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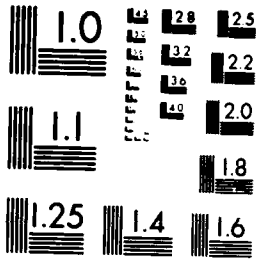
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of Engineers**
New Orleans District

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**ARCHEOLOGICAL MONITORING OF THE MONTEGUT
STREET TO INDEPENDENCE STREET FLOODWALL
PROJECT IN THE CITY OF NEW ORLEANS,
ORLEANS PARISH, LOUISIANA**

March 8, 1988

FINAL REPORT

R. Christopher Goodwin and Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

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

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Batture	Floodwall alignment	Louisa Street
Clouet Street	Gallier Street	Louisiana
Congress Street	History	Mississippi River
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No. 20 Abstract

This report presents the results of archeological monitoring of the Montegut Street to Independence Street floodwall alignment located on the left descending bank of the Mississippi River in the City of New Orleans. Work consisted of the monitoring of the general contractor's preconstruction trench within the floodwall right-of-way. A total of six archeological sites were designated along the alignment (Sites 16 OR 109 to 16 OR 114). These consisted primarily of late nineteenth century to early twentieth century artifact deposits; no structural remains were noted. The majority of the cultural material appears to derive from the area's use as a railroad corridor during the nineteenth century. None of the sites located are considered eligible for nomination to or inclusion on the National Register of Historic Places (36 CFR 60.4). No additional work is recommended.

No. 19 Key Words, continued

Montegut Street
 Natural Levee
 New Orleans
 Piety Street
 Port of New Orleans
 Riverfront
 Sites 16 OR 109-114
 Touro Alms House

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DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

February 19, 1988

Planning Division
Environmental Analysis Branch

To The Reader:

This study was funded by the U.S. Army Corps of Engineers, New Orleans District for compliance with stipulations contained in a Memorandum of Agreement concerning the Mississippi River floodwalls in the Port of New Orleans. The MOA was ratified by the Chairman, Advisory Council on Historic Preservation in 1982. Archeological monitoring provided the basis of compliance with Federal historic preservation laws.

The field monitoring was conducted in accordance with a previously developed monitoring plan. This plan identified potentially significant cultural resources anticipated in the impact area of the proposed construction.

The New Orleans District has reviewed and accepts this report. We concur with the findings and recommendations and compliment the Contractor for the timely performance of work requirements.

Caroline H. Albright 2/22/88
Caroline H. Albright
Technical Representative

Carroll H. Kleinhans 2/23/88
Carroll H. Kleinhans
Authorized Representative of
the Contracting Officer

Cletis R. Wagahoff 2/24/88
Cletis R. Wagahoff
Chief, Planning Division

ACKNOWLEDGMENTS

R. Christopher Goodwin & Associates, Inc., would like to thank Ms. Caroline Albright, Technical Representative, and Ms. Carroll H. Kleinhans, Contracting Officer's Authorized Representative, Cultural Resources Section, Environmental Analysis Branch, Planning Division, U.S. Army Corps of Engineers, New Orleans District, for their assistance and guidance throughout this project. We also would like to thank Mr. Gay Farou, Corps Inspector, New Orleans District, for his coordination and cooperation during field investigations. Finally, we would like to thank Ms. Jeanne Harris for her efforts during monitoring of the trench; Mr. John Turner for his assistance in the collection of map information; and, Mr. Hobert Creasy for his fine work in the construction and production of the maps and figures in this report.

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CHAPTER I

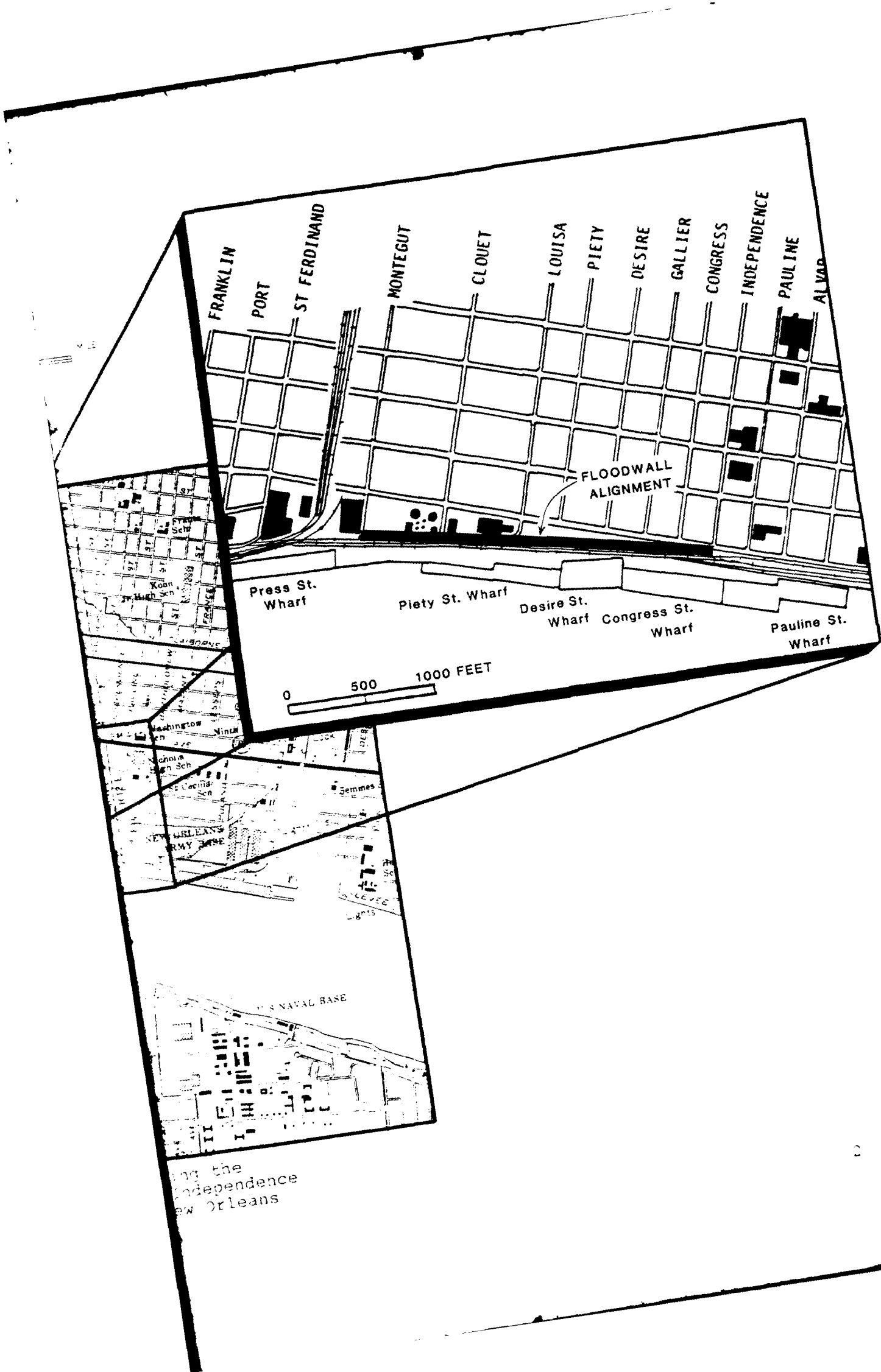
INTRODUCTION

Pursuant to Contract DACW29-85-D-0113, Delivery Order 08, R. Christopher Goodwin & Associates, Inc., conducted intensive archeological field monitoring and recordation of construction inspection trenches along the Montegut Street to Independence Street floodwall alignment (Figure 1). This alignment is located on the east (left descending) bank of the Mississippi River, parallel to the New Orleans Public Belt Railroad (NOPBR) in the City of New Orleans. The purposes of these investigations were to locate and to identify potentially significant cultural resources within the floodwall right-of-way. Monitoring was conducted from June, 1987, to July, 1987, along the entire project reach, with the exception of the four access gates. These gate areas were not excavated by the construction contractor during the course of the monitoring effort described in this report.

Description of the Project Area

The Montegut Street to Independence Street floodwall alignment is located between wall line station 00+00 at Montegut Street to wall line station 25+85.80 (station 547+50 B/L) at Independence Street. The total length of the alignment is 2585 feet or 783 meters. When completed, the floodwall will connect the Independence Street to Inner Harbor Navigation Canal floodwall with the Barracks Street to Montegut Street alignment. Excavation of these two rights-of-way was monitored previously (Goodwin et al. 1986).

The floodwall alignment is situated within the active riverine environmental zone. The riverbank adjacent to the right-of-way has been subjected historically to periodic episodes of deposition and erosion. The present alignment is located on the elevated levee (approximately 10 feet N.G.V.D.). With the exception of minor river bank erosion, this area of the batture and levee has remained relatively stable throughout the historic period (Reeves and Reeves 1983:208). At present, the area is used primarily as a railroad right-of-way. An access road to wharves located along the waterfront is present riverside of the railway line. Facilities of the Board of Commissioners of the Port of New Orleans are located at the Piety Street Wharf. The downriver segment of the floodwall alignment right-of-way is relatively open and grassed. The upriver segment is located between the levee road on the riverside and numerous warehouses and businesses on the cityside.



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Format of this Report

This report presents the results of archeological monitoring of the Montegut Street to Independence Street floodwall alignment. Chapter II presents an overview of the comprehensive project history. Chapter III briefly discusses the environmental setting of the project area, and presents a broad description of the historic setting of the area. This chapter also includes a block by block description of historic development within the project area. Chapter IV summarizes briefly the research design developed for the archeological monitoring of all of the floodwall alignments in the City of New Orleans. Field methods and the results of the archeological monitoring at the Montegut Street to Independence Street floodwall alignment are presented in Chapter V. Chapter VI includes a discussion of laboratory methods and presents the results of artifact analyses. Finally, Chapter VII, reviews conclusions and recommendations based on investigation of archeological remains within the Montegut Street to Independence Street floodwall alignment.

CHAPTER II

HISTORY OF THE PROJECT

Description of the Project

The present study is part of the overall project called Mississippi River Levee, Orleans Levee District, Item M-93.9-L to M-93.3-L, Montegut to Independence St. Floodwall, Orleans Parish, Louisiana. This project consists of the construction of a reinforced concrete floodwall with five swing gates and three roller gates, between Montegut Street and Independence Street in downtown New Orleans. The floodwall will connect two previously constructed alignments: Barracks Street to Montegut Street located at the upriver end, and Independence Street to the Inner Harbor Navigation Canal located at the downriver end. This section of the floodwall is part of a comprehensive floodwall protection system for the City of New Orleans begun in the 1970s by the U.S. Army Corps of Engineers, New Orleans District. When completed, the floodwall will be a major protective barrier against floods, and an adjunct to existing earthen protection levees.

The floodwall is designed to provide protection both above and below the ground surface. In addition to providing protection from high water flooding, the wall also will form a watertight barrier to prevent subsurface seepage. The floodwall will include gates at some railroad and street crossings.

The wall itself will consist of two structural elements: massive concrete monoliths, and metal sheetpiling. The monoliths are joined together to form the above-ground barrier; they rise 12.5 feet (4 meters) above the ground surface, and descend to as much as 6.25 feet (2 meters) below the ground surface. The sheetpiling represents the underground water barrier; it is composed of individual interlocking pilings sunk between 31 to 41.5 feet (9.6 to 12.5 meters) below the ground surface. The sheetpiling is embedded in the concrete monoliths at the top of the pilings. As a result, all of the floodwall alignments will have substantial subsurface impact on any extant cultural resources.

Archeological monitoring of the Montegut Street to Independence Street floodwall alignment was undertaken applying a research plan provided in Archeological Monitoring Plan for Four Floodwall Projects in the City of New Orleans, which was submitted to the New Orleans District by R. Christopher Goodwin & Associates, Inc. (Goodwin et al.

1985). This monitoring plan provided information on each segment of the floodwall alignment, including an historical overview of each segment scheduled for monitoring. A predictive analysis of cultural remains expected in each block of each segment reviewed historical activities and structures within each impact area. This analysis was used as a guide to the interpretation of features and artifacts recorded during monitoring.

The ongoing and comprehensive project of which this report represents one part constitutes the first large scale linear subsurface archeological investigation along the riverfront corridor of New Orleans. The only earlier investigation in the alignment under consideration here was a pedestrian survey conducted by J. Richard Shenkel along the Canal-Toulouse alignment in 1976 (Shenkel and Sternberg 1976). The Montegut Street to Independence Street floodwall alignment is the second archeological field project conducted as part of the larger comprehensive assessment. The first field study (Goodwin et al. 1985) included the monitoring of the Independence to Inner Harbor Navigation Canal alignment, the Barracks to Montegut alignment, and the upriver portion of the Canal to Toulouse phase II alignment. Archeological investigations are scheduled to be conducted at the Jackson Street to Thalia Street floodwall alignment during the fall of 1987.

CHAPTER III

THE NATURAL AND HISTORIC SETTING

The Natural Setting

The Montegut Street to Independence Street floodwall alignment is located on the east (left descending) bank of the Mississippi River. It is situated within the active riverine environmental zone in the modern delta. Natural levee deposits associated with the modern delta overlies former deposits of the St. Bernard delta complex. The alignment varies in distance from approximately 100 to 120 feet from the river, and lies on top of the natural levee. Adjacent to the meandering course of the river, the riverbank area has been subjected historically to periodic episodes of deposition (batture formation) and erosion.

The natural levees of the Mississippi River are typically wedge-shaped in cross-section (Saucier 1962). At New Orleans, the levee is approximately 1.5 miles wide, from river bank to backswamp. Natural levee deposits located along the Mississippi River in New Orleans range from approximately 8 to 12 feet thick, and they have an average elevation of about 12 feet (Dobney et al. 1987). The coarsest materials normally are encountered near the levee crest, where sediments consist of stiff silty clays interspersed with thin lenses of silt. Clay content increases toward the backswamp, as does the amount of organic material. Levee sediments tend to be well oxidized and to contain numerous iron and manganese nodules. Color is generally tan or light grey-brown. Mottling is generally a fine red, yellow, or black (Saucier 1962).

The batture within the present study area is not as wide as in the area upriver from the Vieux Carre. With the exception of minor riverbank erosion, the downriver stretch of the floodwall alignment right-of-way has remained stable throughout the historic period. During the nineteenth century, the city conducted a considerable amount of road and levee work in this area, although the lateral movement of roads and levees was slight (Reeves and Reeves 1983:208).

Much of the batture land around New Orleans was created by natural accretion during the historic period, leading to a long series of legal disputes over ownership and land use rights (Reeves and Reeves 1983:36). As new batture lands formed during the eighteenth and nineteenth centuries, property owners attempted to extend their claims to the batture area. The city, on the other hand, considered the batture to be public property. The principal dispute arose

over ownership of the land immediately above New Orleans known as Gravier Plantation (Faubourg St. Mary). Legal battles continued throughout most of the nineteenth century (Goodwin et al. 1985:25).

The Historic Setting

The riverfront areas impacted by floodwall construction were important to the historic development of the Port of New Orleans. The riverfront has dominated commerce in the city since the eighteenth century. The Mississippi River has remained the primary corridor for the transport of goods to and from the city; its dominant role in the local transportation network was not challenged seriously by road and railroad development until after the Civil War (Goodwin et al. 1986:18).

The economic importance of the riverfront area resulted in a mixed land use pattern. Industrial, commercial, and residential structures were located in proximity to each other along the river. This pattern can be explained in part by the predominantly pedestrian nature of transportation in New Orleans and its surrounding areas during the eighteenth and nineteenth centuries. The need to house workers near their workplaces encouraged the development of heterogeneous urban areas (Goodwin et al. 1985:19).

Colonial land grant practices limited the amount and direction of the early growth of the city; lands surrounding the original city were plantation properties for most of the eighteenth century. The lands on either side of the Vieux Carre were retained as commons, reserved primarily for defensive fortifications, until the end of the eighteenth century. Spanish patents then ceded common land to individual owners.

