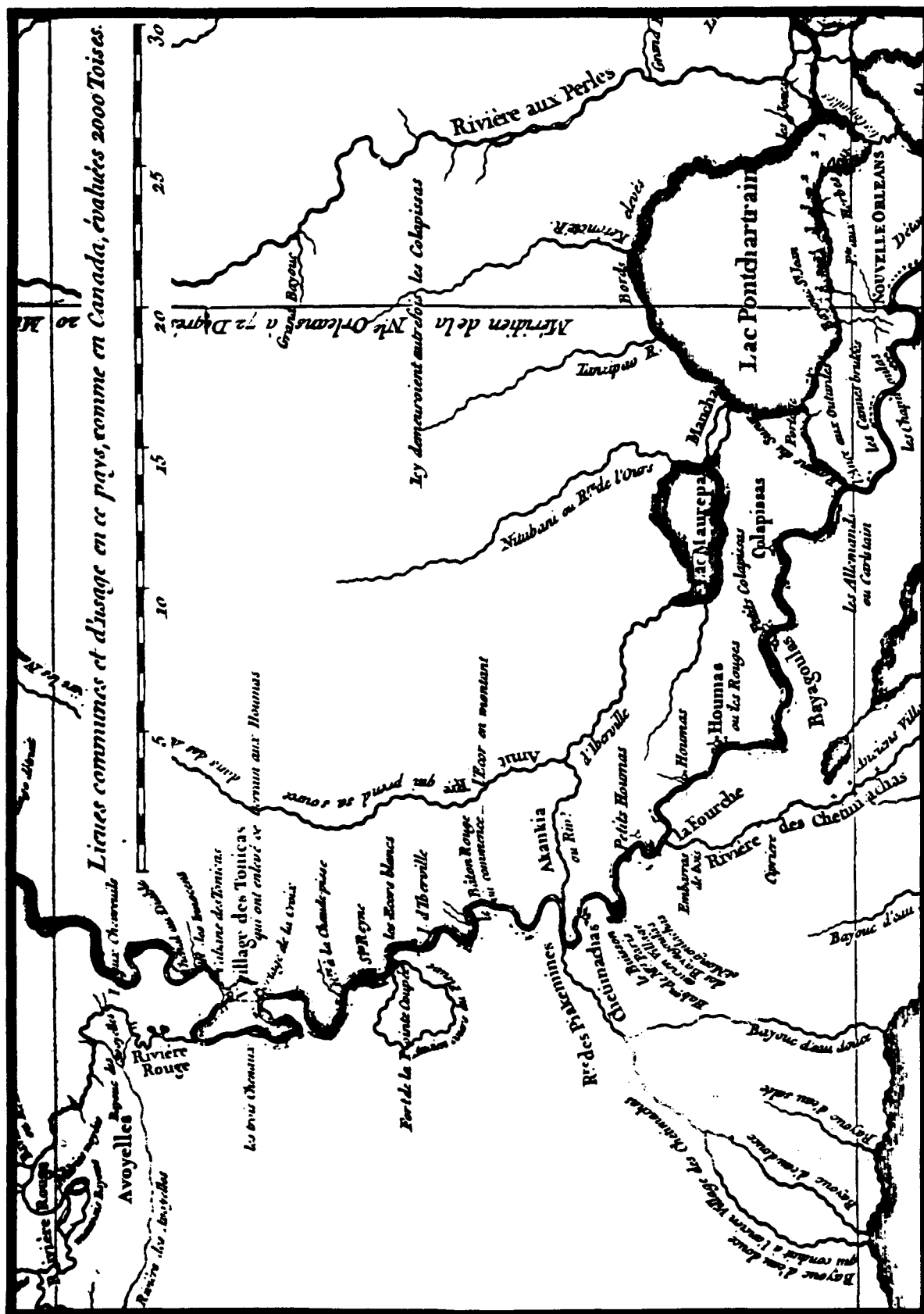


Figure 4. Schematic representation of the project item land tenure from claim confirmation to present.



the 12 servants and slaves of Sr. Julien, a former officer (Ditchy 1930:206, 214, 219; Swanson 1975:65). A 1722 addendum to Diron's report noted:

The concession of Count Dartagnan is in the Cannes Brulees six leagues above New Orleans. There are great clear fields which are to be sown. The ground is very good but during the great overflows it was flooded from eight to ten inches so that they have made levees to protect it. As the ground is not extensive and as it is subject to inundations as has just been said, they have granted him another one four leagues in extent at la Croix des Tonnica . . . [sic throughout] (Ditchy, transl. 1930:222-223).

Both the unsigned author of this 1722 addendum and Diron Dartaguet, in his comments on the 1721 census, agreed that the Louisiana province was ideal for growing indigo "as fine as that of St. Domingue," tobacco, rice, corn, "and every sort of vegetable." Silk production was suggested as "an important object of cultivation" because of the "prodigious quantity of mulberry trees." In addition, it was reported that there were "great quantities of herbs suitable for all kinds of sickness" and "several sorts of good woods," including cypress, white oak, live oak, and cottonwood (Ditchy 1930:220-221, 225).

Inspector General Diron followed his own recommendation for planting indigo, although the early years apparently were not very successful. In 1724, a report made to the Company of the Indies detailed the military conditions "and the situation of the settlers in each post." The following statement describes the French concessions at *Cannes Brûlées*:

At five leagues below the Tensas (Tciensas) are the concessions of Monsieur le Comte d'Artagnan and d'Artaguet (d'Artaguet), the first half may have a small yield of indigo, but the latter will at most be able to supply himself with seed. These two concessions are very well built and have very fine land, but are not rich in negroes: Monsieur d'Artaguet has but twelve; it is true that Monsieur Dartagnan is far better provided. They count six or seven horned cattle, four horses and eight or nine hogs (Cruzat, transl. 1929:123-124).

Spanish Colonial Period

The Isle of Orleans and all of the Louisiana province west of the Mississippi River were ceded to Spain by the secret Treaty of Fontainebleau, signed November 3, 1762, although France retained control until the arrival of Spanish Governor Don Antonio de Ulloa in 1766 (Davis 1971:97). The French colonists objected to Spanish rule, and in October 1768, New Orleans area planters and settlers revolted and occupied the city. Among those rebels were Nicolas Chauvin La Freniere and other planters whose concessions lay between *Cannes Brûlées* and the city of New Orleans. Upon his arrival in 1769, Governor Don Alejandro O'Reilly quelled all attempts at further rebellion against Spain (Davis 1971:97, 99-104; Reeves 1980:36-40).

When the Isle of Orleans became a Spanish possession, *Cannes Brûlées* was translated into its Spanish equivalent, *Cañas Quemadas*, although many maps, Spanish surveys included, carried the French name into the early nineteenth century (Pierson 1987:32; Whitbread 1977:14). It was under Spanish rule that Louis Trudeau established his claim to the tract later designated Section 38, T12S, R9E (Figure 6). Trudeau's tract was described in 1812 as:

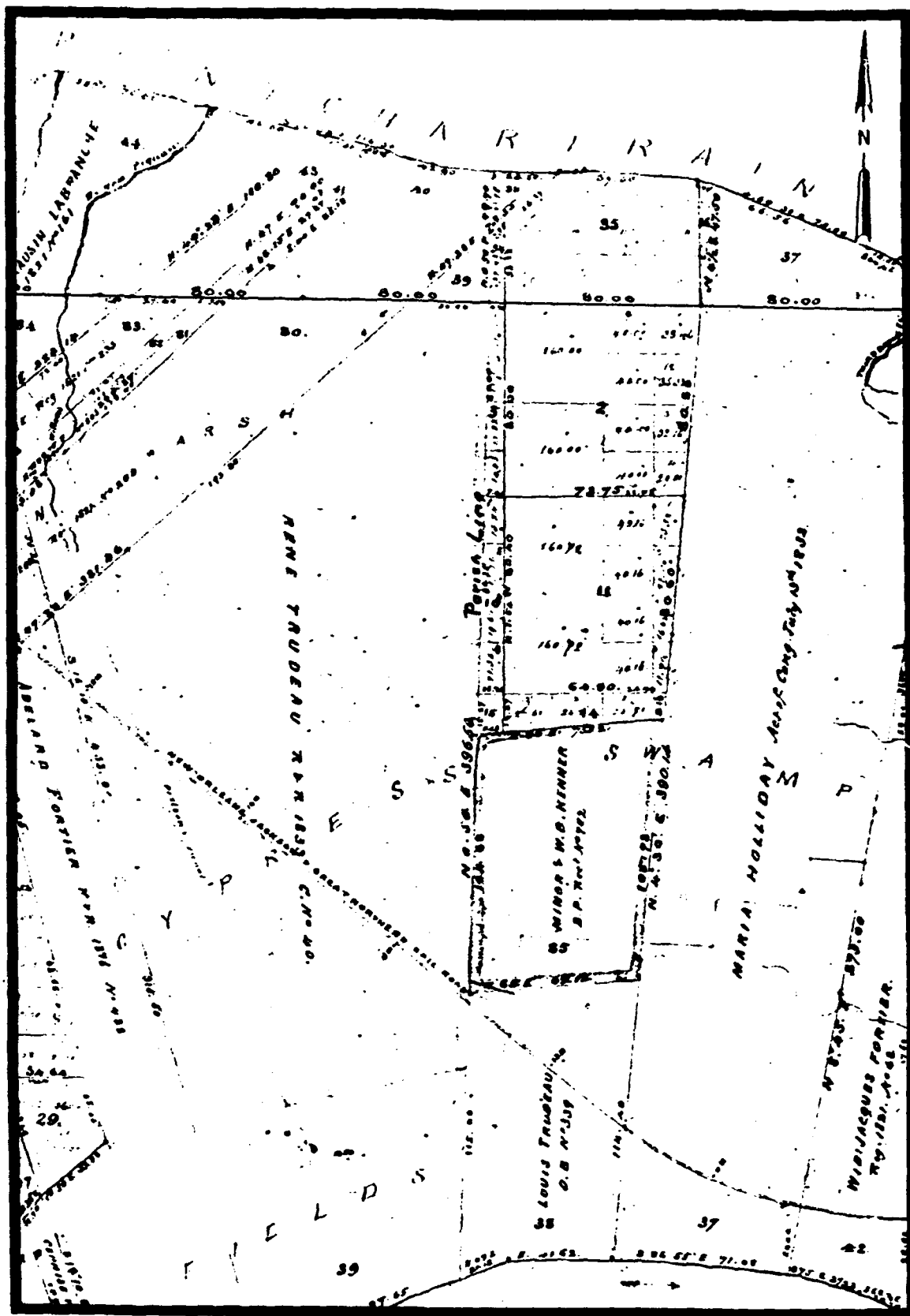


Figure 6. Excerpt from township plat, showing Louis Trudeau's confirmed claim to Section 38, T12S, R9E, east of and adjacent to the parish line (Township Plat Book 1886:1, Jefferson Parish Clerk of Court).

. . . six leagues above the city of New Orleans, on the left bank of the Mississippi, containing twenty arpents in front, . . . adjoining the plantation of Mr. Foreman on the lower side, and that of Mr. Meullons on the upper side.

It appears that the front and first depth of 40 arpents of this land was actually inhabited and cultivated on the 20th of December, 1803, and for more than ten consecutive years next preceding (Lowrie and Franklin 1834:326).

A Spanish map published in 1803 depicted the plantation of Meullon [sic] at *Cannes Brulées* [sic]; plantations located to the east were listed under the names of Mather, Bellechasse (perhaps the predecessor to Maria Holliday's Belle Grove), and J. [Jacques] Fortier (Anonymous 1803). Trudeau's omission from the map could have been an oversight, or he might have been an absentee owner at that time. It is possible that Mather was an overseer residing on the property, or perhaps he owned the land extending behind Trudeau to Lake Pontchartrain.

Territorial Era

Spain transferred the Isle of Orleans to France on November 30, 1803. Three weeks later, on December 20, French and American officials signed the Louisiana Purchase. In 1804, the Territory of Orleans was created from the Louisiana Territory south of the thirty-third parallel, less the "Florida Parishes." The Territory of Orleans then was divided in 1805 by territorial legislative council into 12 counties, including the County of Orleans, which covered the land area now containing Orleans, Jefferson, St. Bernard, and Plaquemines parishes (Davis 1971:162-163, 167-168; Swanson 1975:47).

Louis Trudeau's property claim, confirmed January 9, 1812, was located on the western edge of the new county, adjacent to the German Coast (Lowrie and Franklin 1834:258, 326). In 1810, St. Bernard and Plaquemines parishes were created from the eastern portion of Orleans Parish (designated a parish in 1807); the western boundary of Orleans north of the Mississippi River, however, remained unchanged (Thorndale and Dollarhide 1985; Swanson 1975:47; Tanner 1820; Whitbread 1977:2). Congress approved the constitution for the State of Louisiana on April 8, 1812, and on April 30, the new state was admitted to the Union (Davis 1971:176).

Antebellum Era

William and Mary Kenner

William Butler Kenner [Sr.] was a prominent New Orleans merchant who had emigrated from Virginia in the late eighteenth century. His wife was Mary Minor, daughter of Major Estaban Minor, commander of Spanish forces at the Natchez post. Their sons, Minor, William Butler, George, and Duncan Farrar Kenner, became important figures in the development of northwestern Jefferson Parish (Seebold 1941:1:139; Swanson 1975:107-108).

Although the Kenner family was not mentioned in Jefferson Parish conveyance records regarding the Trudeau claim (Section 38) until 1832, William Kenner apparently owned the tract as early as 1813. The Orleans Parish Police Jury Minutes for August 30 and September 6, 1813, detailed plans for damage repairs following a crevasse at William Kenner's plantation, situated upriver from New Orleans:

A list of planters obligated to send slaves to help Kenner was published, along with the proportion of their required contribution of slave workers. Planters who did not contribute were fined \$5.00 a head for each one they were short. The work took longer than expected, and soon Metairie slaves also were called on to participate in the work (Reeves 1980:80-81).

Another crevasse occurred at Kenner's plantation in the summer of 1823, but because of the difficulties involved with the 1813 repairs, the police jury simply assigned a committee of planters to assess the damage and report repair expenses (Reeves 1980:81).

William Kenner died on May 10, 1824, in Ascension Parish (Spirit of '76 Chapter, DAR ca. 1943:52). Minor Kenner, William Butler Kenner, George R. Kenner, Duncan Farrar Kenner, Frances Anne Kenner Duncan, and Martha Kenner Humphreys, surviving children of William and Mary Kenner (Mary's date of death unknown), inherited the Trudeau tract, by then known as Oakland Plantation, from their parents. No judgment of possession was recorded for either William or Mary in the Jefferson Parish conveyance records; the Kenners' succession(s) may have been filed in Orleans Parish prior to the creation of Jefferson Parish on February 11, 1825 (Bezou 1987:13). In a series of transactions filed from 1832 through 1836, Minor and William Butler Kenner acquired the undivided one-sixth property interests of the other heirs. During this period, Oakland was described as a sugar plantation situated 18 miles above New Orleans, measuring 20 acres along the Mississippi River, by a depth of 40 acres, bounded below by Mrs. [Maria] Holliday's plantation and above by that of Edmond Fortier. Included in the transactions, were the heirs' interests in all buildings and improvements, horses, drays, carts, livestock, the sugar mill, machinery, agricultural implements, and slaves. The slave population at Oakland ranged from 57 to 71 during those five years. Interestingly, some of these documents were witnessed by J. P. Benjamin, apparently Duncan Kenner's close friend, Judah P. Benjamin, who later became a U.S. Senator for Louisiana and then an official with the Confederate government (Conveyance Book 2, Folio 438 [COB 2:438]; COB 3:124; COB 3:126; COB 7:209, Entry No. 140 [#140]; COB 7:211, #141; COB 7:212, #142; COB 7:213, #143, Jefferson Parish Clerk of Court).