During the late eighteenth century, commercial population growth in the Ohio Valley frontier led the early American settlers to seek trade outlets through New Orleans; as a result, much of the city's early business involved riverborne and overseas commerce (Lewis 1976:33). Mercantile structures, such as warehouses, were located directly on the river. The residences of prominent citizens also were located on attractive riverfront property.

Artificial levees to protect against flooding were constructed as early as 1723. Boats were tied up at the levees, stimulating the development of docks and commercial buildings along the riverfront area (Lewis 1976:34). The land between the levee and the city itself, called the quay, was used primarily as a storage area for goods prior to their

transshipment.

Following the American acquisition of the Louisiana Territory in 1803, the expansion and economic development of the New Orleans area was rapid. As the major port of the Mississippi Valley, New Orleans became the primary distribution center for the region between the Appalachians and the Rockies. The advent of the steamship further accelerated riverine commerce during the 1820s and 1830s; New Orleans was the major recipient of this increased river traffic (Goodwin et al. 1985:19). The American period was characterized by an influx of immigrants and American merchants.

Population growth during the first half of the nineteenth century, coupled with the rapid economic development of New Orleans, resulted in the subdivision of plantation lands for the establishment of commercial and residential neighborhoods, or faubourgs. Two major groups were responsible for the dramatic population rise, although immigrants representing varied origins also came to New Orleans during this period. The major groups that influenced the demographic composition of the population were immigrants from St. Domingue (Haiti), and American merchants.

One of the most notable Americans to immigrate to New Orleans during this period was Judah Touro. Touro was among the most prominent philanthropists in America prior to the War Between the States. He learned the mercantile trade from his uncle, Moses Michael Hayes, a prominent Boston merchant. Touro moved to New Orleans in 1802, and found himself in an excellent position to profit from the growth in commerce between the Northeast and New Orleans. At his death in 1854, Touro bequeathed large sums of money to charities. His largest donation, \$80,000.00, was for the founding of an alms house for the poor of New Orleans. In addition, Touro's friend, R.D. Shepard, donated a double square of land for the construction of the Touro Alms House (Goodwin et al. 1985:23). This property was located within the present study area between Piety and Desire Streets. The Touro Alms House is discussed in more detail below.

The subdivision of the properties located downriver from the Vieux Carre occurred at a slower rate and at later dates than those upriver. Faubourg Marigny was the only downriver suburb laid out by 1813. The present study area is located in a number of Faubourgs. In 1815, land owned by Joseph Montegut was subdivided to form Faubourg Montegut; it was located between the Cotton Press and a line midway between Montegut and Clouet. Faubourg Clouet, subdivided from land owned by Jonathas Darby, included the blocks between Clouet, Louisa, and Piety. The blocks between Desire, Congress,

Gallier, and Independence Streets formed part of the Faubourg Montreuil (Wilson 1974:20).

As noted above, transportation technology during much of the nineteenth century necessitated the integration of residential and commercial structures. As internal transportation improved, however, the need for housing near the workplace diminished. As a result, commercial activities grew to dominate the riverfront area. Water transportation remained the most efficient way of shipping bulk cargo. This led to the construction of docks, wharves, and warehouses along the New Orleans riverfront. During the early nineteenth century, the levees were strengthened to facilitate commerce. Levee revetments, first constructed along a portion of the levee in front of the Vieux Carre, became increasingly sophisticated between 1812 and 1820. Docks were extended well into the river to aid the mooring and unloading of ships. Five basic types of wharves were constructed during the first third of the nineteenth century: the narrow finger wharf, which became wider and more standardized over time; the steamboat wharf, with a central inclined ramp; the nuisance wharf, for the disposal of rubbish; the sloping wharf; and, the T-shaped wharf (Reeves and Reeves 1983:102).

These numerous docks and wharves were necessary to accommodate steam-powered vessels. By 1820, the number of steamships arriving at the Port of New Orleans required additional space for the loading and unloading of their cargoes. By the mid-1830s, New Orleans had become the major export city in the United States, and one of the world's leading ports. The growth of the steamship industry, as well as the movement of goods associated with westward migration, accelerated the economic development of New Orleans.

During the nineteenth century, the primary agricultural commodities shipped from New Orleans were cotton and sugar. The demand for these staples in the Northeast and in Europe considerably strengthened the economy of New Orleans, and it resulted in the construction of specialized structures along the riverfront (Clark 1970:299). Cotton presses compressed cotton bales to facilitate maritime shipping; the presses also served as storage areas for baled cotton prior to shipment. During the 1830s and 1840s, the majority of cotton presses were located in Faubourg Ste. Marie, Faubourg Delord, and Faubourg Saulet, all located above Canal Street. Only the Levee Steam Cotton Press, erected in 1832, was located in the downriver floodwall alignments prior to the War Between the States.

When sugar cane became a major Louisiana crop at the turn of the nineteenth century, rum distilleries or

"guilddives" became prominent in the riverfront landscape. Early guilddives were located outside the Vieux Carre in both upriver and downriver riverfront areas. Upriver distilleries were located between Tchoupitoulas and S. Peters Streets and in Faubourg Annunciation. Downriver facilities were established between Clouet and Louisa Streets (in the present study area), and between Mazant and Bartholomew Streets.

Subsequent to the War Between the States, a major change in transportation technology altered the riverfront landscape. The development of steam locomotives and northern rail lines directly linked the Midwest to the major Eastern markets, thus reducing the commodity flow through New Orleans. While the railroad became the preferred means of transporting general cargo, the river remained the most economical method for shipping bulk goods, such as grain and coal. The changing composition of goods shipped through the port was reflected by the appearance of a grain elevator and numerous coal yards along the river. Sugar warehouses, breweries, and ice houses also emerged on the postbellum riverfront.

In the 1870s, a southern rail system was developed, with New Orleans at the hub of the network. By the last two decades of the nineteenth century, railroads had come to dominate the riverfront landscape, often displacing riverfront structures that stood in their right-of-way. Nevertheless, the functional orientation of the riverfront continued to be shipping and commerce. The railroads stimulated and expanded commerce in New Orleans during the late nineteenth century.

The high tariffs charged by private railroads for moving goods to and from the riverfront caused local merchants to form the New Orleans Public Belt Railroad Association. The City Council authorized construction of the public belt in 1900; its main track was laid in 1906. The riverfront thus passed into public hands during the twentieth century, with management provided by the Public Belt Railroad, by the Levee Board, created in 1880, and by the Board of Commissioners of the Port of New Orleans, formed in 1896. These public boards modified the entire riverfront area, constructing new levees, a public belt railway, and new steel sheds along the river. The activities encouraged the economic development of the Port of New Orleans during the early twentieth century.

The foregoing discussion chronicles the historic land use patterns of the New Orleans riverfront from the founding of the city in 1718 until the early twentieth century. During this two hundred year period, New Orleans became the major port of the Mississippi Valley and a major commercial and economic center. The riverfront landscape of New Orleans

reflected the major economic, demographic, and technological factors that influenced the growth of the port. More detailed discussion of the history of the riverfront and of the Port of New Orleans is contained in the two volumes that established the historic setting for the archeological monitoring program described herein (Reeves and Reeves 1983; Goodwin et al. 1985).

A Description of the Montegut to Independence Street Blocks

The blocks containing the present study area, Montegut Street to Independence Street, are located on land that was originally part of a number of plantations. Present day Montegut Street was originally part of La Brassiere or Brewery (circa 1727). This block was sold a number of times until it was finally bought in 1805 by Joseph Montegut. The blocks between Clouet Street and Independence Street originally were part of the Jonathas Darby concession. Portions of this tract were sold between 1755 and 1837. The blocks between Louisa Street and Desire Street were bought in 1801 by Louis De Clouet. This area later became Faubourg Clouet. The blocks between Desire and Congress were bought in 1805 by Desire Montreuil. This area was to become Faubourg Montreuil. Congress Street to Independence Street was bought in 1828 by Duralde and Donnet. According to the 1834 Zimpel map, a large brick yard was located on the front of the property between Congress and Independence Street (Figure 2). During the nineteenth century, land use in the blocks between Montegut Street and Independence Street primarily was industrial. A block by block discussion of the development of each square, a description of expected resources, and a discussion of sites considered to be potentially significant in terms of the National Register of Historic Places criteria (36 CFR 60.4) are provided below.

Montegut to Clouet

This block was used primarily as an industrial area. The New Orleans Foundry, owned by Pierre Soule, was established between Montegut and Clouet Streets in the 1830s. It occupied this site until the War Between the States (Reeves and Reeves 1983:211). The floodwall alignment impact zone traverses the front edge of this square. Smith et al. (1983:258) note that both light and heavy industrial sites are rare in antebellum Louisiana. In fact, no inventories of specific items manufactured at the foundry are extant. Due to the early date of the structure, this site has the potential to provide valuable information concerning early metal casting industries. Diagnostic artifacts anticipated to be present at the site include slag, scrap iron, forges,

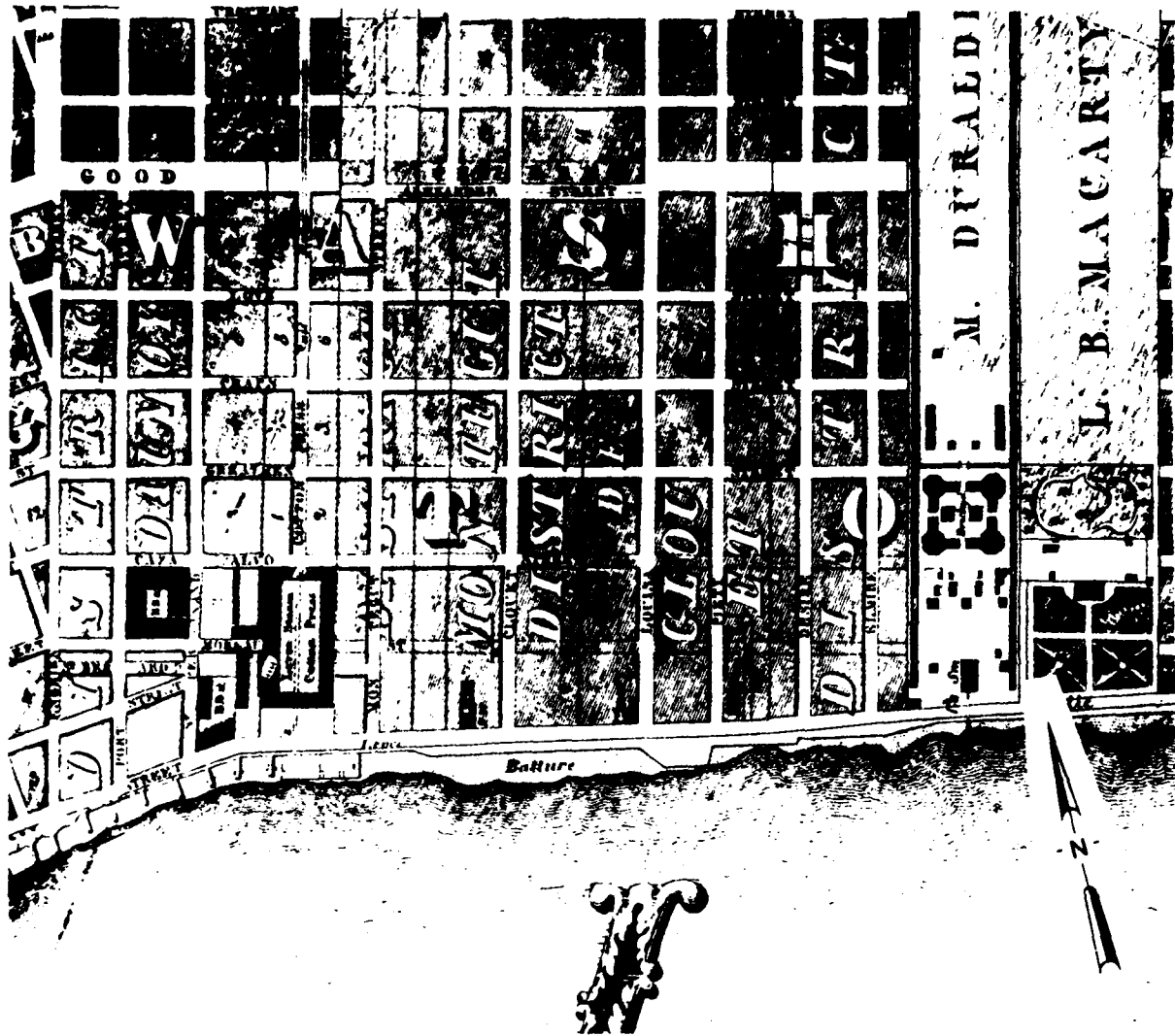


Figure 2. Excerpt from Chas F. Zimpel's Topographic Map of New Orleans and its Vicinity (1834), showing the former location of plantations and standing structures within the project area.

molds, crucibles, bellows, and a variety of ironworking tools (Goodwin et al. 1985:109).

Subsequent to the war, the property was bought by Ignatius Szymanski who opened the Szymanski Cotton Press, later known as the Atlantic Cotton Press (Figure 3). Structures associated with the press were destroyed by a levee setback in 1910, which encompassed 100 feet of the riverside portion of the property. Equipment employed in the cotton-pressing process may be encountered at this locale, although the actual press was located outside the floodwall alignment impact zone. Due to the existence of a substantial number of cotton presses in the New Orleans landscape, the scientific benefit of examining foundations of a demolished press would be questionable (Goodwin et al. 1985:77). Therefore, the Atlantic Cotton Press is not considered to be a potentially significant structure.

Clouet to Louisa

Land use in this block of the alignment was almost entirely commercial, containing businesses and industries. The only exception was the Spurl house located in the center of the square until the twentieth century (Reeves and Reeves 1983:213). The floodwall alignment passes through the front yard of the house. A number of other nineteenth century components are located in this block. Historic structures located in the riverside half of the block include a cotton seed oil mill, a brewery, and a hauling company; all of these were established after the War Between the States. The commercial drayage company, established in 1870 and owned by Dennis Sheen, occupied the upriver end of the block; it was not expected to be impacted by the excavation of the inspection trench. The Pelican Brewery also was located in the upper half of the block. The facilities were located in a heavy 3-story building (Reeves and Reeves 1983:213). This may be the three story building fronting Peters Street within the Clouet Street to Louisa Street block indicated on Figure 4. Note that the structure contains a steam engine. The right-of-way for the present study passes through this structure. Diagnostic artifacts associated with the brewery were expected to include bottle closures, glass bottles, wooden barrels, fragments of brewing vats, and related equipment (Goodwin et al 1985:109).