William Butler Kenner

In 1836, Minor and William Butler Kenner each held an undivided one-half interest in Oakland Plantation. On June 15, 1840, Minor Kenner sold his half interest to his brother, giving William Butler Kenner full interest in the sugar plantation and all buildings and improvements, machinery, cattle, oxen, horses, mules, and an estimated 83 slaves. Oakland was described in this document as fronting 23 arpents (approximately 21.16 acres) on the Mississippi River "and running back and including the Bank concessions thereto belonging." Later records and maps indicated that the described depth might have included Section 85 (north of Section 38), which originally had been acquired by both brothers (Figure 6) (COB 10:667, #842; COB D:794, Jefferson Parish Clerk of Court; *Township Plat Book* 1886:1; La Tourette 1845).

Minor Kenner retained property in Oakland's immediate vicinity. The two brothers previously had acquired three one-arpent lots, extending from river to lake, from Maria Holliday's Belle Grove Plantation [Section 37] (COB 10:168, Jefferson Parish Clerk of Court). Minor acquired the remainder of Belle Grove following Mrs. Holliday's death in 1842; his wife, Eliza Davis, was a daughter and heir of Mrs. Holliday. In subsequent years, Minor Kenner also acquired full interest in adjacent Pasture Plantation, former plantation of Aimée Durel, widow of Jacques Fortier. These three contiguous plantations composed the area that later became the City of Kenner (Figure 6) (COB 10:665; COB D:795, Jefferson Parish Clerk of Court; Swanson 1975:74, 108).

In the summer of 1849, crevasses occurred at Oakland Plantation, at Pierre Sauv 's plantation (adjacent to and east of Pasture Plantation), and at Edouard Fortier's plantation (Magnolia Lane Plantation on the west bank of the river). Because of the funneling effect created by Metairie Ridge, the Sauv  crevasse caused a great deal of flood damage in New Orleans. Despite the devastation, the crevasses generated tremendous excitement and curiosity among area residents. During the summer of 1849, three steamers were rerouted to accommodate excursions to view the Sauv  crevasse. The steamboat *Viola* advertised:

Pleasure excursion for the Crevasse - 50  each way. Splendid band of music, will give a collation, and every comfort extended to the passengers (Swanson 1975:91).

A more productive phenomenon was the rapid growth of railway traffic through northwestern Jefferson Parish. The New Orleans, Jackson, and Great Northern Railroad was incorporated in 1852 and immediately began obtaining servitudes through the Kenner family plantations, which lay on the line's route from New Orleans toward Lake Pontchartrain (COB D:794; COB D:795, Jefferson Parish Clerk of Court; Swanson 1975:99). [William] Butler Kenner donated a right-of-way across Oakland Plantation, described here as measuring 23 arpents by a depth of 80 acres, on July 19, 1852. The railroad company agreed to use the 100-foot right-of-way for:

... the ordinary purpose of hauling and carting dirt, stone, timber, iron, free of cost on condition [of] no unnecessary waste or damage and provided the company makes necessary bridges across my or any drainage canals and ditches at their expense (COB D:794, Jefferson Parish Clerk of Court).

The new railway was the impetus that inspired the Kenner brothers to subdivide a portion of their properties creating the town of Kennerville. William Butler Kenner died in the yellow fever epidemic of 1853, before the plans were completed. In 1855, Minor Kenner and surveyor W. T. Thompson finalized the town site on the riverbank edge of Pasture Plantation (Meador 1968:53-54; Swanson 1975:98;108; Thoede 1976:117). In later years, the town of Kenner spread westward through Belle Grove and Oakland Plantations.

No judgment of possession was filed in the Jefferson Parish conveyance records for William Butler Kenner until 1887; records and maps, though, showed Oakland Plantation under his widow's ownership prior to that year. The 1850 U.S. census listed seven children, all minors (the oldest, Philip M., was listed as a 17-year old student), who no doubt inherited a portion of their father's property under the administration of their mother, Ruhannah A. Brock Kenner. Kenner and his wife apparently died intestate; in 1887, their forced heirs were granted possession of a three-arpent tract in Kennerville, bounded above by Oakland Plantation, and extending in depth to Lake Pontchartrain (possibly the 1840 acquisition from Maria Holliday's Belle Grove Plantation). Oakland had been sold out of the family several years before this judgment of possession was filed (Boling and Duffard 1986:107; COB R:427, No. 703, 26th Judicial District Court [JDC]; COB M:530, Jefferson Parish Clerk of Court).

The Civil War

The city of New Orleans fell to Federal troops in late April 1862, and Major General Benjamin F. Butler took formal possession on May 1 (Davis 1971:255). No significant military action took place in the Kennerville area; however, the town's strategic importance as a "natural outpost" along the Mississippi River

was noted by Major David C. Houston, Chief of Engineers to Major General Nathaniel P. Banks (Reeves 1980:132). Camp Parapet (east bank) and Fort Banks (west bank), both originally built by the Confederates, were established several miles downriver from Kennerville (Casey 1983:11, 145-147; Swanson 1975:93-95).

In 1861, Major General Butler decreed that refugee slaves were to be fed, housed, and protected behind Union lines as "Contraband of War;" however, upon his arrival in New Orleans in 1862, he issued orders that Federal troops were not to intervene in master-slave relations (Reeves 1980:133; Swanson 1975:95). The two successive commanding officers at Camp Parapet, though, were strong abolitionists who disobeyed those orders despite charges brought against them for freeing slaves without cause. Captain Edward Page reported:

If on any of the Plantations here a negro is punished when he most deserves it, the fact becoming known at General Phelps' camp [Brigadier General J. W. Phelps' Camp Parapet], a party of soldiers are sent immediately to liberate them, and with orders to bring them to Camp (Reeves 1980:133).

An example noted in Page's report was that of a slave belonging to Mrs. [William] Butler Kenner, who had been convicted of barn-burning and was duly punished. Phelps' troops freed the slave from Mrs. Kenner's stocks and took him back to Camp Parapet, ignoring Major General Butler's orders to the contrary (Reeves 1980:133).

From the preceding account, it appears that Ruhannah Kenner stayed at Oakland rather than fleeing the occupied New Orleans area for Kenner relations' plantations upriver or in "the interior." It may be noted that Mrs. Kenner's brother-in-law was Duncan Farrar Kenner of Ashland Plantation in Ascension Parish. Duncan Kenner was a member of the Confederate Congress and early in the crisis, served as ambassador to plead the Confederate cause in France and England (Seebold 1941:1:140-151; Seebold 1941:2:88).

Postbellum Era

Postbellum Title History

Oakland Plantation remained the property of Mrs. William Butler Kenner until April 1873, when it was adjudicated at sheriff's sale to Citizens Bank of Louisiana. The plantation was described in this act as measuring 20 arpents front along the Mississippi River, by a depth of 80 arpents, with all buildings and improvements (not listed), formerly bounded below by Mrs. Holliday, now James C. Baumann, and bounded above by the plantation belonging to Joseph W. Frellsen, formerly Edmond Fortier. Citizens Bank of Louisiana held the property title for 16 years, finally selling Oakland to John Deloss Rouse and James Conner Baumann on April 5, 1889. Rouse and Baumann sold the plantation two months later to The Oakland Land Company Limited for \$11,000.00, applied toward 50 shares in the company (COB M:530; COB S:195; COB S:324, Jefferson Parish Clerk of Court).

Oakland Plantation was subdivided under the ownership of Oakland Land Company Limited. On December 13, 1889, John D. Rouse, acting as president of the company, sold the westernmost portion of Oakland to Rogers and Ballintine Company Limited, a firm that previously held a lease on the plantation for the purpose of cutting crossties. The conveyed tract was described as measuring one arpent front on the Mississippi River, by a depth to the right-of-way of the former New Orleans, Jackson, and Great Northern Railroad Co., "now occupied by the Illinois Central Railroad." Rogers and Ballintine sold the property in 1893 to the company president, Robert W. Rogers, who retained title until the tract was sold on March 7, 1898,

to Jacob Voelkel. Voelkel held the property through the turn of the century (Figure 7) (COB S:324; COB S:458; COB V:315; COB Z:117; COB 21:194, Jefferson Parish Clerk of Court).

Postbellum Kenner

Kennerville was incorporated in 1873 with the shortened name, Kenner, but lost its charter in 1886, not to be restored until 1913 (Swanson 1975:109; Whitbread 1977:18). During those years, a number of Europeans - German, Irish, and Italian - settled in the Kenner area. These immigrants continued the agricultural tradition of the community, replacing the old sugar plantations with smaller, but flourishing, truck farms. The railroads, always important for transportation and shipping goods, now became an important factor in the growth of businesses such as processing and freighting the locally grown vegetables. The success of truck farming and railroad commerce, in turn, led to the development of related industries: packing and lumber (i.e., boxes, barrels, and crossties), and later, in the early twentieth century, a canning factory and an ice factory for market preparation (Meador 1968:53-54; Swanson 1975:109).

The tract containing the project area apparently was used little after the Kenner family's ownership. The 1894 Mississippi River Commission [MRC] survey showed the eastern fields of Oakland Plantation planted in sugar cane and other crops (i.e., corn, wheat, etc.); the one-arpent parcel along the parish line, however, was depicted as a small strip of weeds and brush (Figure 7). Other than crosstie-cutting by the Rogers and Ballintine Company, the tract probably had not been used or cultivated since Oakland's days as a sugar plantation.

Early Twentieth Century

Title History

On February 6, 1902, Jacob Voelkel sold the one-arpent strip of land along the parish line to Saverio Carbone. Carbone held the property title for nearly 20 years before selling it on September 10, 1921, to William Edenborn (COB 21:194; COB 52:361, Jefferson Parish Clerk of Court). The 1921 MRC survey noted a structure within that tract, westernmost of a row of such structures south of the Kenner Electric Railroad [sic] (Figure 8). A number of Italian immigrants purchased former Oakland property along the river in the early part of the century; the structures depicted on the MRC survey apparently were houses built by the families who settled there (Conveyance records, Jefferson Parish Clerk of Court; Dusenbury 1923). Many of those tracts remain intact today, although the original houses may have been replaced in recent years by more modern structures (City of Kenner Code Enforcement Department staff, personal communication 1991). Based on archeological evidence, the structure within the project item apparently burned, but it probably was the house built by Saverio Carbone on his one-arpent tract.

Orleans-Kenner Electric Railway Company

The Orleans-Kenner Electric Railway Company, incorporated on January 7, 1913, was the brainchild of Harry K. Johnson, who began construction surveys for the project in October 1913. Cable cars had existed in New Orleans in the previous century, but the "O-K" (or "O.K.") line, completed in 1915, was "New Orleans' first and only electric interurban line," extending 16 miles from Canal and Rampart streets to the Jefferson/St. Charles Parish line (New Orleans Press Club 1916:57, 110; Swanson 1975:109). A car barn and storage yard were built in 1915 west of Harahan, and a depot was constructed east of the Jefferson/St. Charles Parish line, within the project area, apparently on Saverio Carbone's one-arpent tract (COB 35:745, Jefferson Parish Clerk of Court). The depot no longer exists, but appeared on the 1921 MRC survey, on the northern side of the Kenner Electric Railway [sic] (Figure 8).

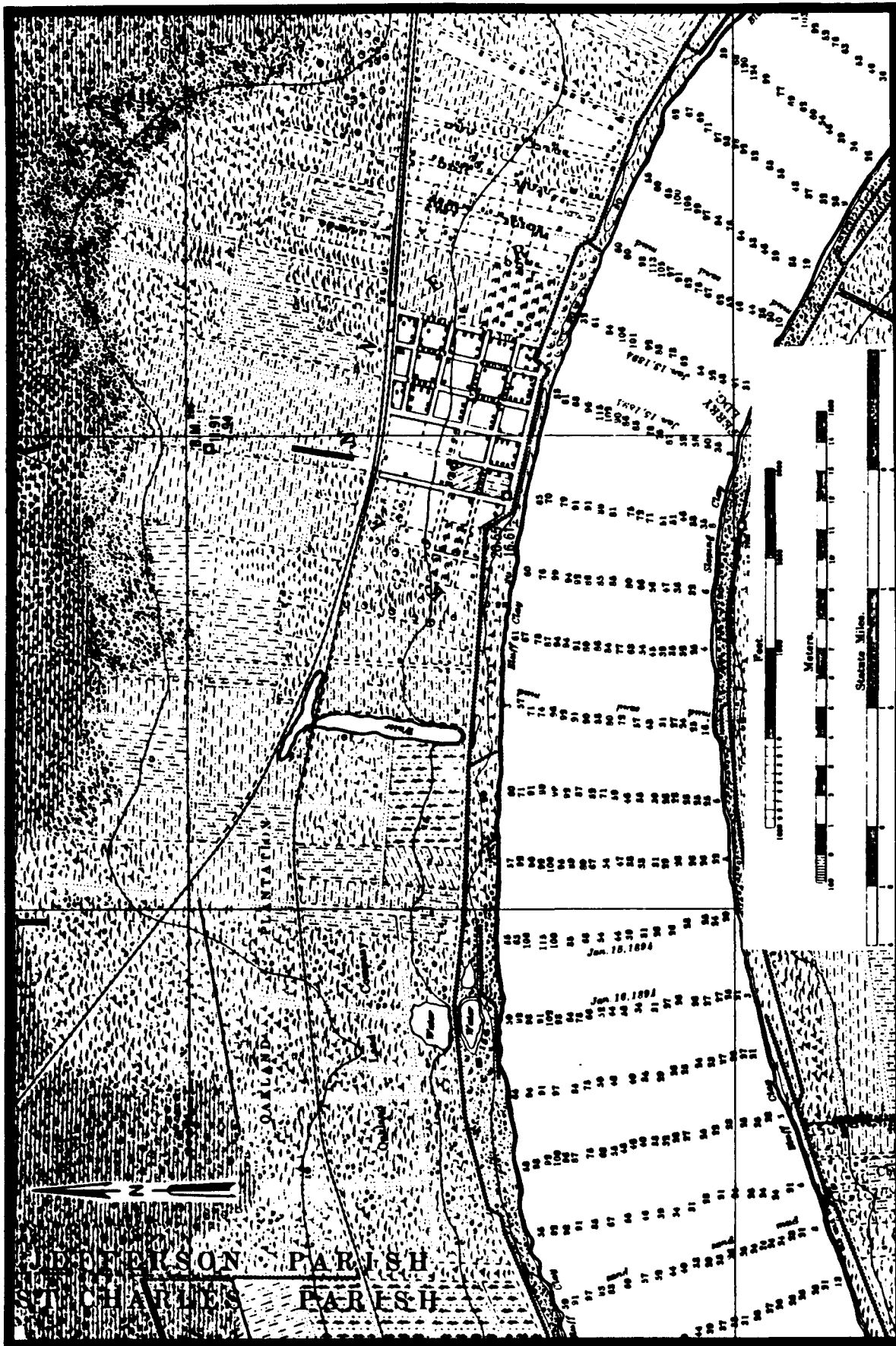
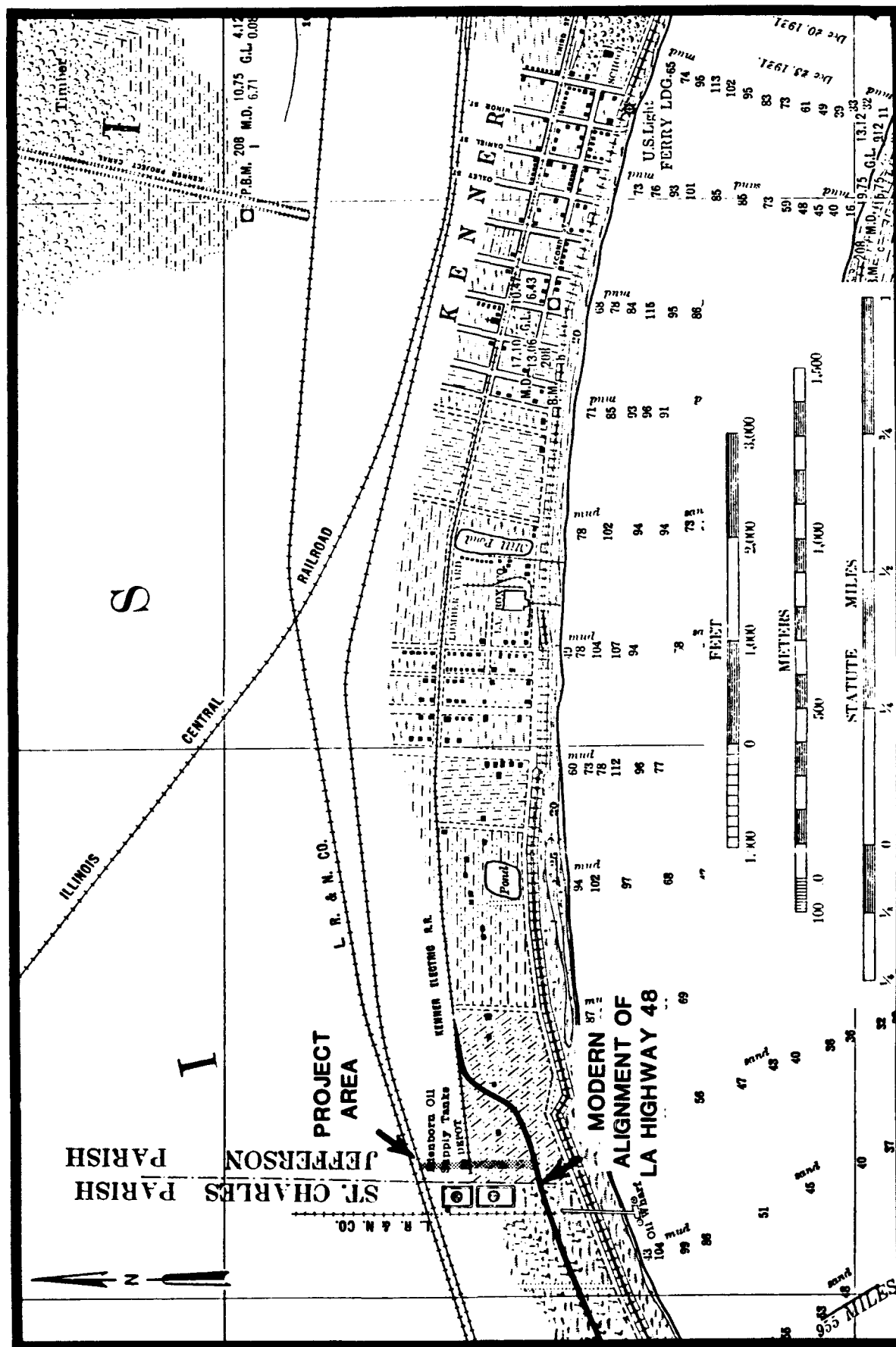