The Louisiana Oil Company and the Louisiana Oil Mill occupied the center of the Clouet to Louisa Street block (Figure 4). Artifacts that were anticipated to be diagnostic of the structure include the seed press and other machinery, oil containers, and perhaps preserved cotton seeds. The Lawler Flour mill, a five-story concrete building, replaced

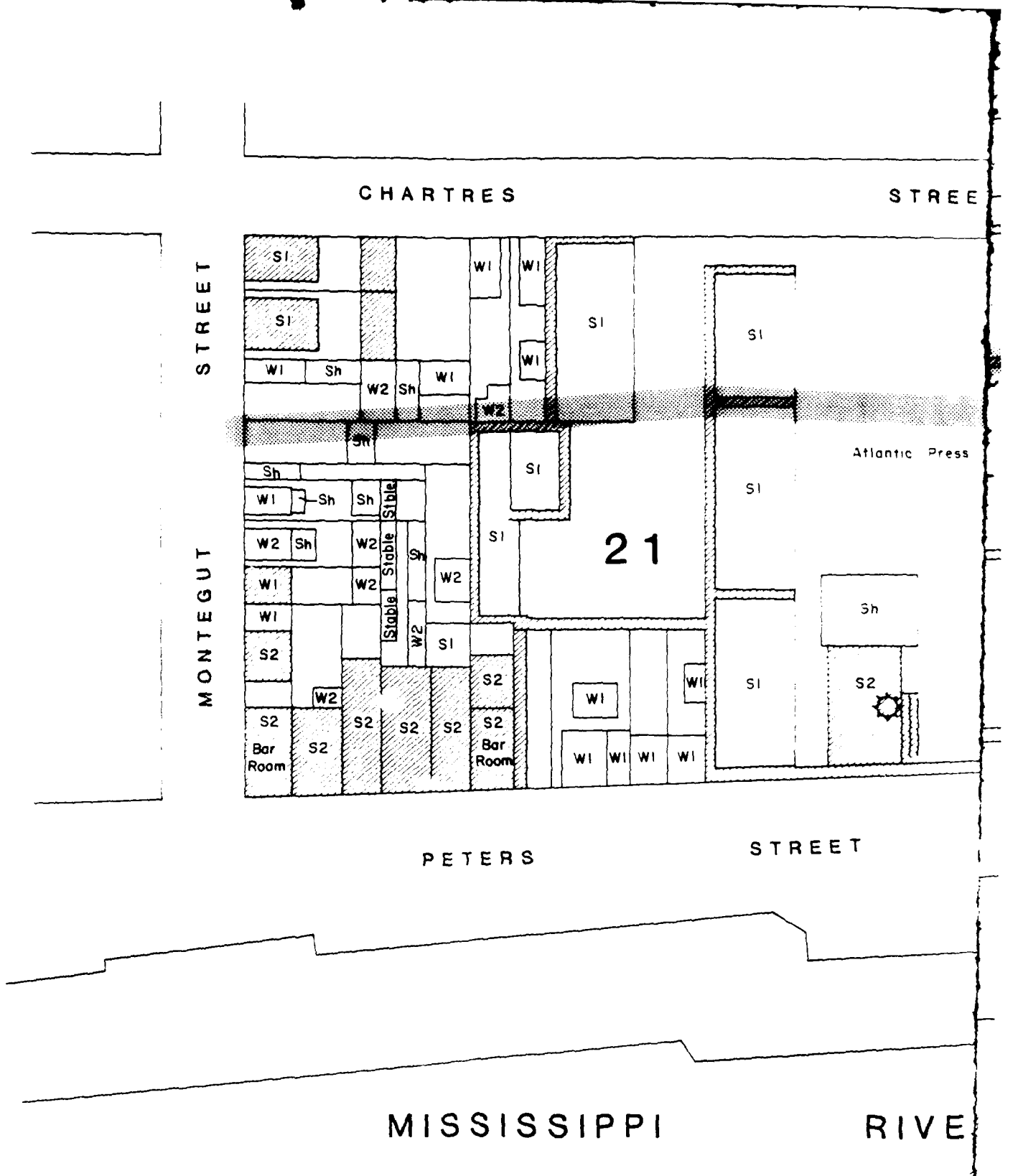
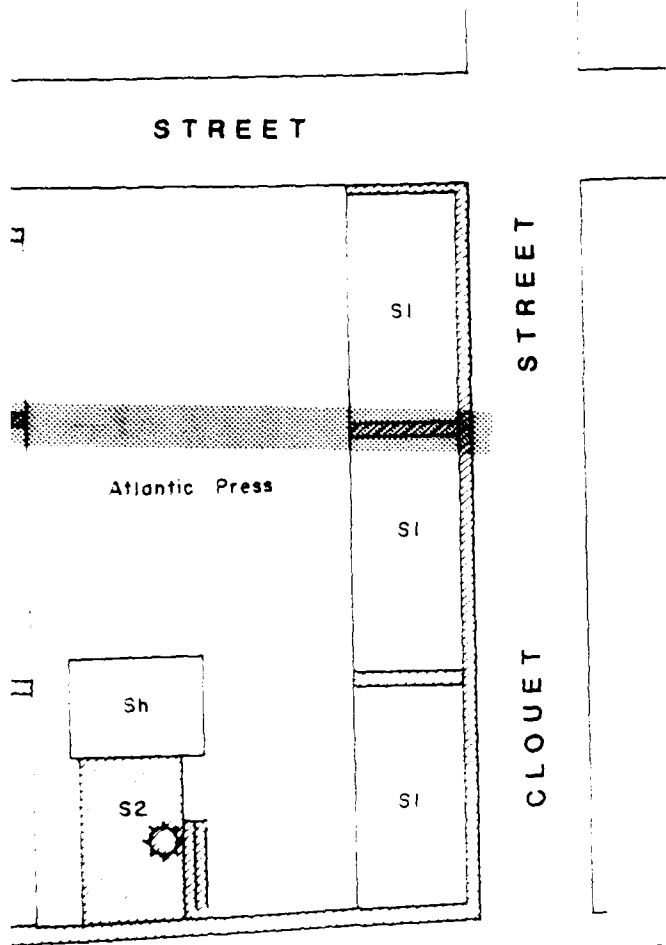






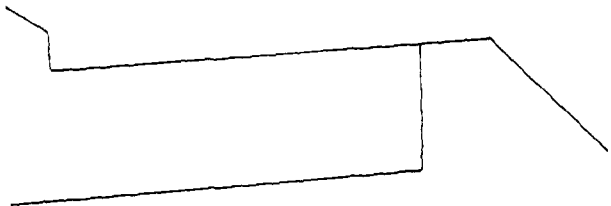
Figure 3. Redrawn Braun Fire Insurance Map showing standing structures for located between Montegut Street Clouet Street.



KEY

-  Brick structure
-  Wood structure
- 1-3 Number of stories
- W - Wood or shingle roof
- S - Slate roof
- Sh - Shed
-  Steam engine
-  Location of floodwall trench

STREET



RIVER



The Insurance Map of 1877,
 structures formerly
 on Bogart Street and

the small structures located at the corner of Louisa Street and North Peters on the Braun insurance map (Figure 4). The assemblage characteristic of the flour mill would include twentieth century milling equipment, and fragments of burlap or paper bags.

The location of early rum distilleries within this block are unknown, although a number formerly were located in the square. The Longuais distillery, owned by Francois de Longuais, was established some time between 1782 and 1805 (Reeves and Reeves 1983:95). The guildive was of brick and contained three rooms. By the 1820s, Longuais land had been sold and two distilleries were opened within the block. One distillery was owned by Eugene Sommereaure and Louis Feriet. Feriet also built a home behind the factory on Chartres Street (Reeves and Reeves 1983:96-97). This home was bought in 1879 by John Jonas Sporn, who owned it for many years (Reeves and Reeves 1983:97). The second distillery was operated by Wm. Watson & Company. The floodwall alignment right-of-way follows the front edge of this former block, and then crosses the block's downriver corner. The associated archeological assemblage should include bottles, and copper coils (Goodwin et al. 1985:80). The early dates of the distillery structures enhance their local and regional significance.

Louisa to Piety

In the early nineteenth century, this block contained the home of Louis Brognier de Clouet, a former Captain in the Spanish service. The house, built before 1800, was located at an undetermined location within the block. Remains of this colonial structure, or associated material, are significant due to the rarity of colonial plantation remains. It was thought that structural evidence of the great house and of various outbuildings might be encountered. Diagnostic materials would include glass, ceramics, cutlery, and other domestic artifacts dating to the eighteenth century. In 1810, de Clouet sold the square to Pierre A. Cuvillier. The City of New Orleans purchased the square in 1813; it was later sold to Solomon Sacerdot in 1820. Sacerdote ran a gambling house in the home until 1823 when he sold the property to Manuel Andry due to lack of funds. In 1836, Andry sold the rear half of the square to the city; it then became the Washington Market, and later the Washington Girls School (Figure 4). The presence of colonial artifacts, or of gambling related artifacts such as poker chips and gambling tables, may indicate the site of the plantation residence. The front half of the square contained numerous small residences. Assemblages pertaining to these structures may overlap spatially and temporally with that of the de Clouet

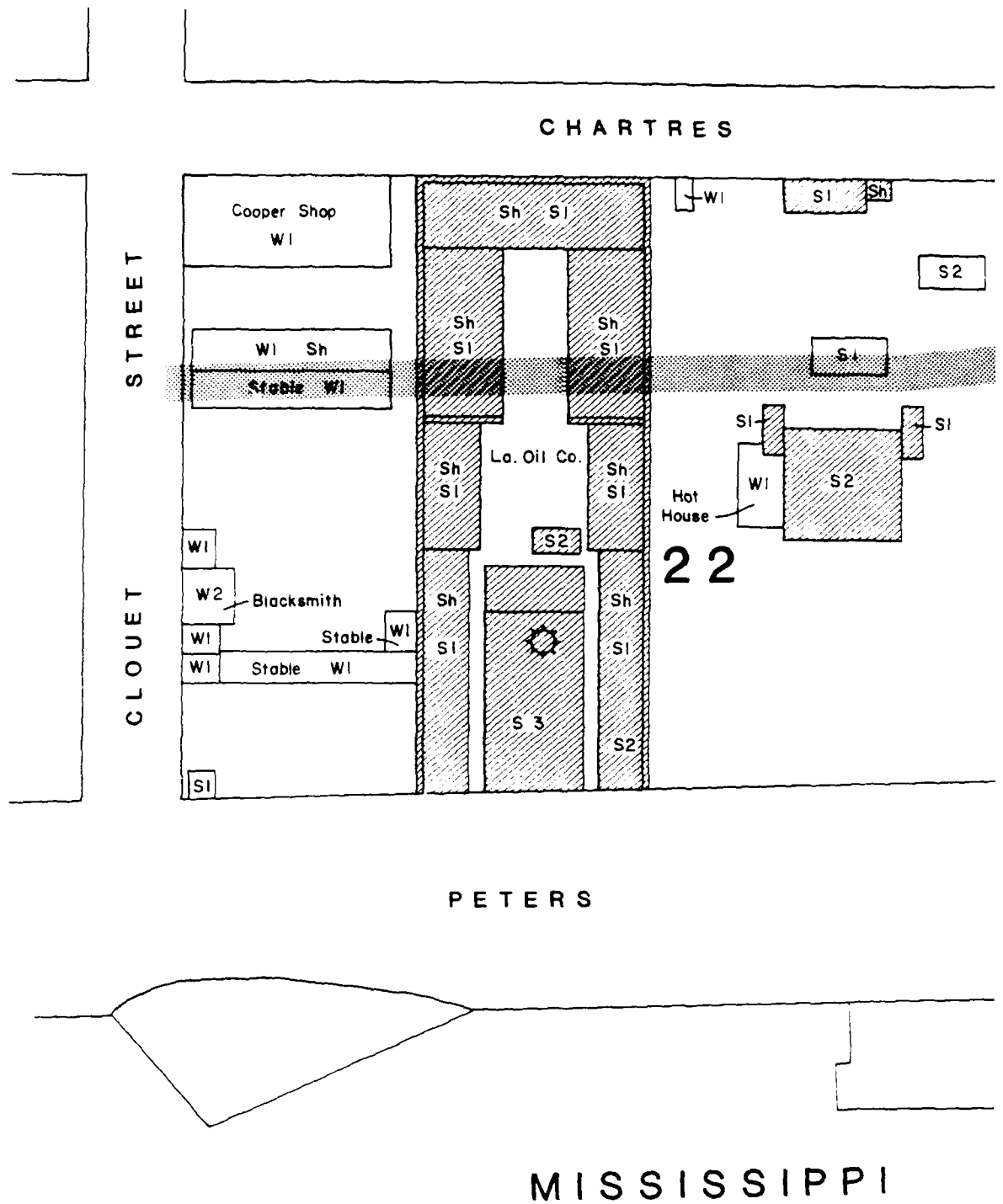
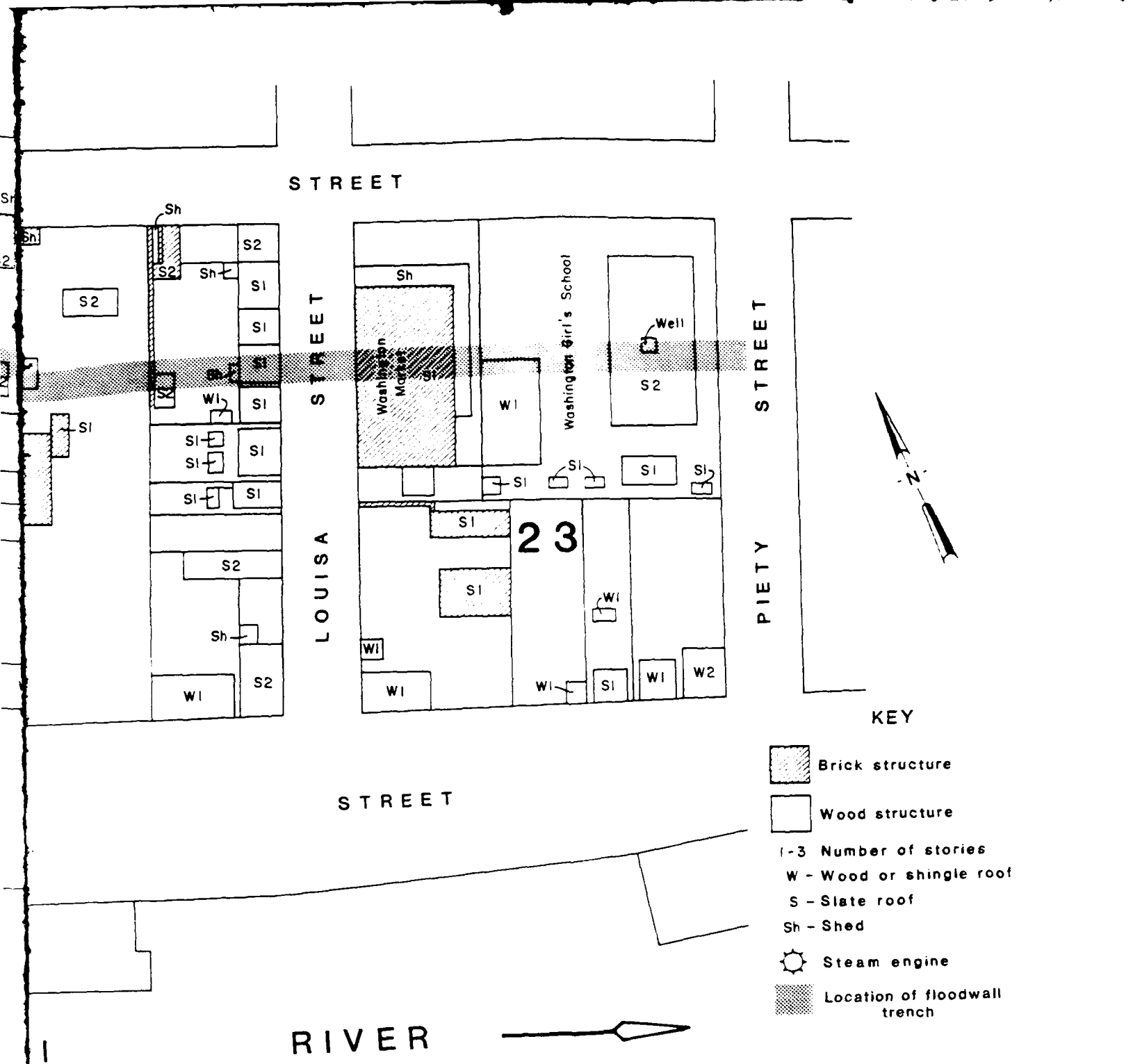






Figure 4. Redrawn Braun Fig. showing standing located between Clobet and Piety Street.



- KEY**
-  Brick structure
 -  Wood structure
 - 1-3 Number of stories
 - W - Wood or shingle roof
 - S - Slate roof
 - Sh - Shed
 -  Steam engine
 -  Location of floodwall trench

Franklin Fire Insurance Map of 1877,
 showing standing structures formerly
 between Clouet Street and
 Claret Street.

house. By the end of the nineteenth century the Jung & Sons' Coal Company occupied this portion of the block.