Figure 7. Excerpt from the Mississippi River Commission's 1894 Survey of the Mississippi River, Chart No. 75, showing Oakland Plantation and the historic town of Kenner (Louisiana Collection, Tulane University).



According to a 1916 advertisement, the "Orleans-Kenner Interurban" paved the way to industrial and residential growth in Jefferson Parish:

Development of field and industry in the parish really got its first great lift in the building of the Orleans-Kenner Interurban. A score or more new industries have been established since along the line. Others are in contemplation and will be erected or built in the very near future. Five hundred new garden tracts ranging in size from a quarter of an acre to five or more acres, have been claimed out of the idle areas and put under cultivation by their new owners.

More than fifty new rural homes have been built along the line; new dairies have been established and existing ones enlarged; shipments of truck and fruit to northern markets have increased wonderfully (Figure 9).

A 1917 map of the Kenner area depicted the region west of Kenner, between the Yazoo & Mississippi Valley Railroad and the "Orleans Kenner Suburban Ry.," as cultivated fields of "miscellaneous forage crops" (Kruse 1917). Most industries at that time probably were located closer to New Orleans.

The Orleans-Kenner Electric Railway Company was purchased by the Orleans-Kenner Traction Company, Inc., in 1918 (COB 42:431, Jefferson Parish Clerk of Court). Streetcars ran on the "O-K" line for another 12 years, until replaced in 1930 by busses (Swanson 1975:109; Thoede 1976:117). Jefferson Highway (Third St. in historic Kenner) was constructed along the former "O-K" route. According to a map surveyed sometime between 1930 and 1938, the westernmost portion of the highway in Jefferson Parish, from Blair Avenue to the Stafford, Derbes & Roy tract (east of and adjacent to the project area), originally was called the Orleans Kenner Road (*East Bank - 7th, 8th & 9th Wards n.d.:1E*). By 1938, the link between Jefferson Highway and the River Road had been completed, dipping southwestward at Alliance Avenue (Scott & Bres 1938). The short street extending west from the highway, between Alliance and a maintenance yard for the City of Kenner (formerly part of the Stafford, Derbes & Roy tract), presently is designated O-K Line, the name being the only remnant of the old electric railway.

William Edenborn

William Edenborn was a Prussian who emigrated to America as a youth. His was a classic "rags to riches" story, growing "from a penniless apprentice boy to the million dollar head of one of the greatest steel and wire industries of the world." Edenborn was the owner, builder, and president of the Louisiana Railway & Navigation Company, commonly known as the Edenborn Line, which ran between Shreveport and New Orleans. Construction on the railway began in 1898 and was completed ten years later. The primary importance of the Edenborn Line was the connection of the commercial centers of northern and southern Louisiana, not only linking Shreveport, Winnfield, Alexandria, Baton Rouge, and New Orleans, but also tying those cities into other railroad systems crossing the state and country (Hearn-O'Pry 1928:349; Helm 1915:51).

Edenborn owned vast properties - real, moveable, and mineral - throughout the state; he apparently purchased Saverio Carbone's one-acre tract in 1921 to supplement his adjacent property in St. Charles Parish (formerly part of Fairview Plantation). The 1921 MRC survey depicted the "Edenborn Oil Supply Tanks" west of the parish line and east of the Louisiana Railway and Navigation Company spur running north-south between the company's main railway (which ran parallel to the northern right-of-way of the Yazoo & Mississippi Valley Railroad at that point) and an oil wharf extending into the Mississippi River (Figure 8). In 1915, the "L. R. & N. Company" had expressed excitement over the discovery of oil fields

Orleans-Kenner Electric Railway Co.

The Orleans-Kenner Electric Railway Company, New Orleans' first and only electric interurban line, leads from the city terminals in the heart of New Orleans, at Canal and South Rampart streets, out 16 miles to the St. Charles-Jefferson parishes boundary line one mile westerly from Kenner. Leaving New Orleans at Chalborne avenue and Protection Levee, the electric line goes through Southport where large industries are established; Harahan City, with its mammoth railroad shops and yards and a large population; Kenner, the seat of one of Louisiana's chief trucking belts, and Hanson City, a Kenner suburb.

From beginning to end the interurban road lies in a valley unparalleled in many respects.

It is richer than Egypt, as tropical and balmy as California or Florida, more fruitful than any region in America, well supplied with water and rail transportation, healthful and prosperous.

Fertility of soil, year-round sunshine and warmth and generous rains make possible the raising of one to four crops a year.

This valley in Jefferson parish is destined to even greater renown as a vegetable and fruit section, for the development of well cultivated gardens is forming in all of the parish that is drained and not pre-empted industrial plants.

Development of field and industry in the parish really got its first great lift in the building of the Orleans-Kenner interurban. A score or more new industries have been established since along the line. Others are in contemplation and will be erected or built in the very near future. Five hundred new garden tracts ranging in size from a quarter of an acre to five or more acres, have been claimed out of the idle areas and put under cultivation by their new owners.

More than fifty new rural homes have been built along the line; new dairies have been established and existing ones enlarged; shipments of truck and fruit to northern markets have increased wonderfully.

The Orleans-Kenner line probably has brought more than \$1,000,000 in new land and industrial values in the parish since first surveys for its construction were made in October, 1913.

The Orleans-Kenner line maintains hourly car service between the Canal street and the Kenner terminals, operating from 6 o'clock a. m. to 6 o'clock p. m. The night service is a car leaving Canal street at 8, 10 and

12 o'clock. Announcement is made that owl car service, from 12 o'clock midnight until 6 o'clock the following morning, is soon to be inaugurated.

To the dweller in the bustling, noisy, hard-working city, the Orleans-Kenner interurban opens the privilege of short or extended recuperative trips in the country. The city man loves the dash through the open spaces of the country, with ever-shifting scenes of forest, field, garden, lake and stream.

Shattered nerves are soothed by the panorama of the country.

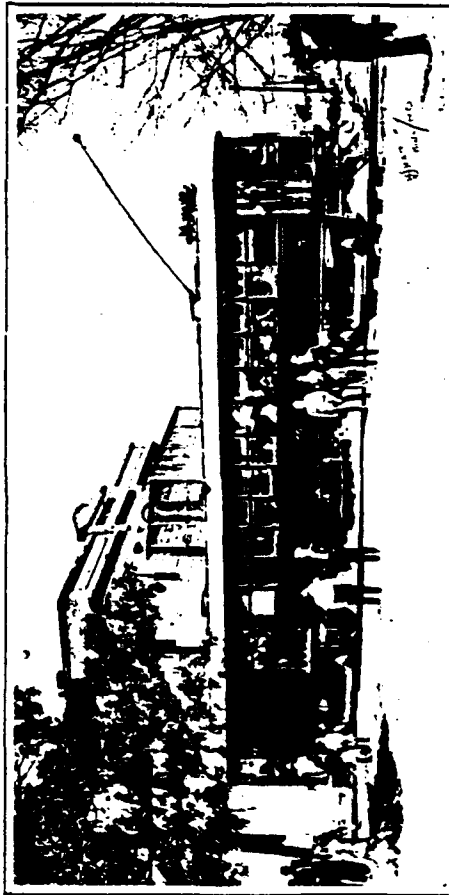
The O-K interurban is the ideal trip. The road bed is solid, the cars are new, clean, airy, noiseless and comfortable; the schedule is fast because the cars are equipped with 200 horse-power motors. The cars are the fleetest to be found in any interurban line south, and so heavy that they roll over the road-bed with little or no jerking or jarring.

Scenes of great historic and romantic interest abound along this interurban line. A little beyond Protection Levee are the ruined embankments of Fort Parapet that on many occasions played an important part in the early military history of New Orleans. Further on are the Elmwood, La Premeire and Soulat plantations, among other large and old landed estates.

Sugar cane and rice were once the chief crops of these plantations. The houses of the old plantation owners were built in the midst of groves of giant live-oaks, and about them were built the shanties of the negro farm workers.

For pleasure trips the Orleans-Kenner interurban offers many advantages. Good roadhouses are to be constructed at several points. One of these now contemplated is to make a specialty of serving country diners, on the old plantation style, in its dining rooms. Parks for picnics, musical concerts and dancing and athletic fields for sports of all classes are projected.

The Orleans-Kenner electric railway was built by Harry K. Johnson, engineer, who organized the company and began the making of surveys in October, 1913. He had first projected the road ten years before but advisedly postponed its construction to a more advantageous period. In the financing of operations, J. D. Purcell, a prominent business man of Lexington, Ky., took the leading part.



TYPE OF CARS USED BY O. K. LINE.

Figure 9. Description of the Orleans-Kenner Electric Railway, as advertised in *New Orleans, Louisiana, Metropolis of the South, Gateway to the Mississippi Valley* (New Orleans Press Club 1916:110).

along its route through Red River Parish, and predicted that the line would "install oil-burning locomotives in the near future," that "will use oil produced in the Creightor oil field on property owned by Mr. Edenborn, owner of the L. R. & N. Company, on his own line" (Helm 1915:52). By 1921, it appears that the prediction proved true, at least in St. Charles and Jefferson parishes.

William Edenborn died in Shreveport on May 13, 1926, "leaving no ascendants or descendants" (COB 77:85 [No. 42,541, 1st JDC, Caddo Parish], Jefferson Parish Clerk of Court; Hearn-O'Pry 1928:349). On June 17, 1926, his nieces and nephews agreed to a judgment putting Edenborn's widow, Sarah Drain Edenborn, in full possession of his Louisiana property, all of which had been acquired as community property. Mrs. Edenborn retained title to most of the Jefferson Parish property, including the project area tract (28.40 acres), until her death. Her judgment of possession (covering Jefferson Parish property only) was filed on October 29, 1947, and a week later, her residuary legatees conveyed title to Edenborn, Inc., a Shreveport company formed by the legatees (COB 77:85 [No. 42,541, 1st JDC, Caddo Parish]; COB 247:340 [No. 90,267, 1st JDC, Caddo Parish]; COB 247:501, Jefferson Parish Clerk of Court; Dusenbury 1923).

Modern Era

Modern Title History

Edenborn, Inc., sold the southern portion of the 28.40-acre tract along the Jefferson/St. Charles Parish line to a Swedish corporation, Delta Match Aktiebolag [Corporation], on May 28, 1951. The fraction sold measured one arpent fronting the Mississippi and extended in depth from Louisiana Highway 1, which ran along the river levee, to the Illinois Central right-of-way (formerly the Yazoo & Mississippi Valley Railroad). At approximately the same time, Delta also purchased a portion of the former Fairview/Edenborn property in St. Charles Parish, extending the same depth as the Jefferson tract, for a combined area of 20.74 acres, the bulk situated in St. Charles Parish (COB 303:573, #6,030; COB 329:395, #7,184, Jefferson Parish Clerk of Court; Tobin ca. 1950s:T12S, R9E).

In the 1960s, Jefferson Parish boasted that Delta Match Corporation was the only Southern match manufacturer. Delta originally produced only "penny matches of safety and 'strike anywhere' types." Kitchen matches were added to production in 1961, with a daily output of 3,000,000 boxes by 1968 (Meador 1968:24). In 1969, Delta Match changed its corporate name to Transmatch, and again, in 1981, to Universal Match Corporation. Universal currently owns the project tract; however, the assessment, along with most of the company records, appears to have been filed in St. Charles Parish, rather than Jefferson Parish (Linda Bergeron, personal communication 1991; COB 1066:724, #8,403,968, Jefferson Parish Clerk of Court). Although the corporation retains ownership of the project tract, the Universal Match manufacturing facility located there has closed (Charles Gudger, personal communication 1991).

Modern Kenner

Kenner has experienced tremendous growth in recent decades. In 1830, the entire parish of Jefferson held only 6,846 residents; by 1960, the parish population totaled 207,891, of whom 17,037 resided in the town of Kenner. During the next 10 years, the Kenner figure rose 75 per cent to 29,858, an enormous leap from the town's 1915 population of around 2,000 (Hansen 1971:529; Meador 1968:15; Swanson 1975:109). For over two centuries, the Kenner area was agricultural; today, Kenner is a heavily developed, residential and industrial community. On the whole, the Jefferson Parish economy made a complete turnaround, changing from 98 per cent agricultural dependence in the early years, to 98 per cent industrial development by 1955 (Brown and Furrer n.d.:34; Swanson 1979:59). The statistics for the City of Kenner undoubtedly are very similar.