Piety to Desire

In the early nineteenth century, sawmills were established above and below New Orleans. Most locational data on early sawmills are imprecise (Goodwin et al. 1985:78). However, several mills lie within the present project corridor. The earliest known sawmill, the Miller and Pierce Sawmill owned by J.F. Miller, was located within the Piety Street to Desire Street block; it was in operation from 1822 to 1858. The present floodwall alignment should have passed through the interior of the sawmill. Artifacts indicative of the mill would include water tank foundations, a shed, and other sawmill facilities (Goodwin et al. 1985:79).

After 1858, the blocks between Piety Street and Desire Street became the site of the Touro Alms House. The main building was designed to be a three story brick structure 270 feet (82.4 m) long and 52 feet (16.0 m) wide; two wings also were present. The complex was intended to accommodate 400 to 500 people. However, due to delays in construction, the building was not completed prior to the War Between the States. Federal troops occupied the house from 1862 until 1865; fire destroyed the complex during that year. Therefore, although the building was not intended for use as a barracks, the associated artifact assemblage should reflect military, rather than civilian, site use (Goodwin et al. 1985:63). The Touro Alms House is significant because of its association with Judah Touro, a prominent person in New Orleans history (see above). The site's significance is enhanced by the fact that Federal troops occupied the building during the War Between the States. Although the period of Federal occupation at the site is well documented, the site has the potential to yield a military assemblage (i.e., ammunition, military buttons and decorations, and a full range of domestic items). In the late nineteenth century, the land remained vacant until the City leased the land to the W.G. Coyle Yard (Reeves and Reeves 1983:216). Note that the Braun Fire Insurance Map indicates that the block was vacant in 1877 (Figure 5).

Desire to Gallier (formerly Elmira)

Initial land use in this block of the floodwall right-of-way was part of the Carriere Plantation. The plantation was owned by Françoise Carriere, the widow of Robert Gauthier Montreuil. In 1830, the front lots of the estate went on

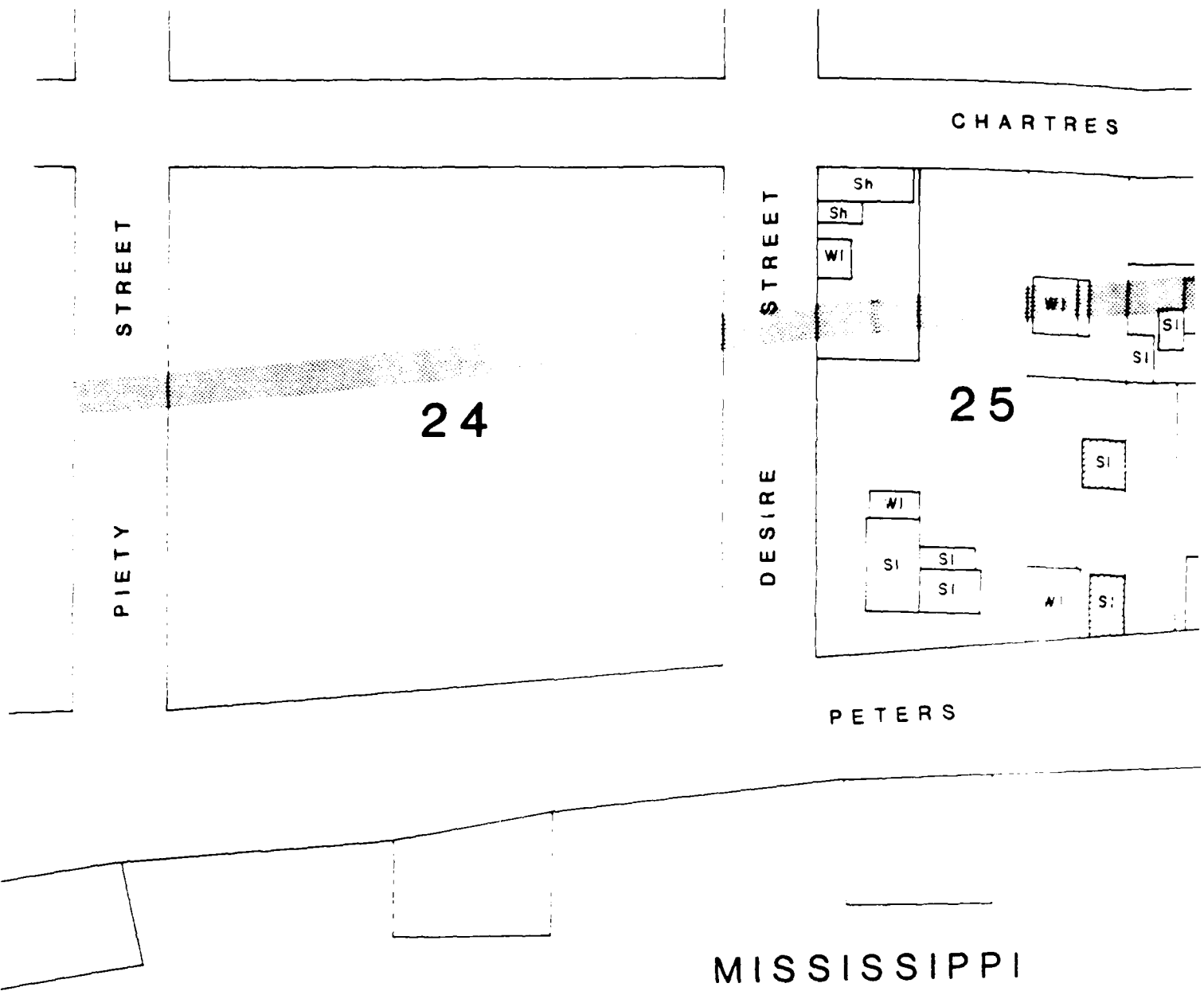
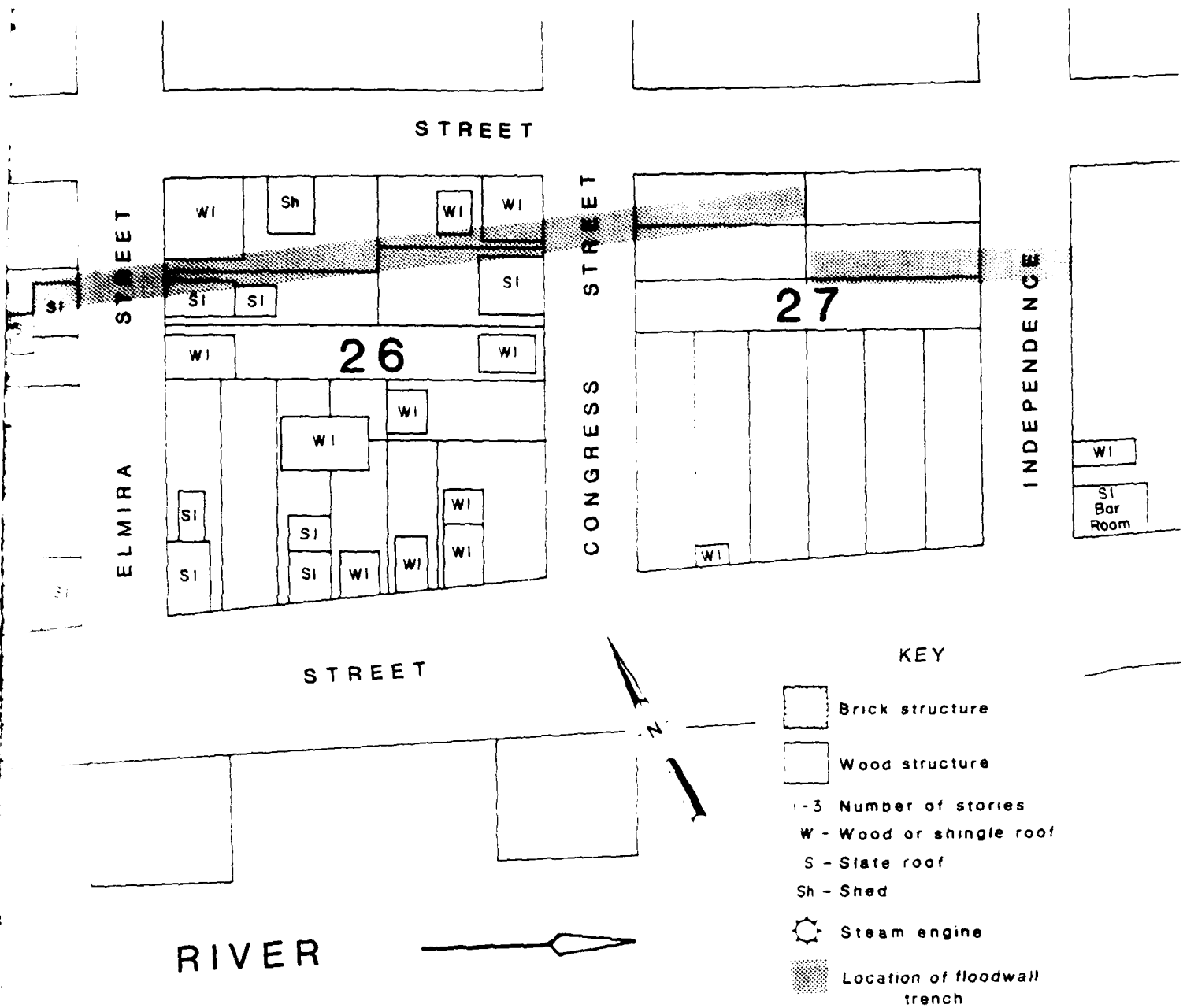


Figure 5. Redrawn Group Fire in showing standing str. located between Piety Independence Street.



Insurance Map of 1877,
 structures formerly,
 Street and

sale. In 1838, the remainder went on the market. However, very little development occurred in the block. By 1877, the block still was lightly developed as evidenced by the Braun Insurance map (Figure 5). In that year, George W. Dunbar opened a seafood cannery that processed shrimp, oysters, green turtle, figs, and other products. By the turn of the century, Dunbar's Sons had acquired nearly the entire Desire Street to Gallier Street block on which they had an oyster shed, a processing factory, and an engine house (Reeves and Reeves 1983:219). This site may be significant as an early example of the modern food-processing industry in New Orleans. Diagnostic artifacts would include steam kettles, boilers, pumps, cans, and oyster shell. Structural remains would include engine or pump houses, hydrants, and water storage tanks (Goodwin et al. 1985:111).

Gallier (formerly Elmira) to Congress

This block originally was part of the Montreuil Plantation. Unlike the Desire Street to Gallier Street block, this square remained residential up until the time of the levee setback (Reeves and Reeves 1983:219). As such, residential remains such as privies, were retrodicted. Also located in this block was the riverside end of General Andrew Jackson's third defense line. It was situated on the Montreuil Plantation on the upriver side of the block. The floodwall alignment passes through or near the bastion constructed near the bank of the Mississippi River. The defense line consisted of an earthen rampart which was erected shortly before the Battle of New Orleans in 1815. The rampart apparently was leveled shortly after the battle. Thus, this structure is directly associated with both an event and a person of outstanding significance in American history. This site has the potential to provide valuable comparative data on the construction of defensive embankments. An exploratory trench would reveal the depth and width of the moat fronting the rampart and determine if a rifle pit had been excavated behind the rampart. Excavation of such an exploratory trench also should provide diagnostic artifacts, which should include military-related items such as gunflints, musket balls, and uniform buttons and ornaments.

Congress to Independence

The Congress Street to Independence Street block remained undivided for a substantial number of years. It was partitioned in 1825 between the two heirs of Louis Chevalier Macarty. The upriver end of the block was soon sold to the partnership of Duralde and Donnet. Duralde gradually

acquired the whole property, and established a steam sawmill. In 1835, the square was sold to John F. Miller and James H. Shepherd. The square again changed hands in 1843 at which time the Levee Steam Cotton Press was established (Reeves and Reeves 1983:221). Fifteen years later, a distillery was erected. Finally, in 1885 the Citizens Bank sold the property to the Union Sanitary Company, a fertilizer manufacturer (Figure 6). Union Sanitary erected several one story frame sheds on the property, and operated a large wharf facility through the turn of the century (Goodwin et al. 1985:59; Reeves and Reeves 1983:222). The floodwall will traverse the length of one of the sheds (Reeves and Reeves 1983:222).

Summary

As indicated above, substantial development of the blocks between Montegut Street and Independence Street did not occur until the late nineteenth and early twentieth centuries. During the nineteenth century, the area contained primarily commercial and industrial enterprises. Approximately thirteen industrial companies, i.e. cotton presses, breweries, mills, etc., were established. In addition, a number of commercial enterprises also were located within the area. These included drayages, markets, etc. Residential development between these blocks was light, although several substantial homes were constructed including the Sporn House and the Touro Alms House. One military structure, Jackson's defense line, also existed within one of the blocks. As noted above, not all of these structures are considered significant in terms of the National Register criteria (36 CFR 60.4). In fact, seven structures were identified as potentially significant prior to commencement of the preconstruction inspection trench. A detailed discussion of this process is provided in Chapter IV. The structures determined to have potential historical significance are outlined in Table 1. The predetermination of potentially significant remains provided the field archeologist with a guide to evaluate remains within the trench.

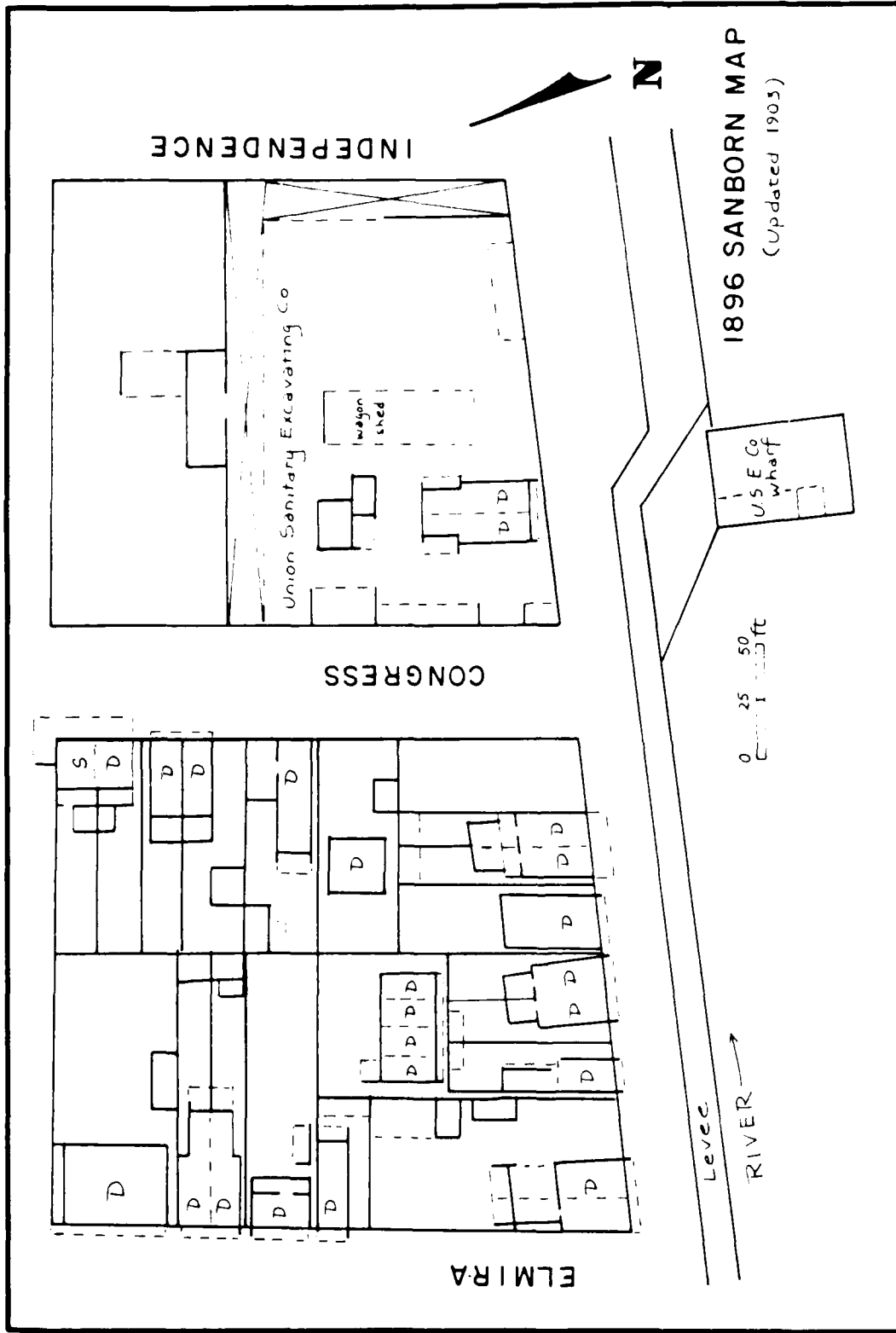


Figure 6. Redrawn Sanborn Fire Insurance Map of 1896, showing standing structures formerly located between Elmira (now Gallier) and Independence Streets.

TABLE 1

**EXPECTED SIGNIFICANT ARCHEOLOGICAL RESOURCES IN THE MONTEGUT STREET
TO INDEPENDENCE STREET FLOODWALL RIGHT-OF-WAY**

<u>BLOCK</u>	<u>POTENTIALLY SIGNIFICANT RESOURCE</u>	<u>DATE</u>
Montegut St. - Clouet St.	Soule's Foundry	ca. 1830
Clouet St. - Louisa St.	Guildives (distillery)	ca. 1805-1820
Louisa St. - Piety St.	DeClouet House	ca. 1790
Piety St. - Desire St.	Miller and Pierce Sawmill/ Touro Alms House	ca. 1820-1860
Desire St. - Gallier St.	Dunbar's Seafood Cannery	ca. 1877
Gallier St. - Congress St.	Jackson's Defense Line	ca. 1815

CHAPTER IV

RESEARCH DESIGN

The project described in this report was based upon a research design and data recovery plan formulated in an Archeological Monitoring Plan for Four Floodwall Projects in the City of New Orleans (Goodwin et al. 1985). The first stage of this research effort involved the inventory and classification of all documented historic properties located along the floodwall alignments. Primary written source material, historic maps (Sanborn Fire Insurance Maps for 1876, 1895, and 1896; Braun Fire Insurance Map for 1877), and a previous project report prepared for the New Orleans District, U.S. Army Corps of Engineers (Reeves and Reeves 1983), were used to provide locational information on historic structures. These data then were applied in the construction of a typology of historic structures located along the impact corridor. Five major classes of structures were identified during the inventory: residential, commercial, industrial, public, and military.

Subsequently, a formal set of significance criteria was developed for the various classes of buried cultural resources that may be impacted by the planned floodwall construction. These criteria were applied in an evaluation of significance for individual properties within the project corridor. This probative evaluation of significance was based upon three primary factors: (1) the relationship of the relevant structures to the growth and development of New Orleans as a major port; (2) their relationship to technological and demographic change; and, (3) the hypothetical characteristics and probable condition of surviving assemblages, including, for example, the uniqueness and integrity of the remains. A number of potentially significant historic structures, such as shipping wharves, docks, warehouses, cotton presses, railroad freight depots, flour, rice, and cottonseed mills, distilleries, canneries, sawmills, foundries, and ice factories, were identified during this phase of research. Historically important structures, such as Fort St. Charles, were considered significant at this stage of the research.

Using the above inventory and classification of historic structures, the potential National Register eligibility of individual properties located along the three floodwall alignments was assessed. The objective of this effort was the delineation of historic properties that might contain archeological or architectural components with the potential for National Register eligibility. Specific criteria for

National Register eligibility that are applicable to the riverfront structures in question include association with events that have made a significant contribution to the broad patterns of local and regional history [36 CFR 60.4(a)], and/or association with the lives of persons significant to the history of New Orleans [36 CFR 60.4(b)]. These structures also should have the potential to yield historically important information [36 CFR 60.4(d)]. In addition, such archeological or architectural sites must possess "integrity of location, design, setting, materials, workmanship, feeling, and association ..." (36 CFR 60.4).

The next stage in the development of the research design entailed the identification of specific examples of the categories of previously identified potentially significant sites along the proposed floodwall alignments. These sites were selected for their potential to yield archeological remains and to contribute materially to a knowledge of local history, thus fulfilling the fourth significance criterion [36 CFR 60.4(d)].

These preliminary determinations of potential significance, obtained from purely archival research, were utilized to develop recommendations for a block-by-block monitoring plan. Only those city blocks along the floodwall alignment which contained historically significant structures were selected for archeological monitoring under the original monitoring plan. The following blocks were recommended for careful monitoring: Barracks Street to Elysian Fields Avenue; Marigny to Mandeville Streets; Pauline to Alvar Streets; Bartholomew to Mazant Streets; and, Kentucky to Japonica Streets.

The original monitoring plan also anticipated the possibility of the unexpected discovery of archeologically significant remains in blocks which were not selected for monitoring. A set of guidelines was developed for the reporting of such archeological remains to appropriate supervisory personnel. These "must call" categories included the following types of archeological remains:

1. prehistoric remains (stone tools, aboriginal pottery, hearths, etc.);
2. human skeletal remains, or other remains indicating the presence of a cemetery or burial site;
3. historic ships, or the remains of shipwrecks and sunken or abandoned vessels;

4. historic military equipment or fortifications; and,
5. definable refuse concentrations, such as filled privy pits and wells.

Construction crews were provided with a copy of the "must call" list; they were instructed to report any "must call" finds, as well as any unusual remains, to the monitoring archeologists, or to appropriate Corps of Engineers staff members, who then could evaluate the significance of in situ material.

This original monitoring plan required vigilance and cooperation on the part of the construction contractors, who are often operating under severe time restraints and who may be reluctant to delay work. However, this situation did not arise during the monitoring of the Montegut Street to Independence Street floodwall alignment. During the negotiation process, the New Orleans District requested that monitoring personnel remain in the field throughout the excavation of the pre-construction inspection trenches.

Field monitors remained on the job site while actual construction excavation was in progress, in order to prevent adverse impacts to significant archeological resources. Upon the discovery of potentially significant subsurface remains, appropriate mitigation procedures were coordinated with the Contracting Officer's Representative (COTR).

The intent of the research design and accompanying monitoring plan, therefore, was to provide an explicit set of procedural guidelines for the efficient resolution of in-field discovery situations. This plan was formulated to avoid unnecessary delays during the excavation phase of construction work, and to provide appropriate mitigation alternatives.

Archeological monitors were present at all times during excavation of the general contractor's inspection trench at the Montegut Street to Independence Street floodwall alignment. "On call" monitoring was not required.

CHAPTER V

ARCHEOLOGICAL FIELD METHODS AND RESULTS

Archeological Field Methods

Documentary research utilizing primary source material, historic maps, and previous archival investigations along the waterfront area yielded information concerning historic land use within the Montegut Street to Independence Street floodwall alignment right-of-way (Goodwin et al. 1985; Goodwin et al. 1986; Reeves and Reeves 1983). From this information, potentially significant resources were identified for the blocks between Montegut Street and Independence Street (Table 1). Information concerning the location of structures determined to be potentially significant was provided to the monitoring crew to aid in the identification of features in the backhoe trench. Archeological monitoring along the Montegut Street to Independence Street floodwall alignment proceeded concurrently with the excavation of the general contractor's preconstruction inspection trench. The archeological monitoring crew remained in the field throughout the excavation process, in order to determine whether significant or potentially significant cultural resources were exposed in the backhoe trench.

Discussion of Inspection Trench Monitoring

Archeological monitoring of the Montegut Street to Independence Street floodwall pre-construction inspection trench was designed to prevent the destruction or disturbance of significant archeological remains. The trench was excavated to an approximate depth of 1.5 meters, with a width of 60 cm. Field recordation and collection procedures were related integrally to the work progress of the general construction contractor. The entire inspection trench was excavated in segments separated primarily by the levee access roads (the future location of the floodwall gates). Trench segments were numbered consecutively as they were excavated. Table 2 lists the trenches by block and by wall line station.

The field monitoring crew conducted a thorough visual reconnaissance of the inspection trench and of the backdirt in order to identify archeological artifacts and features (Figure 7). The horizontal and vertical location of artifact concentrations and features was recorded. Scaled profile drawings of features also were prepared in the field. The stratigraphic position of each feature was indicated on the profile, along with observations on the feature, the

TABLE 2

TRENCHES EXCAVATED IN THE MONTEGUT TO INDEPENDENCE STREET FLOODWALL ALIGNMENT

TRENCH NUMBER	BLOCK	WALL LINE STATION
Trench 1.	Independence - Congress	25+85.80 - 25+18.96
Trench 2.	Independence - Gallier	24+80.96 - 22+22.24
Trench 3.	Gallier - Desire	21+64.24 - 18+87.70
Trench 4.	Desire - Piety	18+55.62 - 14+60.43
Trench 5.	Louisa - Clouet	11+05.80 - 5+65.08
Trench 6.	Clouet - Montegut	5+31.41 - 0+00.0
Trench 7.	Piety - Louisa	14+15.78 - 11+27.30



Figure 7. A view of the general contractor's preconstruction inspection trench between Gallier Street and Desire Street.

stratigraphy, and on soil color and characteristics.

Archeological features and stratigraphic profiles were photographed in situ with a 35 mm single lens reflex camera. Artifacts, including samples of materials such as metal fragments, bricks, roofing slate, and stucco were collected from features and the associated backdirt for identification and analysis.

Problems Associated with the Trench

The pre-construction trench was excavated by backhoe to a depth of approximately 5 feet or 1.5 meters below surface. Occasionally, obstacles at the 5 foot depth required the construction contractor to dig below the required depth. The trench width was slightly wider than the 2 foot (60 centimeter) wide backhoe bucket. Trench width often was increased by wall collapse (Figure 8).

A major problem with trench excavation was ground water seepage. Often, water literally poured into the trench, making observation of the trench floor impossible, and causing the trench walls to become dangerously unstable (Figure 9). Under such circumstances, it was imprudent to enter the trench for recordation, or to draw profiles of the walls. In some instances, the trench wall collapsed before photographs could be taken. Under these conditions, collecting strategies principally involved backdirt examination. Trench instability also was a significant problem for the general contractor. Under such conditions, the backhoe operator was directed to backfill the excavation almost immediately, further hindering archeological observations.

Results of the Inspection Trench Monitoring

Introduction

Field recordation of archeological materials along the Montegut Street to Independence Street floodwall alignment followed the sequence of excavation of pre-construction inspection trenches. Each spot find of an artifact or of any cultural debris was designated as an archeological locus. Associations of artifacts, or structural remains, were designated either as features or as sites, as appropriate. A total of 29 loci were identified during field observations; locus numbers were assigned in order of their discovery. Numbers were assigned to all remains or structures noted in the trench unless the remains were clearly modern. Loci later were designated as archeological sites when analysis of

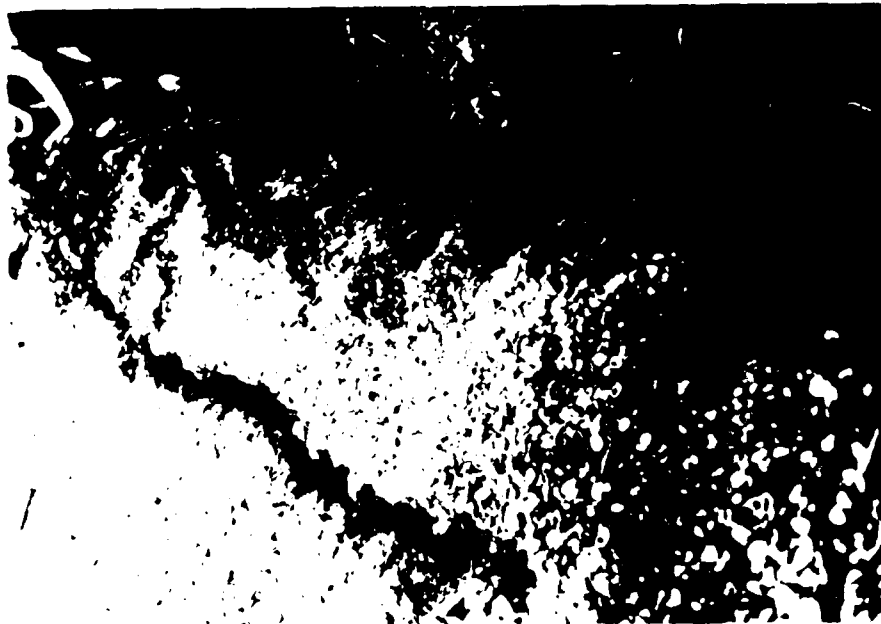
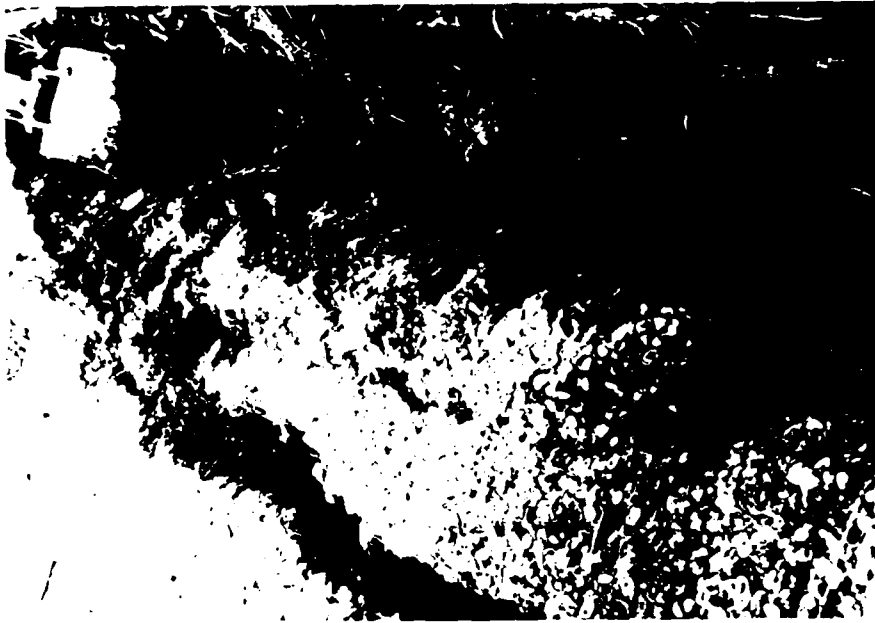


Figure 8. A view of the collapsing wall of the preconstruction inspection trench between Desire Street and Piety Street.



Figure 9. A view of the wet conditions in the preconstruction inspection trench between Clouet Street and Montegut Street.

the associated artifacts and stratigraphy warranted such a procedure. Site designations were assigned to all remains predating 1930. Site forms then were submitted to the Louisiana Division of Archaeology for assignment of official State site numbers. Because of the unusual circumstances in which the sites were located, i.e., in a linear fashion and without the determination of exact site boundaries, the Louisiana Division of Archaeology chose to assign site numbers by city block. All cultural remains and loci found in each city block became a single site. Therefore, a total of six sites were located along the alignment. Site and locus designations presented in the Management Summary submitted to the New Orleans District by R. Christopher Goodwin & Associates Inc., and the corresponding State Survey numbers, are presented in Table 3. Note that Trench 1 was not given a site number since no site was found in this block (Figure 10).

Description of Archeological Sites

Site 16 OR 109 (Floodwalls 1987-1). Site 16 OR 109 is represented approximately by the city block Congress Street to Gallier Street, or Trench 2 of the preconstruction inspection trench excavation (Figure 11). The site is situated on the east (left descending) bank of the Mississippi River between wall line stations 24+80.96 and 22+22.24. The area surrounding the site is open and grassed. The New Orleans Public Belt Railroad is located approximately 8 feet (2.4 meters) river side of the inspection trench. The site consists of four loci containing late nineteenth and early twentieth century cultural materials.