In 1935, oil was discovered in Lafitte, located in the Barataria region of Jefferson Parish. Petroleum-related industries, i.e. exploration, drilling, and transport, quickly evolved, and by the 1970s, oil was considered the largest industry in Jefferson Parish (Meador 1968:21; Thoede 1976:12-13). A five-year oil, gas, and mineral lease was filed in January 1962 on the Delta Match Corporation property in Jefferson and St. Charles parishes. One month later, an amendment was recorded limiting drilling to a specific portion of the tract; unfortunately, the survey designating the drilling location was not attached to the available amendment copy (Mineral Lease Book [MLB] 22:228, #222,749; MLB 22:270, #224,778, Jefferson Parish Clerk of Court). Observations made within the project area, however, indicate that drilling operations apparently were conducted elsewhere within the Delta/Universal tract.

Summary

The Kenner area was an agricultural region well into the twentieth century, depending first on indigo, then the large sugar plantations, and finally, the small truck farms of European immigrants. The success of truck farming, combined with the lucrative railroad commerce, generated related industries. Industry, in turn, brought in more people to work and live in the community, along with the necessary support services, resulting in the thriving city existing today.

The project area is a microcosm of the Kenner community's economic history. First, came the French indigo planters of the *Cannes Brûlées* concessions, followed by the Kenner family and their sugar plantation, Oakland. There is no evidence that Saverio Carbone cultivated the project tract as a truck farm in the early twentieth century, but area histories of the period record a wave of Italian immigrants who helped turn Kenner into a successful truck-farming center. Crossties were cut on the old Oakland Plantation around the turn of the century to accommodate the growing railroad systems. From 1915 to 1930, the Orleans-Kenner Electric Railway provided the growing populace with transport from its depot at the parish line into New Orleans. By 1951, Delta Match Corporation joined Kenner's burgeoning industries, converting the project area from agriculture to industry.

CHAPTER VI

FIELD METHODS

In accordance with the Scope of Services, the entire project area was examined for cultural resources using pedestrian reconnaissance augmented by systematic shovel testing. Two survey transects, spaced 10 m (32.8 ft) apart, were established within the 15.2 x 285 m (50 x 935 ft) project area. Shovel tests were excavated at 10 m (32.8 ft) intervals along each transect; adjacent shovel tests were offset. Shovel tests were excavated to a depth of 60 to 75 cm (23.6 to 29.5 in), or into sterile subsoil deposits. A total of 48 shovel tests were excavated within the 1.1 ac project area; shovel tests were not excavated at nine locations because they were situated either in extensive spoil piles, or within a large modern drainage ditch (Figure 10). Shovel test fill was screened through 0.6 cm (0.25 in) wire mesh; clays and excessively wet soils were hand-sifted for artifacts. Each shovel test was backfilled immediately upon completion of the archeological recordation process. Recovered artifacts were bagged and labeled by provenience, and delivered to the laboratory at R. Christopher Goodwin & Associates, Inc. for analysis.

During survey, one historic archeological site, Universal Match site (16JE219), was encountered. Two 1 x 1 m (3.28 ft) excavation units were placed within the site to define better the vertical extent of the site, as well as its stratigraphy, cultural association, and research potential. These units were excavated by natural strata and extended into sterile subsoil. The stratigraphic profiles of each unit was recorded; soils were described using Munsell Soil Color Charts and the textural triangle. Both units were photographed, and both were backfilled upon completion of the archeological recordation process. Finally, a profile of the drainage ditch was completed; it extended along the northern wall of Unit 1 and documented the distribution of spoil deposits that overlie much of the site.

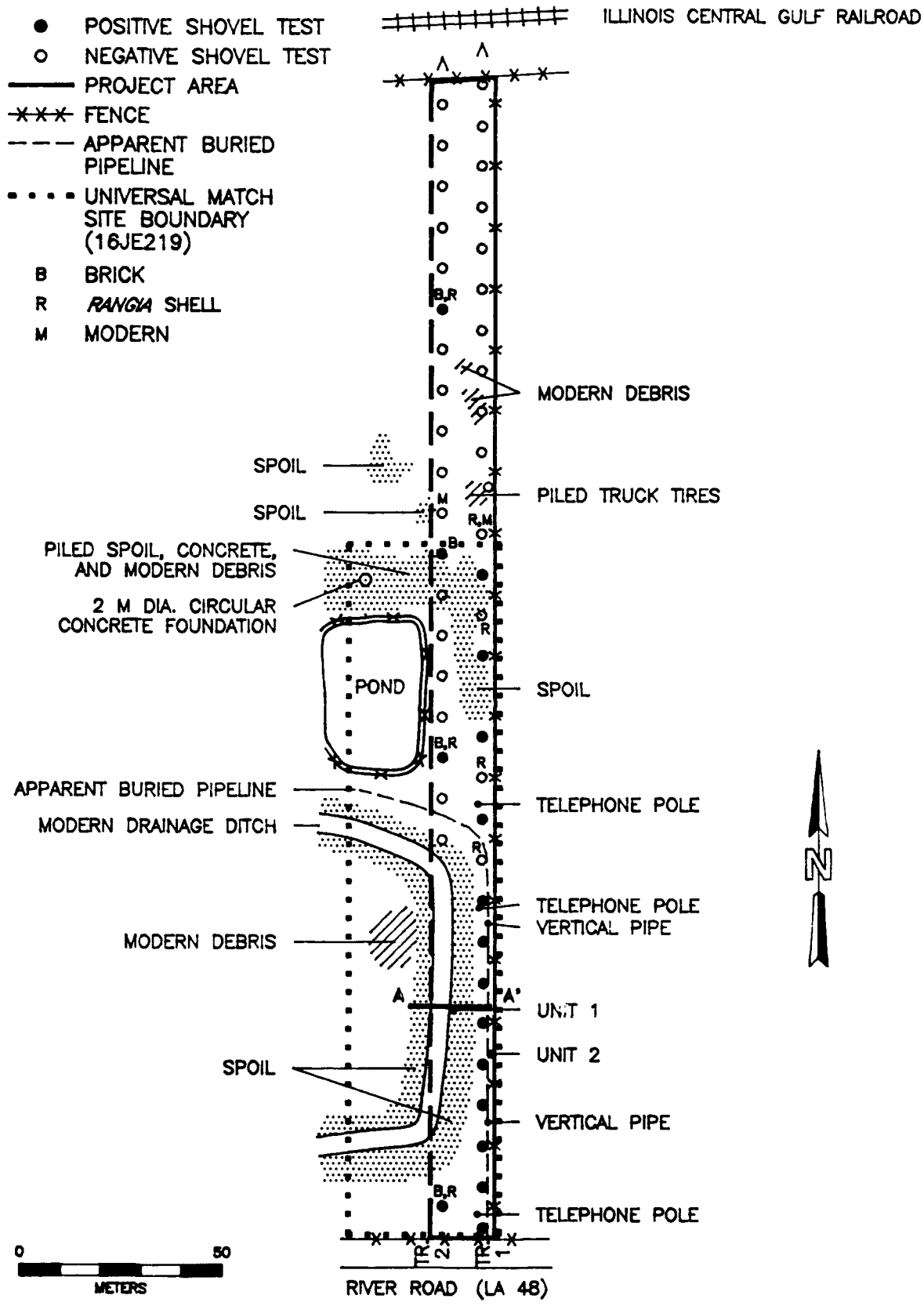


Figure 10. Plan of the project area, showing field investigations and landscape features.

CHAPTER VII

RESULTS OF THE FIELD INVESTIGATIONS

Introduction

Historic maps of the project area were examined prior to field work. The ca. 1890s edition Mississippi River Commission (MRC) Chart 75 associates the project area with the western end of Oakland Plantation, but does not delineate any standing structures or other cultural resources in the project area. The 1921 MRC Chart 75 (Figure 8) depicts an apparent house in the southern third of the project area; a train depot and the western terminus of a Jefferson Parish railroad line are shown near the central portion of the project area. The current USGS topographic quadrangle exhibits a large modern structure immediately west of the project area (Figure 1), and in the vicinity of the former train depot. Field investigations supported the cartographic data.

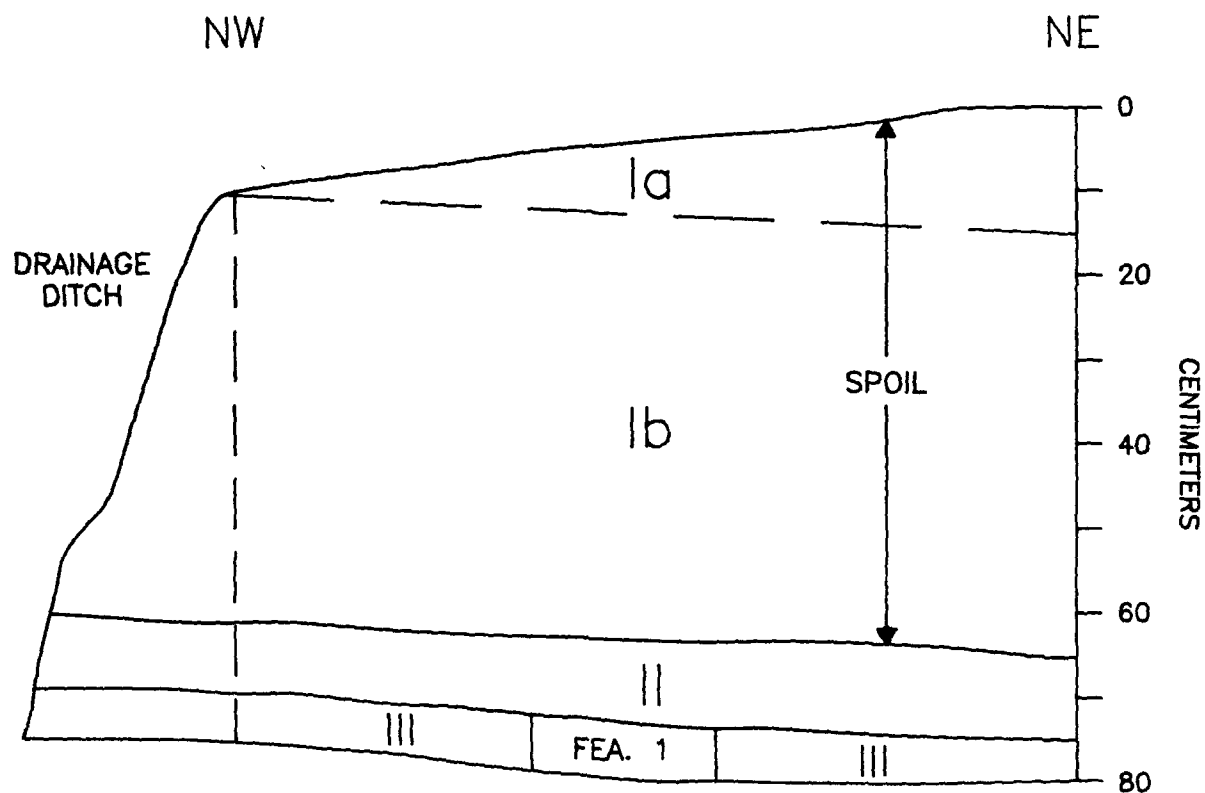
Numerous modern disturbances were observed within the project area. A 3 m (9.8 ft) wide, 1 m (3.2 ft) deep modern drainage ditch cuts through approximately 70 m (230 ft) of Transect 2; 5 to 8 m (16.4 to 26.2 ft) wide berms of spoil align both sides of the ditch. This spoil extends to within 1 to 2 m (3.2 to 6.6 ft) of Transect 1. An apparent buried pipeline extends along and adjacent to the southern 95 m (311.7 ft) of Transect 1. An extensive irregular pile of spoil, cement, gravel, *Rangia* shell, and modern debris is located near the center of the project area, in the vicinity of the former train depot and the modern structure shown on the current topographic quadrangle (Figure 1). The modern structure, which was part of the Universal Match complex, no longer is standing. A pond is located a few meters west of the project area, and several piles of spoil and modern debris overlie the area (Figure 10).

Universal Match Site (16JE219)

One early twentieth century site was identified as a result of archeological survey. The Universal Match Site (16JE219) is located in the southern half of the project area, in the vicinity of the 1921 house and the train depot. A variety of early to mid-twentieth century artifacts were observed and recovered from the drainage ditch, the adjacent spoil, and the shovel tests placed in the area (Figure 10). These materials included bottle and window glass fragments; whiteware and porcellaneous ceramic sherds; nails; brick; and, other artifacts. Modern debris, such as sheet plastic, plastic conduit pipe, and modern bottle glass, also were observed within the site area. Because of the extensive modern disturbance observed in the vicinity of the former train depot, site testing was concentrated within the southern half of the site, in the vicinity of the former domestic residence.

Unit 1

Based on collected data, two excavation units were placed in the site. Unit 1 was established along the eastern edge of the drainage ditch, overlying an exposed brick in the wall of the ditch (Figure 10). It was excavated in three natural strata (Figure 11). The 65 cm (25.6 in) thick Stratum I consisted of modern mixed spoil deposits that align the ditch. This spoil contained two distinct depositions. The upper stratum, Stratum Ia, consisted of 7.5YR 4/2 dark brown clay loam; it may be spoil from post-excavation cleaning of the drainage ditch. The underlying Stratum Ib contained mixed deposits of 10YR 3/1 very dark gray clay loam, 10YR 4/1 dark gray clay loam, and 10YR 4/2 dark grayish brown clay loam with 10YR 3/4 dark yellowish brown clay loam mottles. Because this entire stratum was disturbed, it was removed as one level. A wide variety of materials were observed and recovered from the stratum, including whiteware, bottle glass,



- IA: 7.5YR 4/2 DARK BROWN CLAY LOAM.
- IB: 10YR 3/1 VERY DARK GRAY CLAY LOAM, MIXED WITH
 10YR 4/1 DARK GRAY CLAY LOAM, AND
 10YR 4/2 DARK GRAYISH BROWN CLAY LOAM WITH 10YR 3/4 DARK YELLOWISH
 BROWN CLAY LOAM MOTTLES.
- II: 10YR 3/1 VERY DARK GRAY LOAM.
- III: 10YR 4/2 DARK GRAYISH BROWN SILT LOAM.
- FEATURE I: 10YR 3/1 VERY DARK GRAY LOAM WITH 10YR 4/2 DARK GRAYISH BROWN SILT LOAM
 MOTTLES.

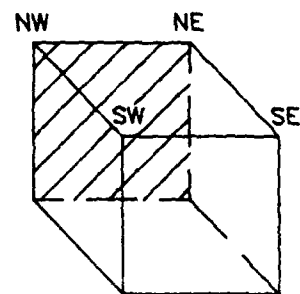


Figure 11. Stratigraphic soil profile of the north wall of Unit 1.

tumbler fragments, pressed glass, ceramic caster and doorknob fragments, nails, bricks, mortar, *Rangia* shell, and roofing slate.