Locus 1, located at wall line station 23+80.97, consisted of a small concentration of brick fragments and a single complete bottle manufactured by the Louisville Glass Works, circa 1913 (Figure 11). The documented remains were situated in a stratum of dark brownish (10 YR 4/2) gravel fill and, therefore, may represent a secondary deposit. Excavation of the inspection trench has disturbed any brick configuration that may have been present.

Locus 2 is located at wall line station 23+57.60 (Figure 11). It consisted of a circular stain containing an undetermined number of brick fragments situated in the trench floor at an approximate depth of 1.64 meters below surface (Figure 12). The stain was approximately 1 meter in diameter and appeared to consist of a dark gray clayey silt. It also is uncertain whether any artifactual remains were associated with the stain and brick. The depth of the trench (over the 4.6 feet), and water seepage prevented access to the feature and made detailed examination of the feature impossible.

TABLE 3

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MANAGEMENT SUMMARY SITE NUMBERS AND THE CORRESPONDING
STATE SURVEY SITE NUMBERS

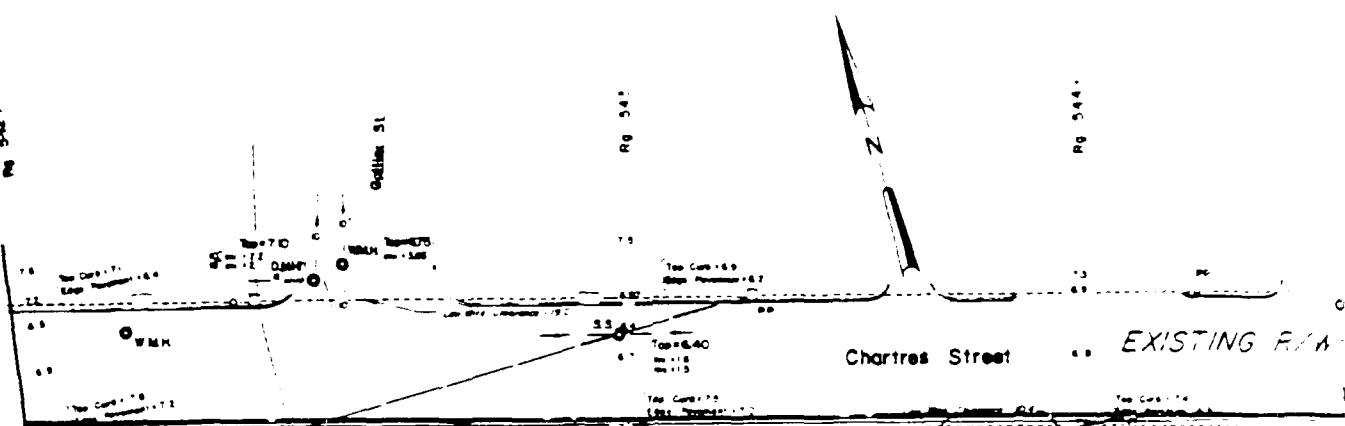
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<u>OLD SITE NUMBER</u>	<u>STATE SITE NUMBER</u>	<u>CORRESPONDING BLOCK</u>
Floodwalls 1987-1	16 OR 109	Gallier - Congress
Floodwalls 1987-2	16 OR 109	
Floodwalls 1987-6	16 OR 109	
Floodwalls 1987-7	16 OR 110	Desire - Gallier
Floodwalls 1987-4	16 OR 111	Clouet - Louisa
Floodwalls 1987-9	16 OR 111	
Floodwalls 1987-5	16 OR 112	Montegut - Clouet
Floodwalls 1987-10	16 OR 112	
Floodwalls 1987-3	16 OR 113	Piety - Desire
Floodwalls 1987-8	16 OR 113	
Floodwalls 1987-11	16 OR 114	Louisa - Piety

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Pg 544

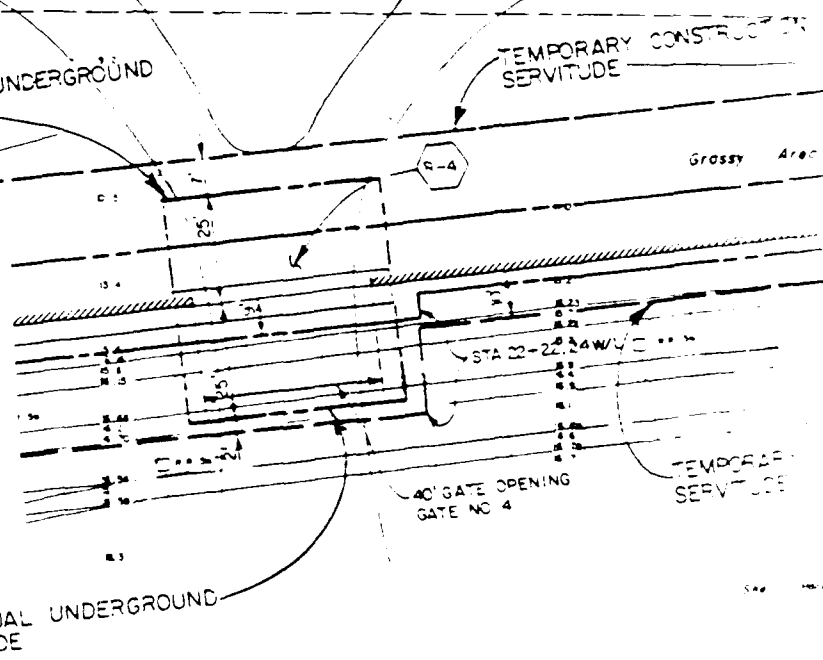
Pg 544



MATCH LINE STA. 20+30 W/L DWG. 5

SYMBOL LEGEND

- D.M.H. DRAIN MANHOLE
- M.M.H. METER MANHOLE
- M.H. MANHOLE
- SS— STORM SEWER
- PP— POWER POLE
- CB— CATCH BASIN
- LP— LIGHT POLES
- PP SW RAILROAD SWITCH
- PM— PARKING METERS
- N.C.B. NEW CATCH BASIN
- N.V.M. NEW VALVE MANHOLE
- UTILITY IDENTIFICATION
- UNDISTURBED TYPE BORING
- GENERAL TYPE BORING
- NEW FLOODWALL
- W— WATERLINE
- S— SEWERLINE
- P— POWER LINE
- F— FENCE
- BURIED TEL. CABLE
- AERIAL TEL. CABLE

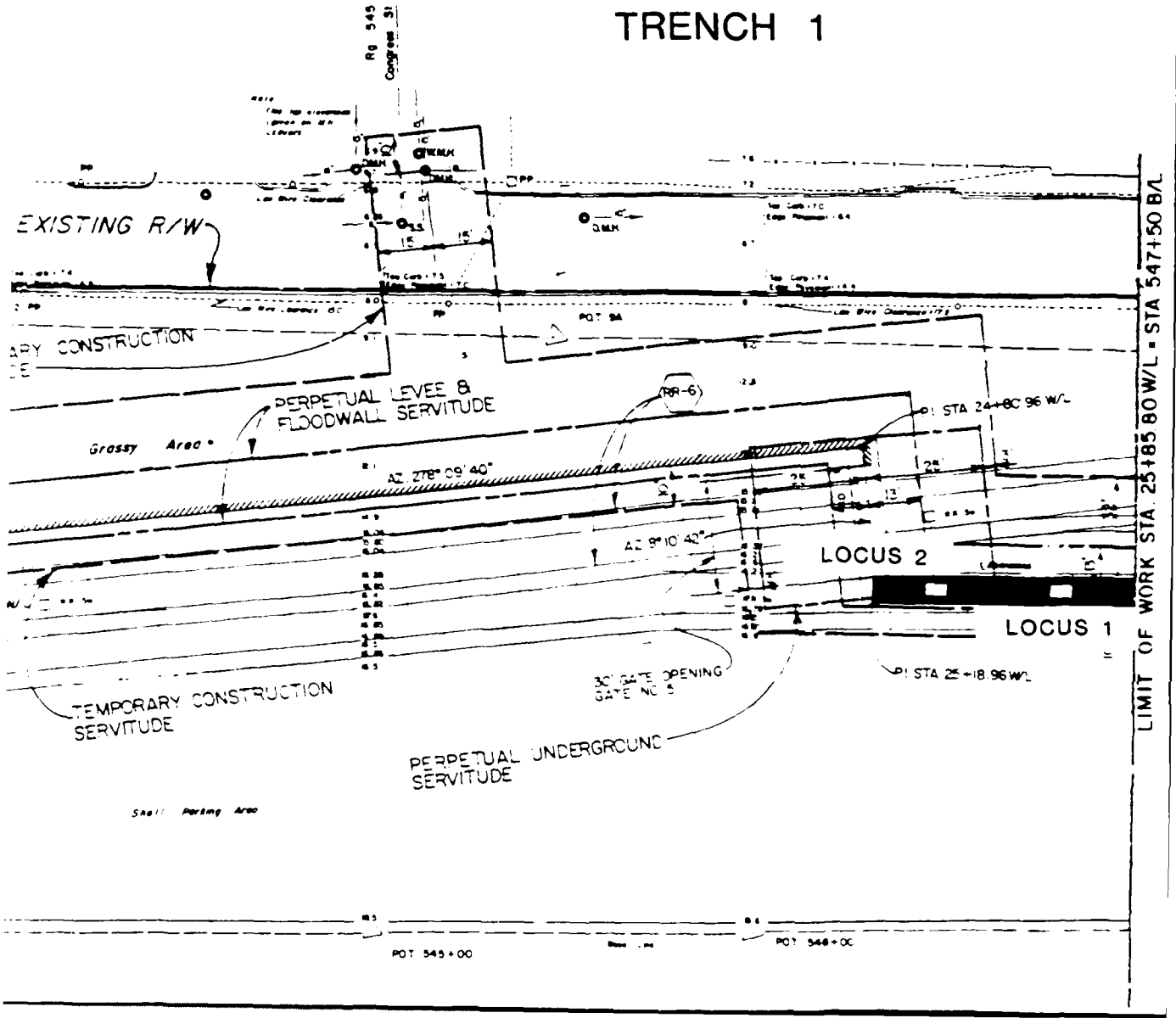


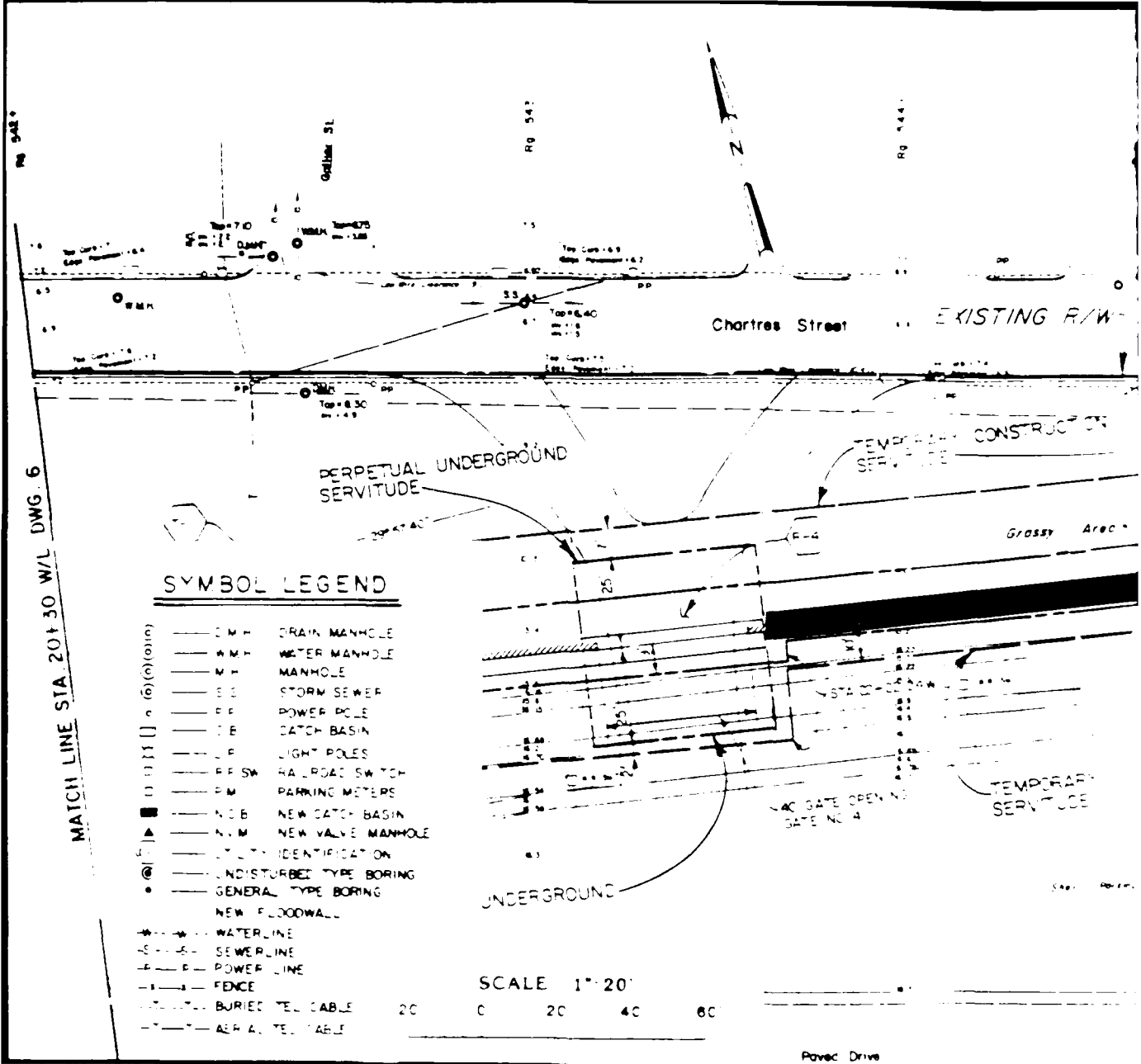
SCALE: 1"=20'



Paved Drive

FLOODWALLS 1987 TRENCH 1





MATCH LINE STA. 20+30 W/L DWG. 6

SYMBOL LEGEND

- D.M.H. DRAIN MANHOLE
- W.M.H. WATER MANHOLE
- M.H. MANHOLE
- |— S.S. STORM SEWER
- |— P.P. POWER POLE
- |— D.B. DITCH BASIN
- |— L.P. LIGHT POLES
- |— P.F.S.W. RAILROAD SWITCH
- |— P.M. PARKING METERS
- N.C.B. NEW DITCH BASIN
- ▲— N.V.M. NEW VALVE MANHOLE
- U.I. UTILITY IDENTIFICATION
- U.D.T. UNDISTURBED TYPE BORING
- G.T. GENERAL TYPE BORING
- |— N.F. NEW FLOODWALL
- |— W.L. WATER LINE
- |— S.L. SEWER LINE
- |— P.L. POWER LINE
- |— F. FENCE
- |— B.T.C. BURIED TELE. CABLE
- |— A.T.C. AERIAL TELE. CABLE

SCALE 1" = 20'

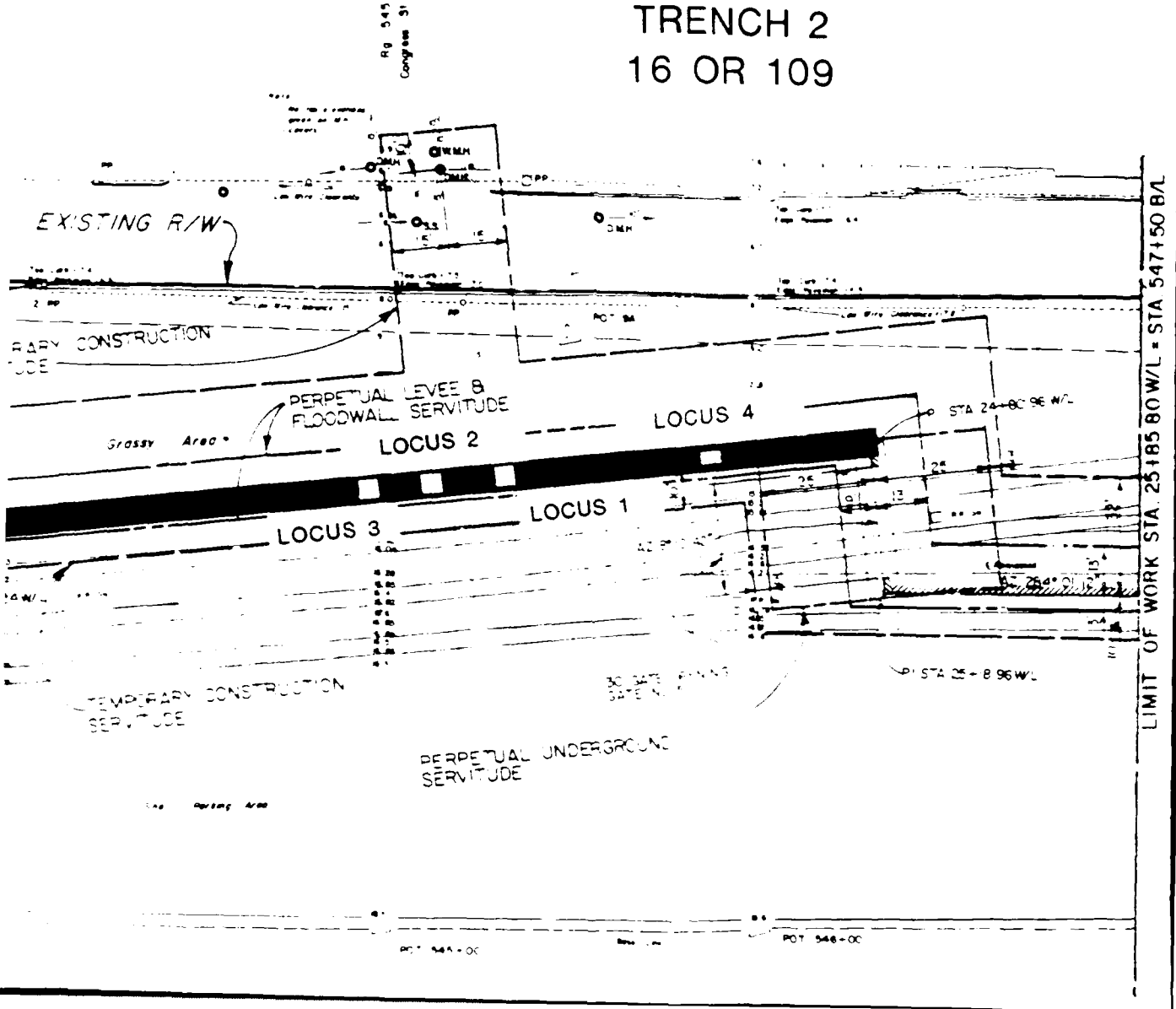
0 20 40 60

Paved Drive

FLOODWALLS 1987

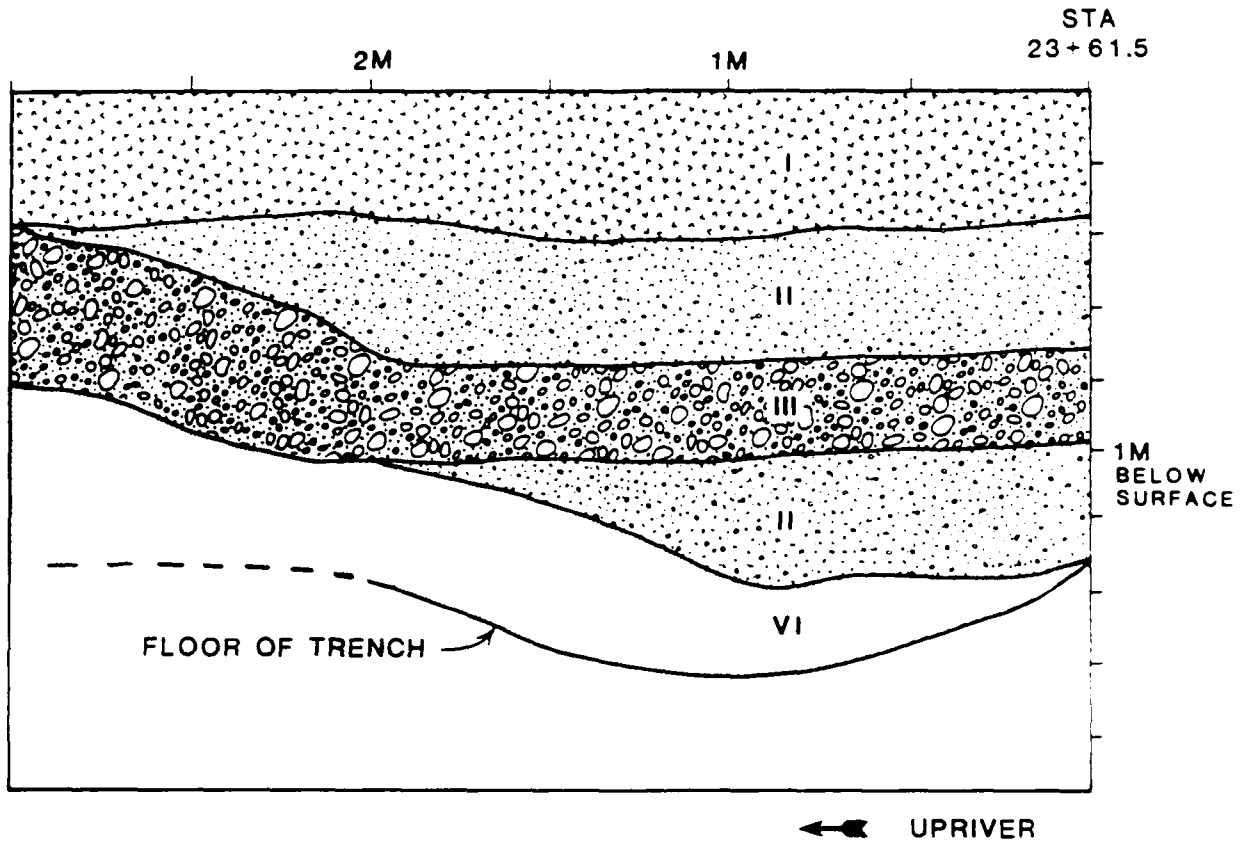
TRENCH 2

16 OR 109



LIMIT OF WORK STA. 25+85.80 W/L = STA 547+50 B/L

FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 109 LOCUS 2



KEY





- Stratum I  Rangia Shell Fill (10 YR 2/1)
- Stratum II  Brown Silty Sand Fill (10 YR 5/3)
- Stratum III  Black Coarse Silt/Gravel Fill (5 Y 2.5/1)
- Stratum VI  Dark Gray Clayey Silt (7.5 YR 4/0)

Figure 12. Profile at Locus 2, Site 16 OR 109.

Locus 3 is located at wall line station 23+43.76 (Figure 11). It consisted of a sparse scatter of late nineteenth century to early twentieth century artifactual material collected from a depth of approximately 1.1 meters below surface. Materials also were collected from the backdirt. Artifacts include 2 brick fragments, 1 whole brick, 1 bale seal, and 1 unidentified metal object. No features or stains were noted in the area from which the artifacts were collected. Stratigraphically, the remains were associated with a stratum of coarse black (5 Y 2.5/1) fill, and may represent a secondary deposit.

Locus 4 is located at wall line station 24+37.4 (Figure 11). It consisted of a small concentration of brick located in a stratum of gravel fill. No artifacts or structural remains were noted in association with the brick.

All four loci, with the exception of Locus 2, were located in secondary deposits or fill. This means the artifacts have been removed from their original locale of deposition and redeposited. Loci 1, 3, and 4 also did not contain any other stains or intact structural remains. Therefore, because of the lack of structural integrity, the secondary nature of the deposits, and the paucity of artifactual remains, the site is not considered eligible for nomination to or inclusion on the National Register of Historic Places.

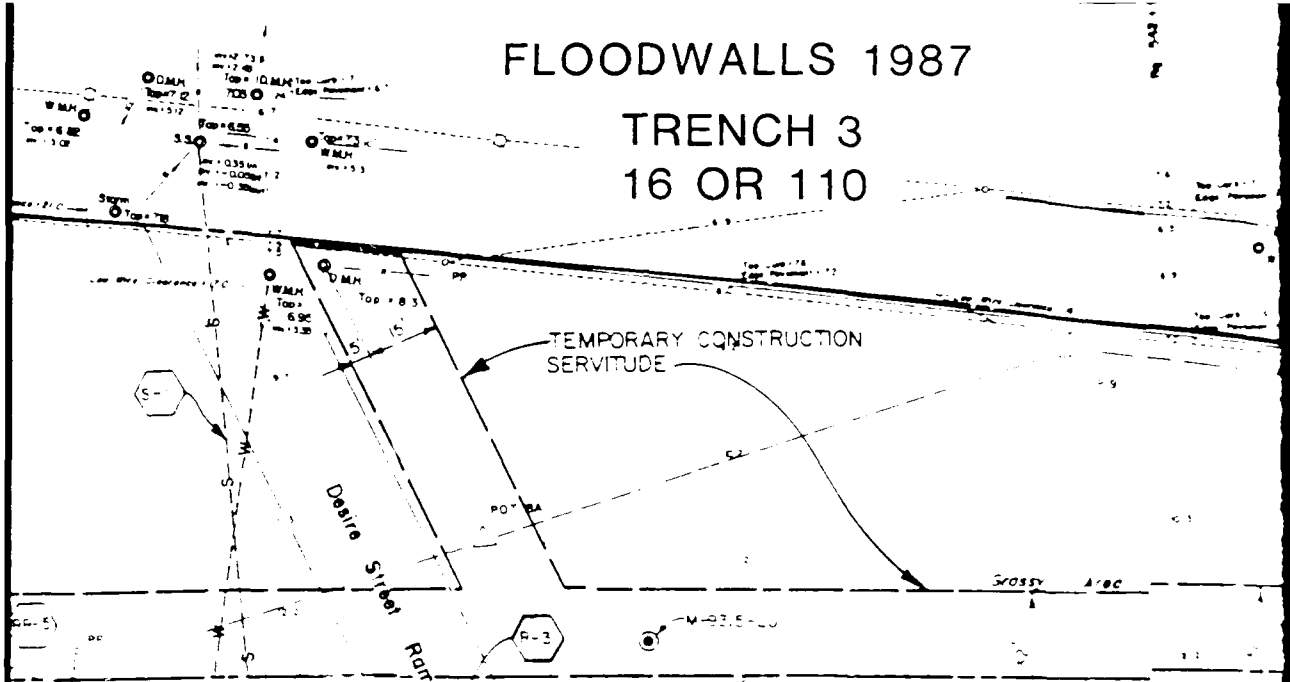
Site 16 OR 110 (Floodwalls 1987-7). Site 16 OR 110 is represented by the city block between Gallier Street and Desire Street, or Trench 3 of the preconstruction trench excavation (Figure 13). The site is situated on the east (left descending) bank of the Mississippi River between wall line stations 21+64.24 and 18+87.70. The area around the site is overgrown with weeds and vegetation. This overgrowth was cleared prior to the excavation of the inspection trench. The site consisted of three loci of cultural material.

Locus 1 was located at wall line station 19+22.70 and consists of a small concentration of late nineteenth century to mid-twentieth century artifacts (Figure 13). These include 2 ceramic sherds, 1 whole bottle (circa 1930), 1 bottle base, and 1 glass insulator. Stratigraphically, these remains were associated with a stratum of coarse black (5 Y 2.5/1) fill, located at a depth of 60 centimeters below surface. The remains appear to have been secondarily deposited. No other stains or features were located in the vicinity.

Locus 2 was located at wall line station 20+39.01 (Figure 13). The feature consisted of a small square structure fabricated from three 4 inch timbers (Figure 14).

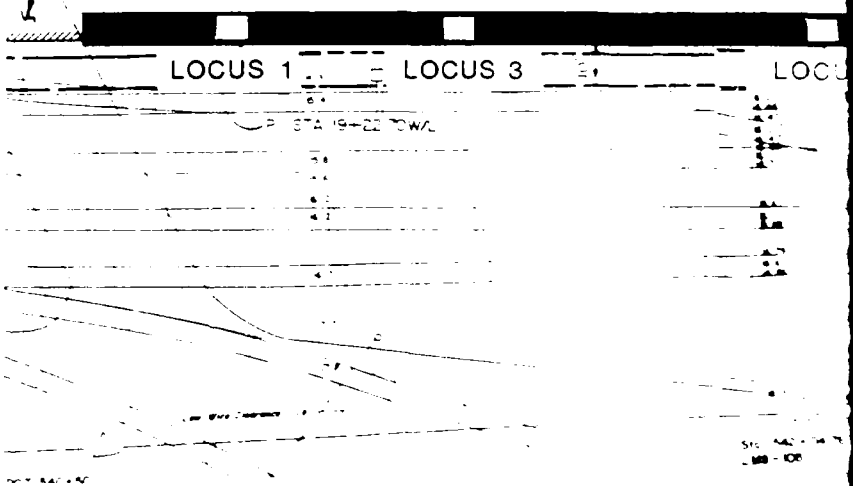
FLOODWALLS 1987

TRENCH 3 16 OR 110



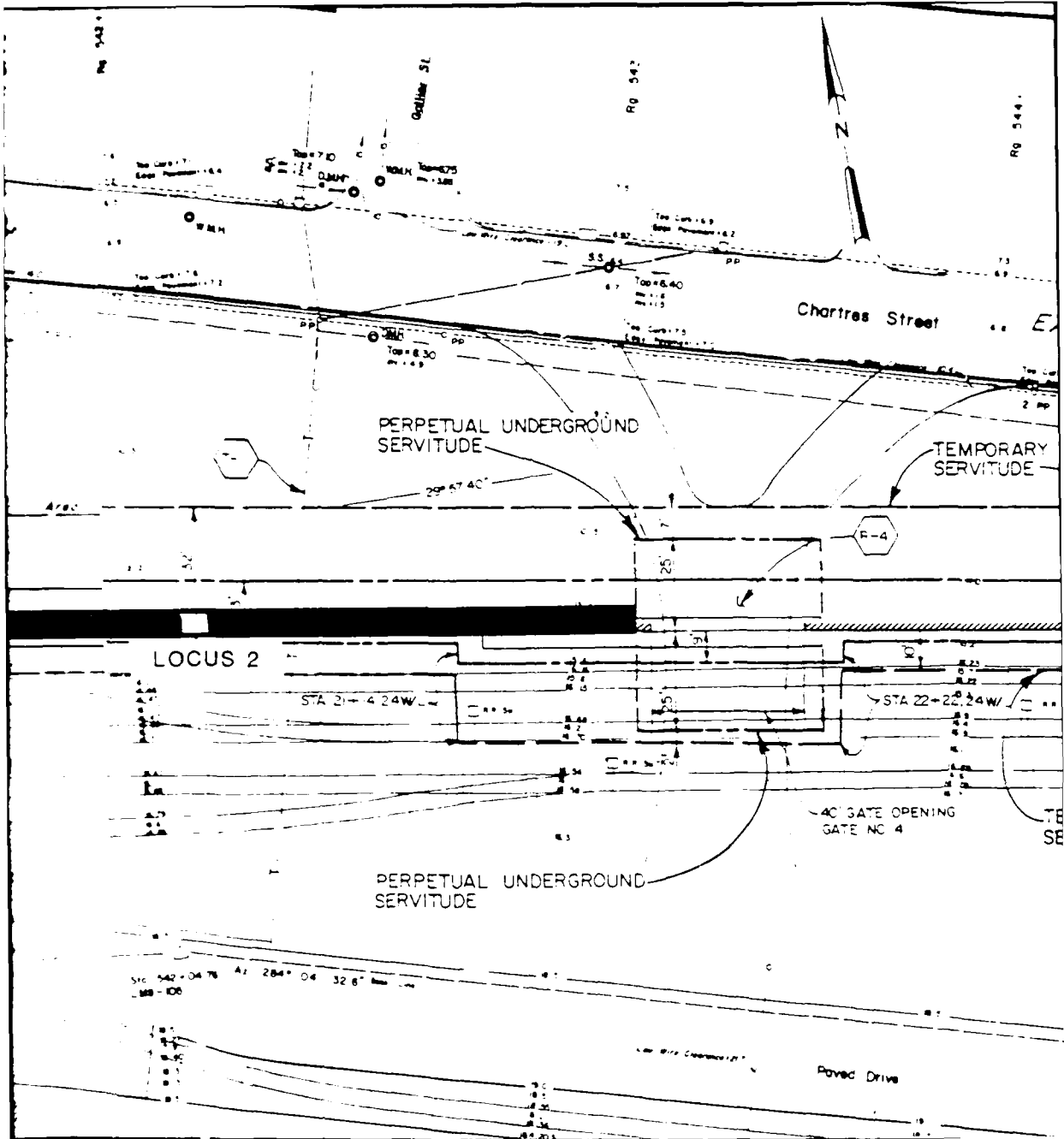
SYMBOL LEGEND

- (with 'D') --- DMH DRAIN MANHOLE
- (with 'W') --- WMH WATER MANHOLE
- (with 'M') --- MH MANHOLE
- (with 'S') --- SS STORM SEWER
- (with 'P') --- PP POWER POLE
- (with 'C') --- CB CATCH BASIN
- ⊥ --- LP LIGHT POLES
- ⊥ (with 'R') --- RR SW RAILROAD SWITCH
- ⊥ (with 'P') --- PM PARKING METERS
- --- NCB NEW CATCH BASIN
- ▲ --- NVM NEW VALVE MANHOLE
- (with 'S') --- UTILITY IDENTIFICATION
- (with 'U') --- UNDISTURBED TYPE BORING
- (with 'G') --- GENERAL TYPE BORING
- NEW FLOODWALL
- WATERLINE
- SEWERLINE
- POWER LINE
- FENCE
- BURIED TEL. CABLE 20'
- AERIAL TEL. CABLE