Stratum II in Unit 1, a 10 cm (4 in) thick deposit of 10YR 3/1 very dark gray loam, comprised the original ground surface (Figure 11). The brick, observed in the wall of the drainage ditch, along with numerous early twentieth century artifacts, was situated within Stratum II. Much of the glass was melted, indicating that the former residence was destroyed by fire. The underlying Stratum III, a 10YR 4/2 dark grayish brown silt loam, formed the bottom cultural deposit. It contained a decreasing quantity of artifacts, which were contemporaneous with those recovered from Stratum II. Stratum IV consisted of culturally sterile subsoil comprised of 10YR 4/1 dark gray silt with 7.5YR 3/4 dark brown silt mottles; Stratum IV was not excavated.

One soil feature, Feature 1, was located at the northern end of Unit 1 (Figures 11 and 12). This rectangular feature extended from the base of Stratum II, through Stratum III, and into the underlying subsoil. The portion within the unit measured 15 x 22 cm (6 x 8.6 in); it extended into the northern wall. Feature 1 contained a mixture of Strata II and III soils, along with some brick, sand mortar, and wood charcoal. While no postmold was present, the feature's morphology suggests a small posthole. The feature was not excavated beyond Stratum III; it was preserved intact.

Unit 2

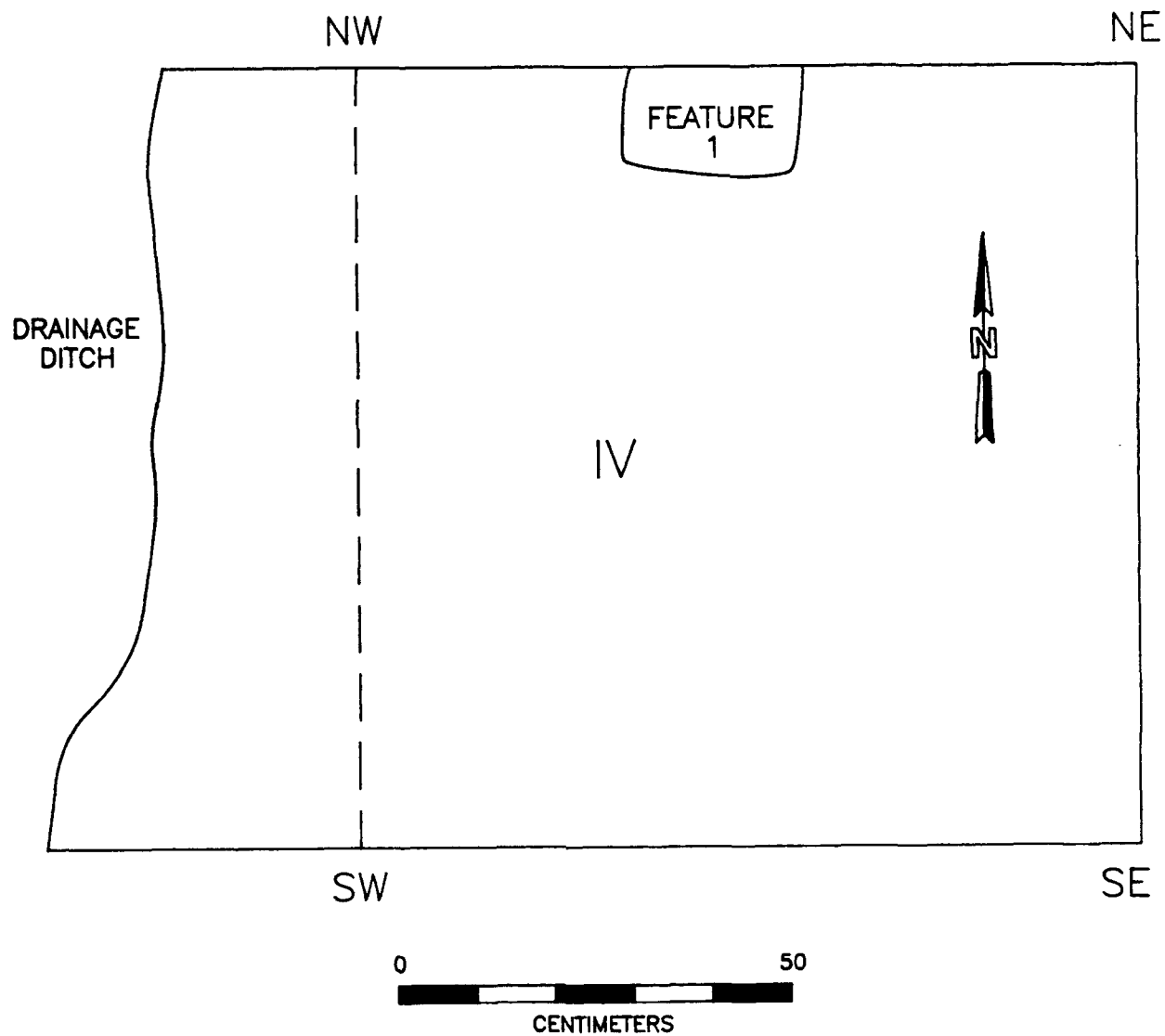
Unit 2 was placed approximately 15 m (49 ft) southeast of Unit 1, along the eastern edge of the project area, and east of the spoil deposits associated with excavation of the drainage ditch (Figure 10). The unit was excavated in four natural strata (Figure 13). Stratum I consisted of 10YR 3/1 very dark gray silt loam. This topsoil deposit contained a sparse quantity of artifacts, including a spike, two glass fragments, a whiteware fragment, some brick, sand mortar, and gravel. The underlying Stratum II, a 10YR 4/1 dark gray silt loam, contained a moderate quantity of artifacts, including whiteware, stoneware, bottle glass, milk glass, nails, various iron fragments, a brass washer, plastic, brick, gravel, concrete, coal, and sand mortar. The eastern half of the unit contained a concentration of brick rubble, a few pieces of which extended into the western half of the unit. The plastic was recovered from within the brick rubble. The presence of plastic strongly suggests that the stratum lacks archeological integrity.

Stratum III, a 10YR 4/2 dark grayish brown silt loam, underlies Stratum II (Figure 13). A moderately low concentration of artifacts were observed and recovered from the stratum, including stoneware, a few glass fragments, nails, a railroad spike, cut bone, a 1901 Indian Head penny, scattered brick fragments, coal and shell, and sand mortar. No evidence of any archeological features or artifact concentrations was observed in Stratum III.

Stratum IV, consisted of a 10YR 4/1 dark gray silt with 7.5YR 3/4 dark brown silt mottles. One small whiteware fragment and a few small brick fragments were recovered from the upper 2 cm of the stratum; the rest of the stratum was culturally sterile and represents the natural undisturbed subsoil that underlies the project area.

Bisection A - A'

A bisection of the modern drainage ditch and adjacent spoil was prepared along the northern face of Unit 1 (Figures 10 and 14). This was prepared by stretching a line level across the entire width of the ditch and adjacent spoil, and measuring down to the current ground surface. The historic ground surface was estimated based on stratigraphic information observed within Unit 1, and observed terrain morphology. Bisection A - A' demonstrated that approximately 65 cm (25.5 in) of spoil overlay the pre-ditch ground



STR. IV:	10YR 4/1	DARK GRAY SILT WITH 7.5YR 3/4 DARK BROWN SILT MOTTLES.
FEATURE I:	10YR 3/1	VERY DARK GRAY LOAM, WITH
	10YR 4/2	DARK GRAYISH BROWN SILT LOAM MOTTLES.

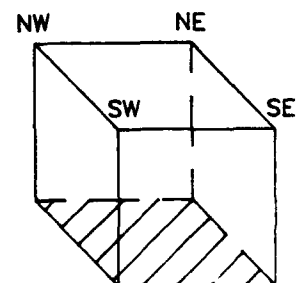
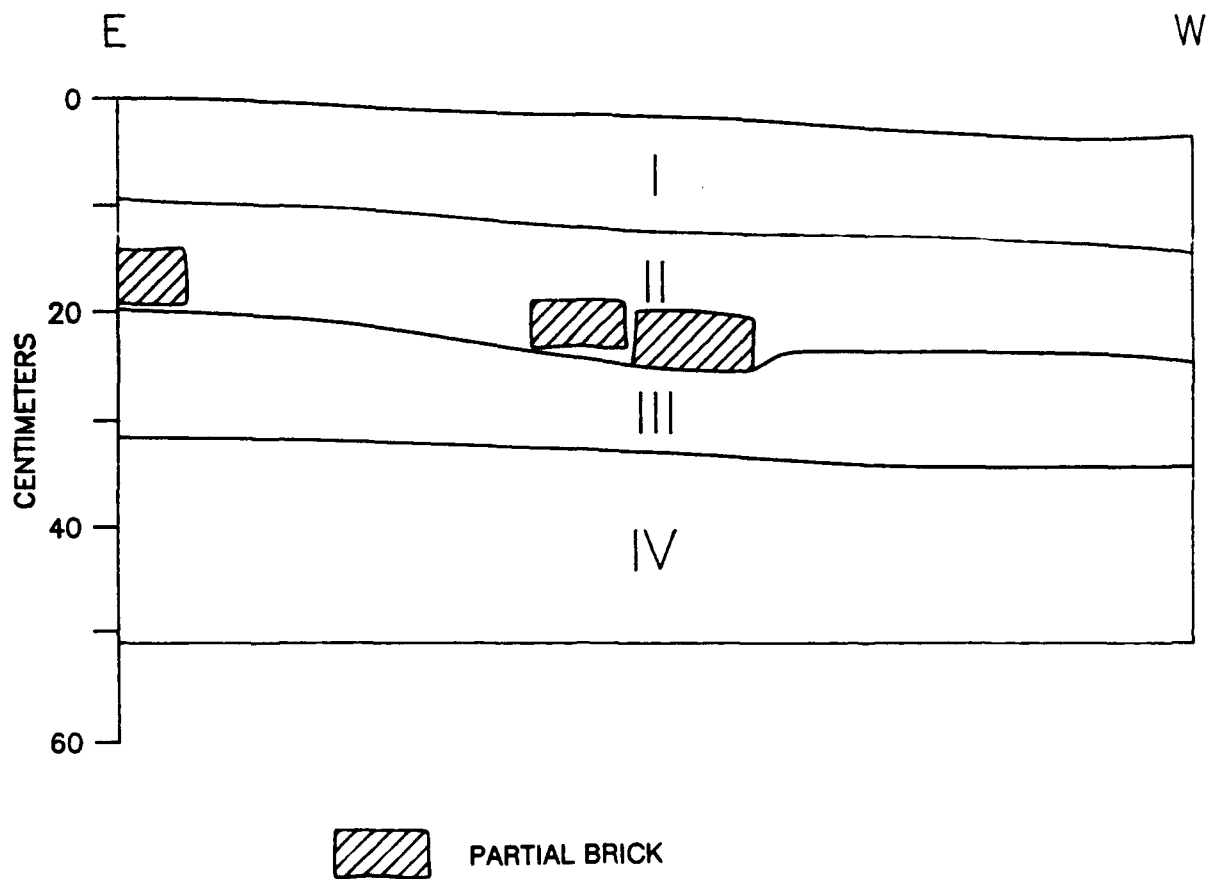


Figure 12. Plan view of the base of Unit 1, showing Feature 1.



- I: 10YR 3/1 VERY DARK GRAY SILT LOAM.
- II: 10YR 4/1 DARK GRAY SILT LOAM.
- III: 10YR 4/2 DARK GRAYISH BROWN SILT LOAM.
- IV: 10YR 4/1 DARK GRAY SILT WITH 7.5YR 3/4 DARK BROWN SILT MOTTLES.

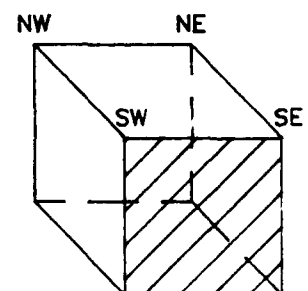


Figure 13. Stratigraphic soil profile of the south wall of Unit 2.

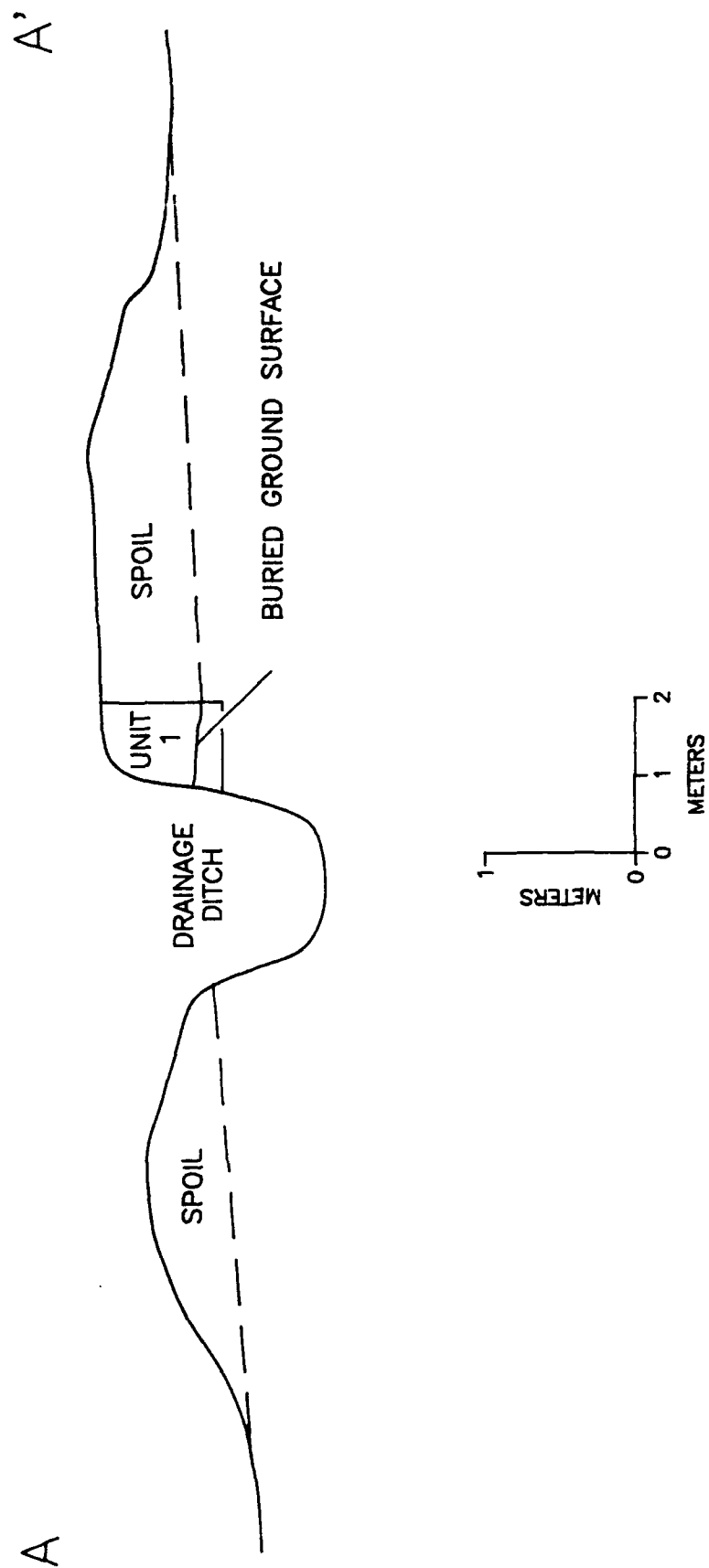


Figure 14. Bisection A - A', showing drainage ditch, adjacent spoil deposits, location of Unit 1, and the buried ground surface.

surface, as indicated in Unit 1. The pre-ditch ground surface west of the ditch and spoil, and outside of the project area, is approximately a half meter lower than the area to the east of the ditch and spoil. That area west of the ditch and spoil is disturbed extensively, as evidenced by piles of modern debris, and substantial undulation of the ground surface. The level of its original ground surface is unknown.

Summary

Field investigations within the project area identified one archeological site, Universal Match (16JE219). Based on cartographic data and archeological evidence, this site contains remains of an early twentieth century house and a contemporaneous train depot. Two excavation units placed in the vicinity of the house revealed that the house apparently burned prior to the mid-twentieth century. One small posthole was recorded in Unit 1, indicating that some in situ features have survived. However, the site has been damaged extensively by modern disturbances, including the excavation of a drainage ditch; deposition of the associated spoil; construction of a buried pipeline; the deposition of an extensive mixed earth, concrete, and debris pile; and, discard of other piles of modern debris. Artifacts recovered from the site are discussed in Chapter VIII.

CHAPTER VIII

LABORATORY ANALYSIS

Introduction

Surface collection, shovel testing, and unit excavation at Universal Match (16JE219) produced 484 historic artifacts, 9 animal bones, 1 coal slag fragment, and 1 mud dauber wasp (*Sceliphron caementarium*) nest part. Recovered materials were washed and sorted by material category, cataloged, and encoded into a computerized site catalog to allow for further manipulation of the data.

The computerized site catalog was organized by category, functional group, type, and subtype. The first level, category, represented the artifact material type, and was based on the format defined by the Louisiana Division of Archaeology. The second level, functional group, was based on classifications established by South (1977). The third and fourth levels, type and subtype, were defined by diagnostic attributes.

The following discussion describes materials collected during surface collection, shovel testing, and excavation of the two units placed within Site 16JE219. Chronological data pertaining to the identification of various diagnostic historic artifact attributes are presented in Table 2. Attribute data also was recorded for partial bricks, including width, thickness, Munsell color designations, Mohs test hardness values, presence or absence of glaze or mortar, and brick brands. Additional information pertaining to brick form and function was obtained from Gurcke (1987).

Surface Collection

A total of 22 historic artifacts were recovered from the drainage ditch and associated spoil in the site area, and from Transects 1 and 2 (Table 3). Artifacts included 3 porcellaneous ware fragments (Figure 15), 4 whiteware sherds, including plain, transfer-printed, and molded examples, and 1 unidentified tin-glazed earthenware fragment (Figure 15). One of the 3 porcellaneous fragments was a bowl/cup base, stamped with the word "JAPAN." Collected glass included 2 tooled bottle lips (Figure 16), 4 machine-made glass fragments (Figures 16 and 17), 1 whole machine-made soda bottle, 1 blown-in-mold bottle lip, 2 unidentified bottle glass fragments, and 1 embossed milk glass lid liner fragment (Figure 17). Three of the 4 machine-made glass fragments were embossed; however, only 2 of the 3 embossments were identifiable, i.e., those displayed on the flask base and the panel bottle base (Table 3). The flask base was embossed with the letter "O" surrounding the letter "I," all superimposed by a diamond (Figure 17). This embossment dates from 1929 and was used by Owens-Illinois, Toledo, Ohio (Peterson 1985). The panel bottle base displayed the letter "O" within a square, a mark used from 1919 by the Owens Bottle Co., Toledo, Ohio (Peterson 1985). The complete machine-made aqua soda bottle was embossed on both sides, as well as on the base. One side read "SPARKLING/GRAPICO/NATURALLY GOOD;" the other side was embossed with "THE DRINK OF THE NATION/6 1/2 FLUID OZS." Around the bottom of the bottle was embossed "NEW ORLEANS, LA. PROPERTY ONLY OF J. GROSSMAN'S SONS." The bottle base read "DESIGN/PAT. APPL'D/FOR," and the bottle neck was decorated with embossed grapes. The single milk glass lid liner fragment was embossed "...A...;" in the center was the base of an unlettered Hero Cross (Toulouse 1977) (Figure 17). This cross was developed in 1882 by Hero Glass Works (1856 - 1884). In 1884, the company changed its name to Hero Fruit Jar Company (1884 - 1909), and the cross was then lettered "H F J and Co" in its "wings" (Toulouse 1977). The unlettered Hero Cross dates from the 1882 to 1884 line of Hero Glass Works fruit jars

Table 2. Chronology of Ceramic Types, Glass Types, and Nails from Site 16JE219, Universal Match.

MATERIAL TYPE	USE POPULARITY DATE RANGE	SOURCE
CERAMIC WARE AND DECORATION		
Porcelain		
Button	post 1840	Hinks 1988
Porcellaneous ware	post 1880	Worthy 1982
Stoneware		
Albany slipped	ca. 1805 - 1900	Webster 1971
Whiteware		
Plain	1820 - 1900 +	South 1977
Sponged	ca. 1850s - 1920s	G. Miller, personal communication 1988
Transfer-printed	post 1820	G. Miller, personal communication 1989
Ironstone		
White, undecorated	post 1845	G. Miller, personal communication 1989
DIAGNOSTIC GLASS ATTRIBUTES		
Lip, tooled	1820s - 1920s	Jones and Sullivan 1985
Turn-paste mold	1870s - 1920s	Jones and Sullivan 1985
Machine-made	post 1920	Jones and Sullivan 1985
Amethyst color	ca. 1875 - 1920	Jones and Sullivan 1985
NAILS		
Wire	post 1890	Nelson 1968

Table 3. Material Recovered during Surface Collection and Shovel Testing at Site 16JE219, Universal Match.

MATERIAL TYPE	SURFACE COLLECTION	SHOVEL TESTS
CERAMIC MATERIALS		
Porcelain		
Porcellaneous ware	3	
Whiteware		
Plain	1	1
Transfer-printed	2	
Molded	1	
Tin-Glazed Earthenware		
Unidentified	1	
Redware		
Unglazed tile		1
CONSTRUCTION MATERIALS		
Partial firebrick	3	
Brick fragment		1
GLASS		
Tooled Bottle Lip		
Aqua	1	
Colorless	1	
Machine-made Bottle		
Aqua panel bottle base	1	
Colorless flask base	1	
Colorless base, embossed	1	
Colorless lip	1	
Whole aqua soda bottle	1	
Blown-in-Mold		
Amber bottle base fragment		1
Colorless bottle lip	1	
Colorless, embossed		1

Table 3, continued

MATERIAL TYPE	SURFACE COLLECTION	SHOVEL TESTS
Light green, embossed		1
Milk Glass		
Lid liner fragment	1	
Unidentified Bottle Glass		
Amber		1
Colorless	2	1
METAL		
Railroad spike		1
Wire nail		5
Unidentifiable nail fragment		5
Cast iron fragment		1
Unidentified iron object		1
TOTAL	22	21

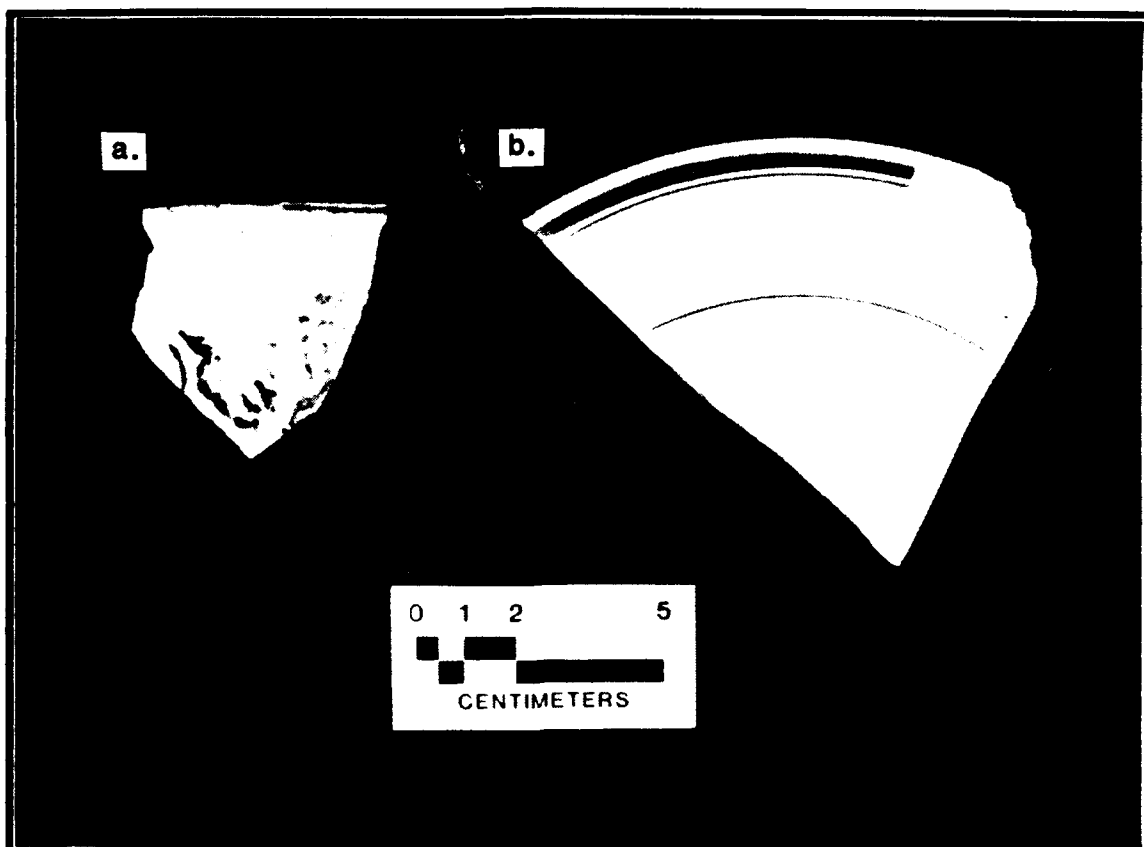


Figure 15. Selected artifacts recovered from 16JE219 Surface Collection from eroded trench bank, near Transect 2: (a) unidentified tin-glazed earthenware rimsherd; (b) green banded porcellaneous ware rimsherd.

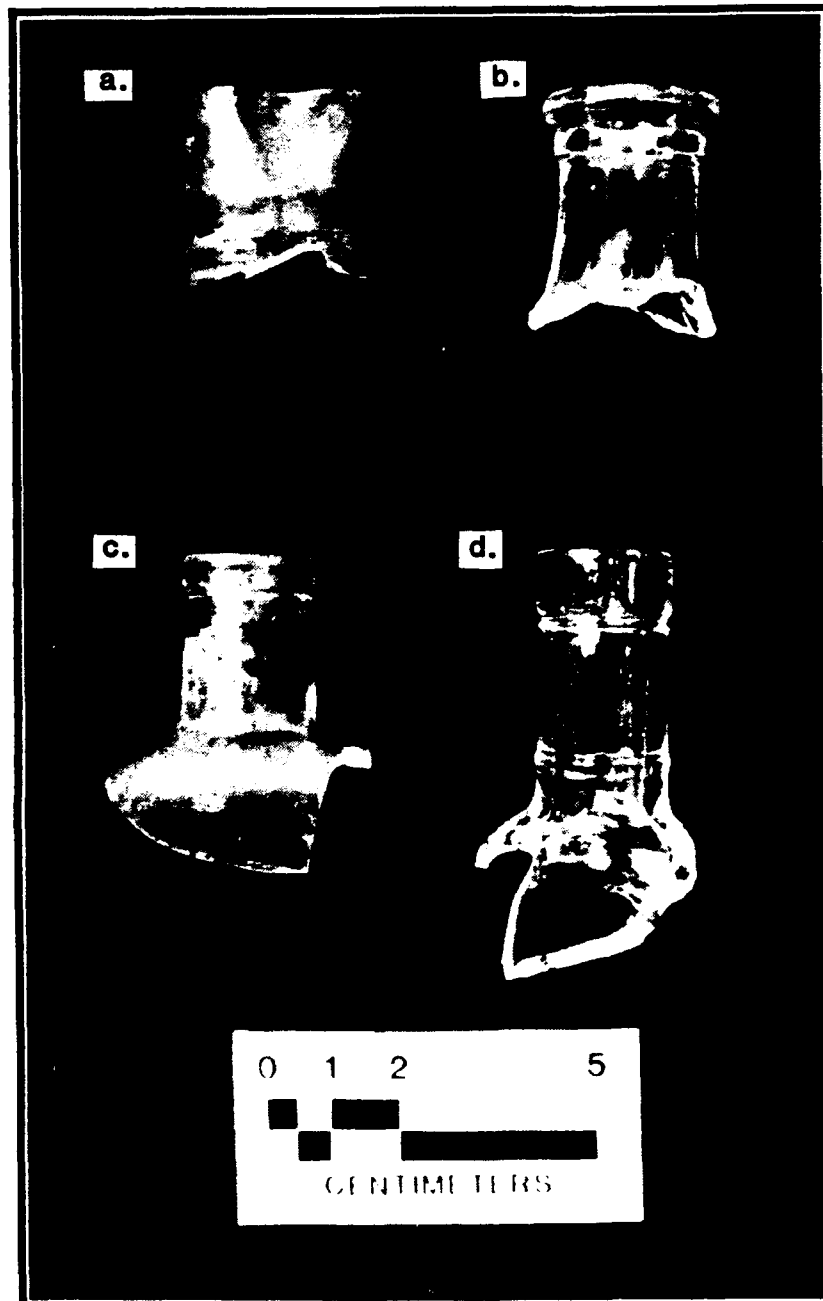


Figure 16. Selected glass artifacts recovered from 16JE219: (a) amethyst-colored tooled whiskey bottle lip, partially melted (Unit 1, Stratum II, Level 1, 74 - 82 cmbd); (b) colorless tooled bottle lip (Surface Collection from eroded trench bank, near Transect 2); (c) aqua tooled bottle lip (Surface Collection from eroded trench bank, near Transect 2); (d) colorless machine-made bottle lip, possibly from a flask (Surface Collection from eroded trench bank, near Transect 2).

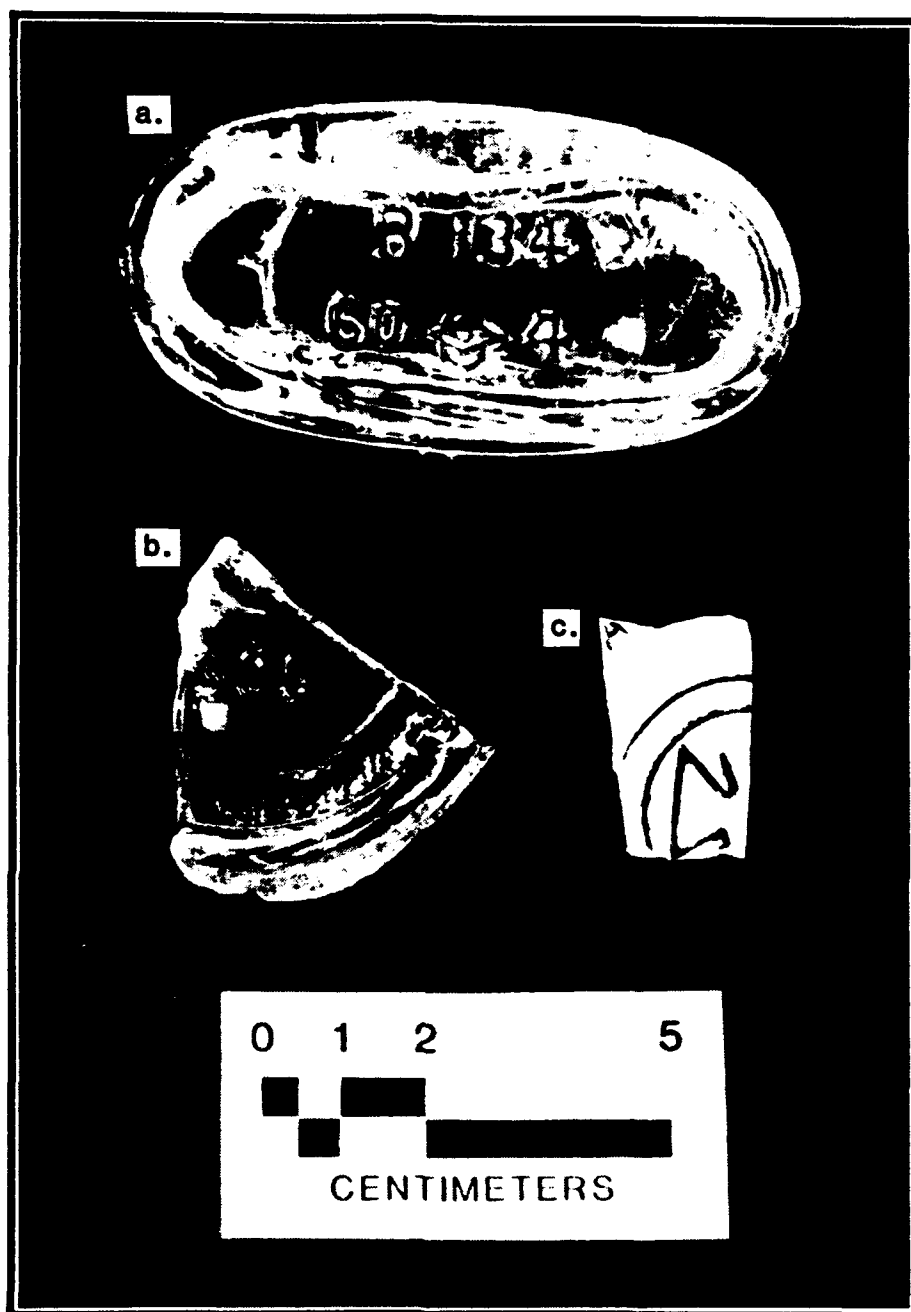


Figure 17. Selected glass artifacts recovered from Surface Collection along eroded trench bank, near Transect 2: (a) colorless machine-made flask bottle base embossed "R 134/60...4," with an Owens-Illinois embossment between the numbers "60" and "4;" (b) colorless machine-made bottle base embossed "...306;" (c) milk glass lid liner fragment embossed "...A...." and displaying the base of an unlettered Hero Cross.

(Toulouse 1977); however, it is unclear as to whether this date applies to lid liners, which normally postdate 1869 (Jones and Sullivan 1985).

Also surface collected were 3 partial firebricks, displaying manufacturer brands. The first brick measured 10.5 x 6.2 cm; it was reddish brown (2.5YR 5/4), displayed mortar, and had a Mohs test hardness value of 4.5. Branded on the brick was "EVEN[S - HOWARD]/ST-LO[UIS]," a mark used from 1857 to 1930, by Evens & Howard Fire Brick Co., MO (Gurcke 1987). The second brick also was manufactured by Evens & Howard Fire Brick Co. The brick was pale brown (10YR 6/3), had a Mohs test hardness value of 5, and measured 11.0 x 6.0 cm; remnants of mortar were attached to it. Stamped on the second brick was the brand "...S - HOWARD/[ST]-LOUIS." The last firebrick collected measured 11.0 x 6.2 cm; it had a Mohs test hardness value of 3, and was white (10YR 8/2) in color. Stamped on the brick was "L F B WKS/XXX," a mark used by Louisville Fire Brick Works Inc., KY; it dated from 1935 (Gurcke 1987).

In addition to the various diagnostic embossments and brick brands, several other surface collected artifacts appear diagnostic. Porcellaneous ware postdates 1880, plain whiteware dates from 1820 to 1900+, while transfer-printed whiteware postdates 1820. Tooled bottle lips date from the 1820s to the 1920s, and machine-made glass dates from ca. 1903, but achieved popularity after 1920 (Jones and Sullivan 1985). In general, the surface collected artifacts date from the first third of the twentieth century. However, modern debris was observed throughout the site area (Chapter VII).

Shovel Testing

Shovel testing within the site area produced 21 historic artifacts (Table 3). Artifacts included 1 plain whiteware sherd (1820 - 1900+), 1 unglazed redware tile fragment, 1 firebrick fragment, 3 blown-in-mold glass fragments, and 2 unidentified glass bottle sherds. Five wire nails (post 1890), 5 unidentifiable nail fragments, 1 railroad spike, 1 cast iron fragment, and 1 fragment from an unidentified iron object also were collected. The firebrick fragment was too incomplete to measure; however, the fragment had a Mohs hardness value of 3, was white (10YR 8/2), and was stamped "...ME...." Two of the three blown-in-mold glass fragments displayed unidentified embossments. However, the light green example probably originated from a soda bottle, and was embossed "...N/[BOTT]LING CO" (Table 3). A railroad spike was recovered in the vicinity of the former train depot. Although few diagnostic artifacts were recovered during shovel testing, the shovel test artifact assemblage is not incompatible with an early twentieth century date.

Unit 1

Unit 1 was placed at the edge of a drainage ditch, within the area of the 1921 house (Chapter VII). A total of 347 historic artifacts, 7 animal bones, and 1 mud dauber wasp nest fragment were recovered from 3 Strata (Table 4). Stratum I produced 52 historic artifacts, including 16 plain whiteware sherds (1820 - 1900+), 1 molded whiteware fragment, 1 door knob fragment, and a fragment from a caster wheel. Both the door knob fragment and the caster wheel were made of porcellaneous ware. A single unidentifiable nail fragment also was collected; the remaining 32 artifacts were glass fragments. Glass artifacts included 1 turn-paste mold (1870s - 1920s) base, 2 machine-made (post 1920) glass fragments, 8 blown-in-mold sherds, 5 table glassware sherds, 2 pieces of melted glass, 2 window glass fragments, 1 possible milk glass figurine fragment, and 11 unidentified bottle glass sherds. Two of the 8 blown-in-mold fragments were embossed; one was from an aqua canning jar fragment, embossed "[M]ASO[N]," while the other example was a light green bottle base fragment embossed with "[N].O." The initials "N.O." no doubt stand for "New Orleans." Also observed within the collection were examples of both amethyst-colored (ca. 1875 - 1920) table glassware and unidentified bottle glass (Table 4). Stratum I artifacts generally date from the early twentieth century. However, as noted previously, Stratum I was disturbed, consisting of mixed deposits including the modern spoil deposits that aligned the drainage ditch (Chapter VII).

Table 4. Material Recovered from Unit 1, Site 16JE219, Universal Match.

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III
CERAMIC MATERIALS			
Porcelain			
Undecorated, hard		4	
Transfer-printed, hard			1
Unidentified overglaze decoration, hard		1	
Porcellaneous ware door knob fragment	1		
Porcellaneous ware caster wheel fragment	1		
Porcelain button			1
Whiteware			
Plain	16	29	1
Embossed patterns		1	
Sponged		1	
Transfer-printed		7	1
Molded	1	3	1
Ironstone			
White, undecorated		2	
Unidentified Ceramic Type			
Burned white earthenware fragment		1	
Unidentified spherical ceramic object		1	
CONSTRUCTION MATERIALS			
Concrete fragment		1	
Plaster fragment with exterior whitewash		1	
FAUNA NON-HUMAN			
Large mammal, sawn		4	
Mammal rib bone fragment		1	
Unidentified bone fragment		2	
STONE			
Whetstone		1	

Table 4, continued

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III
GLASS			
Tooled Bottle Lip			
Amethyst-colored whiskey bottle lip fragment		1	
Turn-Past Mold			
Light olive	1		
Machine-made Bottle			
Amber base	1		
Colorless mug base		1	
Colorless base, embossed		1	
Amber lip	1		
Blown-in-Mold			
Amber	1	1	1
Amethyst-colored		4	
Amethyst-colored whiskey bottle fragment, embossed		1	
Aqua	1	5	1
Aqua, canning jar fragment, embossed	1		
Aqua, canning jar fragment, melted		1	
Aqua, 1 gallon vessel base		1	
Colorless	2	8	
Colorless, embossed			1
Colorless, panel bottle, extract	1		
Green	1		
Dark green		1	
Light green		1	
Light green, embossed	1	2	
Light green, frosted		1	
Light green melted Coca-Cola bottle fragment		1	
Table Glassware			
Amethyst-colored	1		

Table 4, continued

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III
Amethyst-colored, tumbler fragment	1	2	
Amethyst-colored, tumbler/mug		1	
Aqua, frosted		1	
Colorless, tumbler fragment	1	3	
Colorless, frosted, notched design		1	
Colorless, frosted		1	
Pressed, amethyst-colored starburst design		1	
Pressed, amethyst-colored, notched/cross-hatched design		2	
Pressed, amethyst-colored starburst with cross-hatched design	1		
Pressed, colorless notched design		2	
Pressed, colorless, starburst and star design	1	6	
Melted Glass			
Amber		2	
Amethyst-colored		1	3
Aqua	1	7	
Blue and colorless		1	
Colorless	1	24	5
Dark green		1	
Light green		4	5
Milk glass		1	
Lamp Glass			
Colorless		3	2
Milk Glass Objects			
Button with metal shank, burned		1	
Button		1	
Lid liner fragment, burned		1	
Lid liner fragment			1
Figurine fragment	1		

Table 4, continued

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III
Pharmaceutical Glass			
Graduated, embossed, colorless bottle fragment		1	
Window Glass	2	13	1
Unidentified Bottle Glass			
Amber		1	3
Amber and colorless			1
Amethyst-colored	2	10	
Aqua	5	7	
Colorless	2	7	
Green		1	
Dark green		1	
Light green	2	2	
Olive		2	
METAL			
Cable clamp		1	
Iron eye		1	
Lead weight		1	
Railroad spike		1	
Screw		1	
Sheet iron fragment		9	
Wire nail		38	15
Unidentifiable nail fragment	1	2	
Unidentified iron object		1	
OTHER			
Mud dauber (<i>Sceliphron caementarium</i>) wasp nest part		1	
Rubber gasket		1	
TOTAL	52	259	44

Stratum II consisted of the original ground surface (Chapter VII). A total of 251 historic artifacts, as well as 7 animal bones, and 1 burned mud dauber wasp (*Sceliphron caementarium*) nest fragment, were recovered from Stratum II (Table 4). Ceramic artifacts included examples of plain (n=29), molded (n=3), transfer-printed (n=7), sponged (n=1), and embossed pattern rim designed (n=1) whiteware sherds, 5 porcelain sherds, 2 white, undecorated ironstone fragments, 1 burned earthenware sherd, and 1 unidentified spherical ceramic object; the latter possibly may be related to an electric generator. Recovered construction materials included fragments of concrete, and plaster with exterior whitewash. A single whetstone was collected (Figure 18); in addition, 1 rubber gasket and several metal artifacts, including 38 wire nails, 9 sheet iron fragments, 2 unidentifiable nail fragments, 1 cable clamp, 1 iron eye, 1 lead weight (Figure 18), 1 railroad spike, 1 screw, and 1 unidentified iron object were recovered. The 7 animal bones recovered included 4 sawn large mammal bones, 1 mammal rib fragment, and 2 unidentified mammal fragments. The single recovered mud dauber wasp nest fragment displayed evidence of being attached to part of a wooden structure. The remaining materials collected from Stratum II were glass (n=142).

The glass artifacts included 1 tooled amethyst-colored whiskey bottle lip (Figure 16), 2 machine-made glass fragments, 2 milk glass buttons (Figure 18), 1 melted milk glass lid liner fragment, 1 graduated, embossed pharmaceutical bottle fragment, 27 blown-in-mold sherds, 20 pieces of table glassware (Figure 19), 13 window glass fragments, 3 pieces of lamp glass, 41 melted glass fragments, and 31 unidentified bottle glass fragments. Glass artifacts with unidentified embossments included 1 piece of machine-made glass, marked with the letter "D" within a square shape; 1 amethyst-colored blown-in-mold whiskey bottle fragment embossed "...TRAD[E].../...REGIS[TERED];" and, two light green blown-in-mold fragments with illegible initials. The single graduated pharmaceutical glass bottle fragment also was embossed, and read "...[F]LUID CO/[CHI]CAGO."

Diagnostic artifacts recovered from Stratum II include plain (1820 - 1900+), sponged (ca. 1850s - 1920s), and transfer-printed (post 1820) whiteware, undecorated, white ironstone (post 1845), tooled glass bottle lips (1820s - 1920s), and machine-made glass (post 1920). Amethyst-colored glass was recorded in various glass categories (Table 4), and dates from ca. 1875 to 1920. Milk glass lid liners postdate 1869 (Jones and Sullivan 1985). The embossed pattern observed on one of the whiteware sherds was not of the shell-edged variety, but most likely dates from the late nineteenth and early twentieth centuries. Diagnostic metal artifacts included wire nails that postdate 1890. The artifact assemblage recovered from Stratum II generally dates from the early twentieth century, and is consistent with a residential structure, as is the recovery of the mud dauber wasp nest part, which generally are found in residential structures. The numerous melted glass fragments (n=41), as well as other melted glass and ceramic artifacts (i.e., blown-in-mold glass fragments, 1 button, 1 lid liner, and 1 white earthenware sherd), and the burned mud dauber wasp nest part collected from this stratum, suggest that the structure was destroyed by fire (Chapter VII).

Artifacts recovered from Stratum III included a total of 44 historic artifacts; 15 of these were wire nails. One transfer-printed porcelain sherd, 1 porcelain button (post 1840), 1 sherd each of plain, transfer-printed, and molded whiteware, 3 blown-in-mold glass sherds, 13 melted glass fragments, 2 lamp glass sherds, 1 milk glass lid liner fragment, 1 piece of window glass, and 4 unidentified bottle glass fragments also were collected. An unidentified embossment, the letter "B," was observed on 1 of the 3 blown-in-mold glass fragments. The artifact assemblage recovered from Stratum III also is consistent with an early twentieth century residential structure. Several pieces of melted glass (n=13) also were recovered from Stratum III.

Unit 2

Unit 2 was excavated in the eastern part of the project area, and like Unit 1, within the area of the 1921 residential structure (Chapter VII). A total of 94 historic artifacts, 2 animal bones, and a single piece of coal slag were recovered from four strata (Table 5). Stratum I produced 1 whiteware (1820 - 1900+)

Table 5. Material Recovered from Unit 2, Site 16JE219, Universal Match.

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III	STRATUM IV
CERAMIC MATERIALS				
Porcelain				
Undecorated, hard		2		
Stoneware				
<i>Domestic Brown</i>				
Salt-glazed and Albany slipped on buff			1	
<i>Domestic Gray</i>				
Salt-glazed and Albany slipped			1	
Whiteware				
Plain	1	10	1	1
Transfer-printed		1		
Molded		1		
Ironstone				
Unidentified cobalt blue decoration		1		
Buff-Bodied Earthenware				
Bristol-glazed and Albany slipped		1		
FAUNA NON-HUMAN				
Cow (<i>Bos taurus</i>) bone, sawn			1	
Unidentified bone fragment		1		
STONE				
Coal slag		1		
GLASS				
Blown-in-Mold				
Milk glass		1		
Milk glass, molded		1		
Window Glass	1			

Table 5, continued

MATERIAL TYPE	STRATUM I	STRATUM II	STRATUM III	STRATUM IV
Unidentified Bottle Glass				
Amethyst-colored	1	2	1	
Aqua		1		
Colorless		3		
Dark green		2		
Milk glass		2		
METAL				
1901 penny, eroded			1	
Railroad spike			1	
Sheet iron fragment		5	5	
Slag		1		
Spike	1			
Wire nail		23	13	
Washer		1		
Unidentifiable nail fragment		1	1	
Unidentified iron object		3		
OTHER				
Unidentified plastic object		2		
TOTAL	4	66	26	1

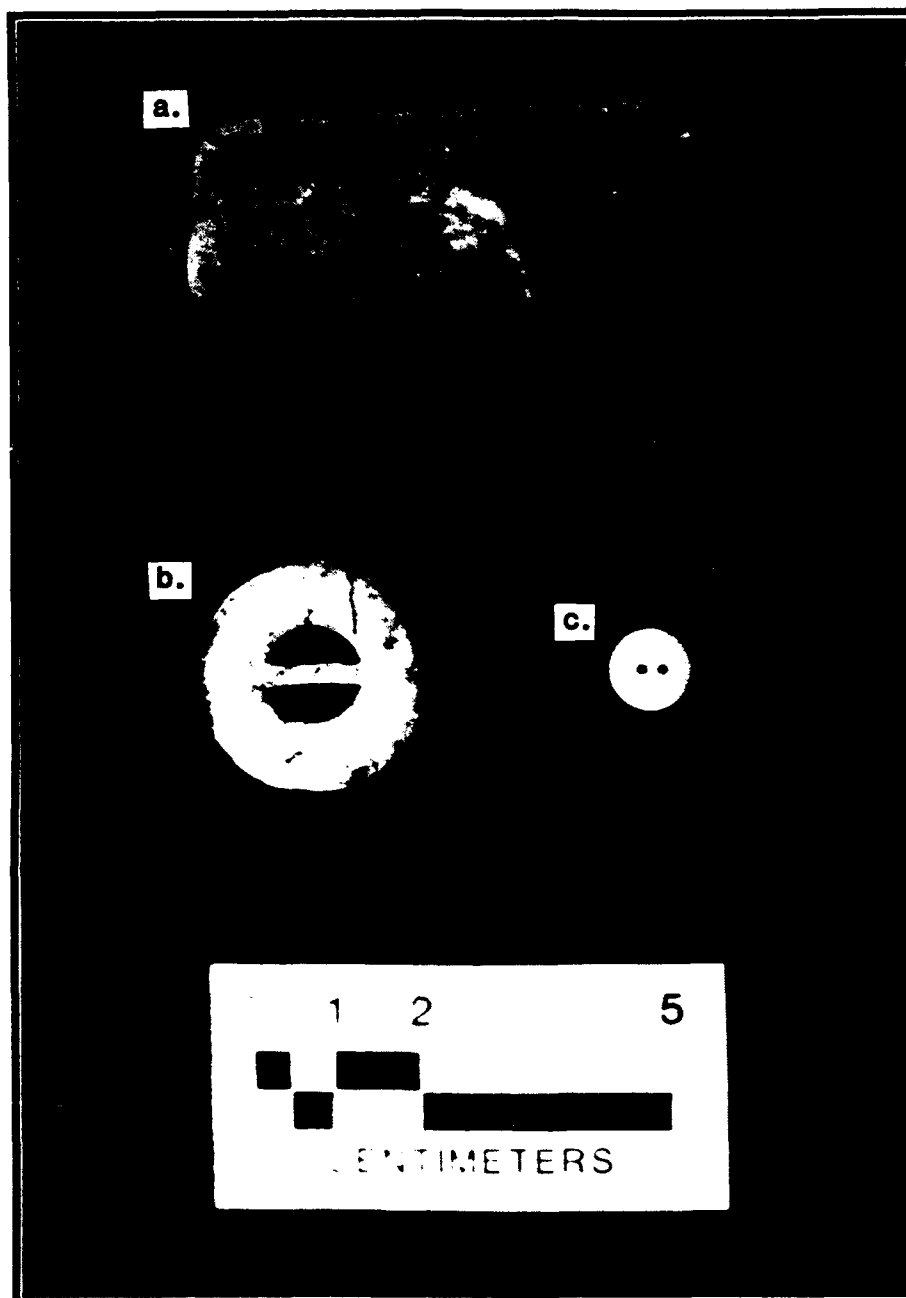


Figure 18. Selected artifacts recovered from 16JE219, Unit 1, Stratum II, Level 1, 74 - 82 cmbd:
(a) whetstone; (b) lead weight; (c) milk glass button.



Figure 19. Colorless pressed table glassware recovered from Unit 1, Stratum II, Level 1, 74 - 82 cmbd.

sherd, 1 piece of window glass, 1 piece of amethyst-colored (ca. 1875 - 1920) unidentified bottle glass, and 1 spike. Artifacts recovered from Stratum II included 2 porcelain sherds, 12 whiteware sherds (10 plain, 1 transfer-printed, and 1 molded), 1 ironstone sherd with an unidentified decoration, and 1 buff-bodied earthenware sherd with an Albany slip (ca. 1805 - 1900) and a Bristol glaze. Other artifacts included 2 blown-in-mold glass fragments, 10 unidentified glass fragments, 23 wire nails, 1 washer, 1 piece of slag, 5 sheet iron fragments, 1 unidentifiable nail fragment, 3 unidentified iron objects, and 2 pieces of plastic. Also collected were 1 unidentified animal bone, and 1 coal slag fragment. Strata I and II artifacts both generally date from the early twentieth century; modern plastic also was collected from Stratum II.

Stratum III produced 25 historic artifacts and 1 sawn cow (*Bos taurus*) bone. Artifacts included 2 Albany slipped stoneware sherds, 1 plain whiteware sherd, 1 amethyst-colored unidentified bottle glass fragment, 13 wire nails, 5 sheet iron fragments, 1 railroad spike, 1 unidentified nail fragment, and 1 eroded, 1901 Indian Head penny. Stratum IV produced only 1 plain, whiteware sherd.

The artifact assemblage recovered from Unit 2 generally dates from the early twentieth century, and is compatible with the remains of a residential structure. The railroad spikes from both Unit 1 and Unit 2 probably were associated with the train depot.

Summary

The artifacts recovered during surface collection, shovel testing, and excavation of 2 archeological test units produced artifact assemblages that generally date from the early twentieth century. These assemblages are spatially and temporally associated with a 1921 residential structure and a train depot. However, the site area has been disturbed extensively by modern construction and excavation activity (i.e., a drainage ditch, a buried pipeline, as well as piles of spoil and modern debris), and the integrity of the site has been compromised.

CHAPTER IX

SUMMARY AND RECOMMENDATIONS

Archeological testing within the proposed East Jefferson Levee Gap Closure project area resulted in the identification and testing of one early twentieth century archeological site, the Universal Match site (16JE219). This site consisted of the scattered remains of a domestic residence and a train depot, both of which are depicted on the 1921 MRC Chart 75 (Figure 8). Since the area of the train depot was disturbed extensively, site testing concentrated around the remains of the domestic residence.

Two excavation units were placed within the Universal Match site. Unit 1 demonstrated that most of the site was confined to the topsoil deposits; one apparent posthole was recorded during unit excavation. Based on the abundance of melted glass recovered from the unit, it is probable that the historic residence burned. Cultural deposits observed in Unit 2 dated from the twentieth century; Strata I and II appear to date from the second half of this century. Extensive disturbance was observed throughout the site. This included the ditch, an apparent buried pipeline, and the disposal of considerable quantities of spoil and modern debris. The site possessed little archeological integrity.

The site contains limited research potential. The early twentieth century train depot area lies within a portion of the site that was damaged considerably by construction and destruction of a large structure associated with the adjacent Universal Match Corporation factory. Few, if any, intact cultural deposits remain in that portion of the site. Early twentieth century domestic sites are common throughout the region, including many with extent structures and intact archeological deposits. Additional archeological investigation at the Universal Match Corporation (16JE219) site would not provide any additional data concerning early twentieth century occupation or folkways within the project area. Based on the low archeological integrity exhibited at the site, and on its limited research potential, the site does not possess the quality of significance, as defined by the National Register of Historic Places criteria (36 CFR 60.4). No additional investigation of the site is recommended.

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APPENDIX I
SCOPE OF SERVICES

SCOPE OF SERVICES

Cultural Resources Survey and Testing of the
East Jefferson Parish Levee Gap Closure,
Jefferson Parish, Louisiana

1. Introduction. The archeological survey and site testing to be performed under this delivery order are in support of proposed improvements to the East Jefferson Parish Levee System, a feature of the Lake Pontchartrain and Vicinity Hurricane Protection project. The improvements consist of floodwall construction from the lower end of the Jefferson Parish Return Levee (adjacent to U.S. 61) to the Mississippi River Levee.

A comprehensive cultural resources survey of the Lake Pontchartrain and Vicinity project was conducted in 1982-83 by New World Research, Inc. under contract to this office. The present study area was apparently included in this survey and no cultural resources were located. However, the precise location and limits of the project right-of-way were not known at that time. A site visit in July 1991 by Michael Stout, New Orleans District staff archeologist, revealed the location of a previously unknown historic archeological site within or in very close proximity to the proposed right-of-way.

2. Study Area. The study area is shown on the attached maps and described below:

a rectangular corridor, 50 feet in width and 1,000 feet in length, located on the downriver edge of the Universal Match property in Section 38, Township 12S, Range 9E. The area is located just inside Jefferson Parish and is defined on the south edge by LA Highway 48 (River Road) and on the north by the Illinois Central Gulf Railroad.

3. Background Information. The study area is located on the downriver property boundary of the Universal Match industrial complex. It is a wooded property edge and presently contains no structures. A recently excavated trench, however, indicates that some cultural activity occurred in this area in the past. The trench is approximately 2-3 feet deep and 5 feet wide and generally parallels the property line.

At the time of the site visit, the trench was relatively dry. Brick and shell were observed in the trench profile approximately 2 feet below the ground surface. Spoil from the trench is located on the downriver (or east) side of the trench. Within the spoil were numerous ceramic sherds and

glass fragments. Typical 19th century ceramics including annular whiteware and transfer printed pieces were located in the spoil deposits.

4. General Nature of the Work. The study will consist of brief historical research relative to the study area, intensive cultural resources survey and archeological testing, and data analysis and report preparation.

5. Study Requirements. The study will be conducted utilizing current professional standards and guidelines including, but not limited to:

- * the National Park Service's draft standards entitled, "How to Apply the National Register Criteria for Evaluation," dated June 1, 1982;
- * the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as published in the Federal Register on September 29, 1983;
- * Louisiana's Comprehensive Archeological Plan dated October 1, 1983; and
- * The Advisory Council on Historic Preservation's regulation 36 CFR Part 800 entitled, "Protection of Historic Properties."

The study will be conducted in three phases: Historical Research, Survey and Testing, and Data Analysis and Report Preparation.

A. Phase 1: Historical Research. The study will begin with brief research of available literature and records necessary to establish the historic setting and predict the nature of the historic resources in the project area. This background research will include a literature review, review of the and research of historic maps and records. Historical research will include title searches and review of other written, cartographic and aerial photography records sufficient to reconstruct the historic use of the study area.

B. Phase 2: Survey and Site Testing. Within two weeks of delivery order award, the Contractor shall initiate the fieldwork. Terrestrial survey as described below is the required procedure. The intensive pedestrian survey will utilize lane spacing of 10 meters and a shovel testing interval of 10 meters in an offset pattern. Shovel tests will be approximately 30x30 cm in the horizontal plane and approximately 25-50 cm deep, i.e. to sterile subsoil. The excavated soil will be screened through 1/4 inch wire mesh.

All sites located in the survey corridors will be mapped, photographed, and briefly tested using shovel, auger, and limited controlled surface collection to determine depth of deposit, site boundaries, stratigraphy, condition, and cultural association. In addition, the equivalent of one 1x2m test unit will be excavated in the known historic site to ascertain cultural affiliation and research potential. At a minimum, site maps will show site boundaries, locations of features and artifact scatters, locations of all subsurface testing units, and prominent natural and cultural features in the site area. All shovel/auger tests and excavation units will be immediately backfilled upon completion of archeological recordation.

For all sites discovered during the survey, the Contractor will file state site forms with the Louisiana State Archeologist and cite the resulting state-assigned site numbers in all draft and final reports. In addition, the Contractor will submit site update forms to the State Archeologist for all previously recorded sites. These forms will correct previously filed information where appropriate and summarize the results of the present investigation. All sites located within the project area will be recorded to scale on the appropriate 7.5 minute quadrangle and aerial mosaic project maps. The quadrangle maps will be utilized to illustrate the site forms. One copy of the aerial mosaic project maps, marked with the locations of all sites and historic structures in the project easement, and two unbound copies of each site and site update form will be submitted to the COR with the draft report.

C. Phase 3: Data Analyses and Report Preparation. All data will be analyzed using currently acceptable scientific methodology. The Contractor shall catalog all artifacts, samples, specimens, photographs, drawings, etc., utilizing the format currently employed by the Louisiana State Archeologist. The catalog system will include site and provenience designations.

All cultural resources located by the survey will be evaluated against the National Register criteria contained in Title 36 CFR Part 60.4 to assess the potential eligibility for inclusion in the National Register. The Contractor will classify each site as either eligible for inclusion in the National Register, potentially eligible, or not eligible. The Contractor shall fully support his recommendations regarding site significance. For those sites considered worthy of additional testing, the Contractor will recommend a specific testing plan. The Contractor shall also recommend appropriate mitigation measures for all sites classified as eligible.

The analyses will be fully documented. Methodologies and assumptions employed will be explained and justified.

Inferential statements and conclusions will be supported by statistics where possible. Additional requirements for the draft report are contained in Section 6 of this Scope of Services.

6. Reports:

a. Draft Reports (Phase 1-3). Six copies of the draft report integrating all phases of this investigation will be submitted to the COR for review and comment within 8 weeks after delivery order award. Along with the draft reports, the Contractor shall submit:

(1) One copy of the aerial mosaic project maps, marked with the locations of all sites and standing structures in the project easement;

(2) two unbound copies of each site, site update, and standing structure form;

(3) three copies of the National Register Registration Forms for each site recommended as eligible for inclusion in the National Register. This documentation will contain all of the data required by NPS National Register Bulletin 16: Guidelines for Completing National Register of Historic Places Forms.

The written report shall follow the format set forth in MIL-STD-847A with the following exceptions: (1) separate, soft, durable, wrap-around covers will be used instead of self covers; (2) page size shall be 8-1/2 x 11 inches with 1-inch margins; (3) the reference format of American Antiquity will be used. Spelling shall be in accordance with the U.S. Government Printing Office Style Manual dated January 1973.

b. Final Reports. The COR will provide all review comments to the Contractor within 8 weeks after receipt of the draft reports (16 weeks after work item award). Upon receipt of the review comments on the draft report, the Contractor shall incorporate or resolve all comments and submit one preliminary copy of the final report to the COR within 4 weeks (20 weeks after work item award). Upon approval of the preliminary final report by the COR (within 1 week after submittal), the Contractor will submit 30 copies and one reproducible master copy of the final report to the COR within 24 weeks after work item award. The Contractor will also provide computer disk(s) of the text of the final report in Microsoft Word or other approved format.

Included as an appendix to the Final Report will be a complete and accurate listing of cultural material and associated documentation recovered and/or generated. In order to preclude vandalism, the final report shall not contain specific locations of archeological sites. Site specific information, including one set of project maps accurately delineating site locations, site forms, black and white

photographs and maps, shall be included in an appendix separate from the main report.