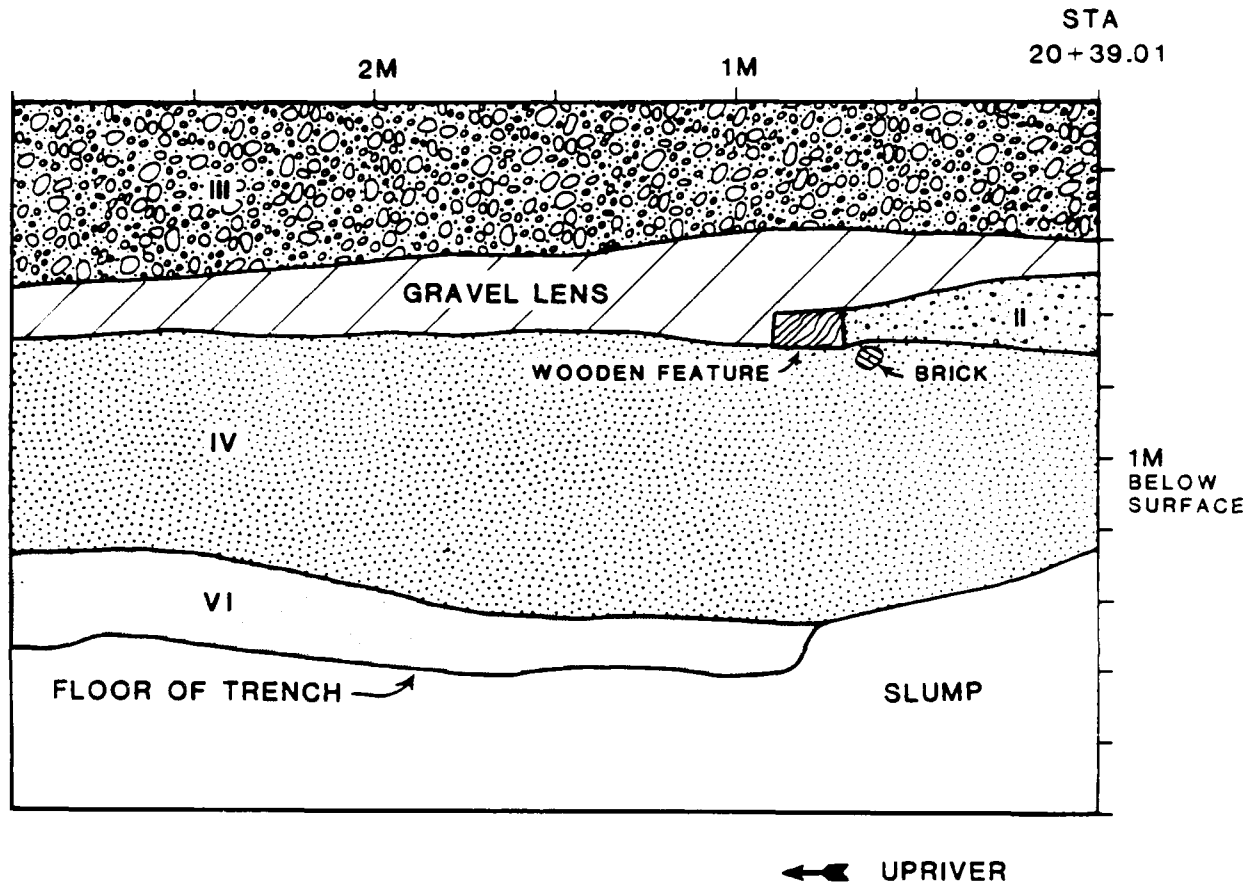


SCALE: 1"=20'

0 20 40 60'



FLOODWALLS 1987
 INDEPENDENCE TO MONTEGUT
 SITE 16 OR 110 LOCUS 2



KEY

- Stratum II Brown Silty Sand Fill (10 YR 5/3)
- Stratum III Black Coarse Silt/Gravel Fill (5 Y 2.5/1)
- Stratum IV Brown Clayey Silt (10 YR 4/3)
- Stratum VI Dark Gray Clayey Silt (7.5 YR 4/0)

Figure 14. Profile of Locus 2, Site 16 OR 110.

The structure may represent a footing or drain pipe. No artifactual remains were found in association.

Locus 3 was located at wall line station 19+53.3 (Figure 13). The feature consisted of a small concentration of brick, and twentieth century glass and ceramic sherds. All the remains were located at 59 centimeters below surface in a stratum of fill.

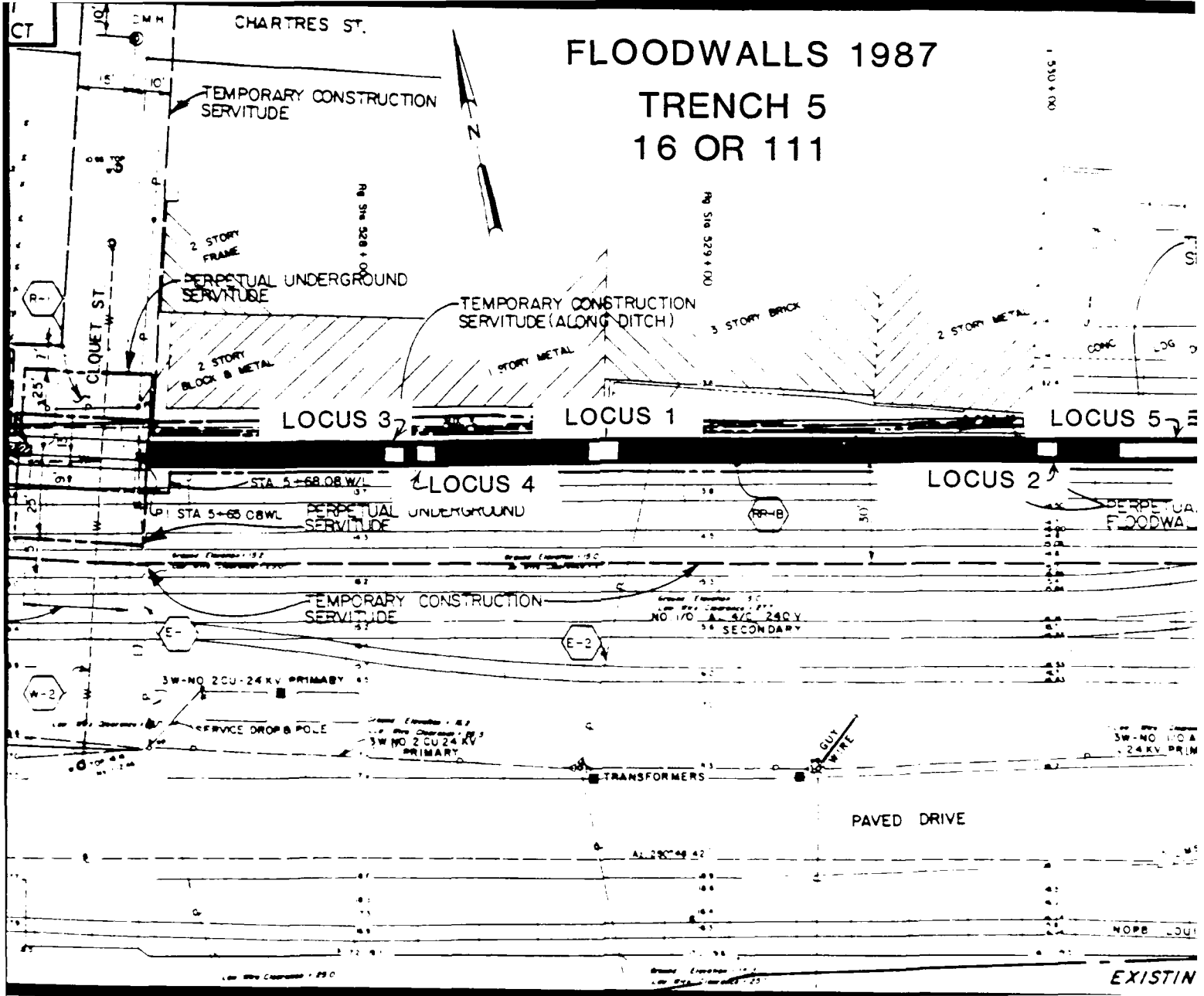
All three loci of cultural materials found at 16 OR 110 were located within secondary deposits, resulting in a lack of depositional integrity throughout the site. In addition, artifactual remains were sparse. No stains or structural remains were encountered. Therefore, due to the lack of depositional and structural integrity, the site is not considered eligible for nomination to or inclusion on the National Register of Historic Places.

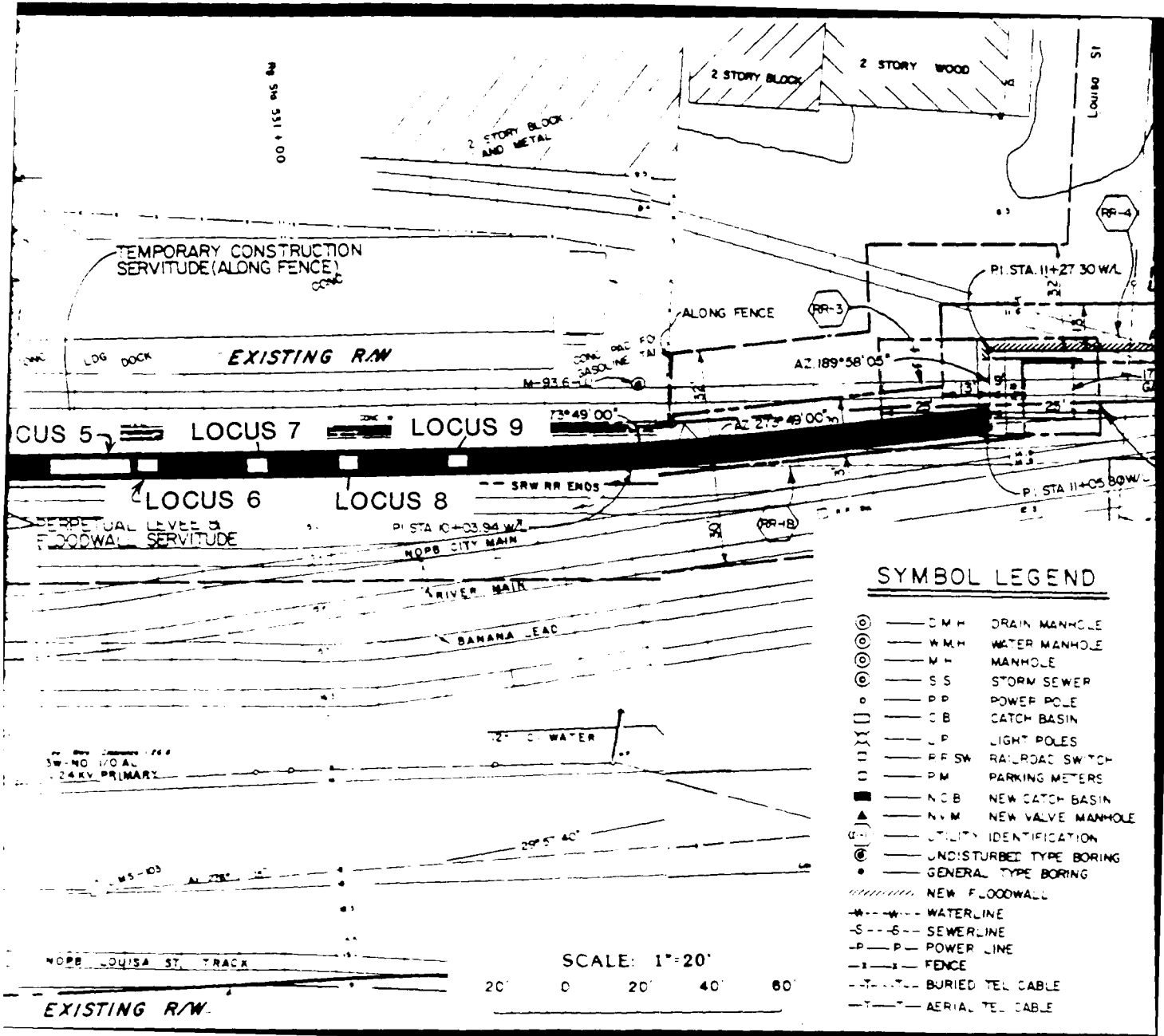
Site 16 OR 111 (Floodwalls 1987-4). Site 16 OR 111 is represented by the city block between Louisa Street and Clouet Street, or Trench 5 of the preconstruction inspection trench excavation (Figure 15). It is situated on the east (left descending) bank of the Mississippi River between wall line stations 11+05.80 and 5+65.08. This portion of inspection trench is located within the NOPBR right-of-way. The site consists of nine loci of cultural remains representing late nineteenth to early twentieth century occupations.

Locus 1 consisted of the remains of two brick piers located between wall line station 6+91.94 and 6+98.54, at a depth of approximately 1.35 meters below surface (Figure 15). Stratigraphically, these piers were associated with a dark gray (7.5 YR 4/0) clayey silt that appears to comprise natural levee deposits (Figure 16). Only a single course of each pier was still present in the wall of the trench. A large scatter of brick was noted in the floor of the trench. It was unclear whether these remains were in situ, or whether they were part of the pier that was disturbed by the backhoe. Very few artifacts were found in association with the features. Collected artifacts included 2 shell edged whiteware sherds and 1 saw-cut bone, indicating an approximate date of 1830 to 1870 for the locus.

Locus 2 was located at wall line station 8+18.6 (Figure 15). It consisted of a sparse scatter of late nineteenth century to early twentieth century artifacts. No other features or stains were noted in the vicinity of the refuse. Artifacts were collected from a stratum of coarse black (5 Y 2.5/1) fill, located at a depth of approximately 60 centimeters below surface, and from backdirt removed from this location. Recovered remains included 1 piece of stucco,

FLOODWALLS 1987 TRENCH 5 16 OR 111

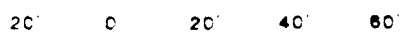




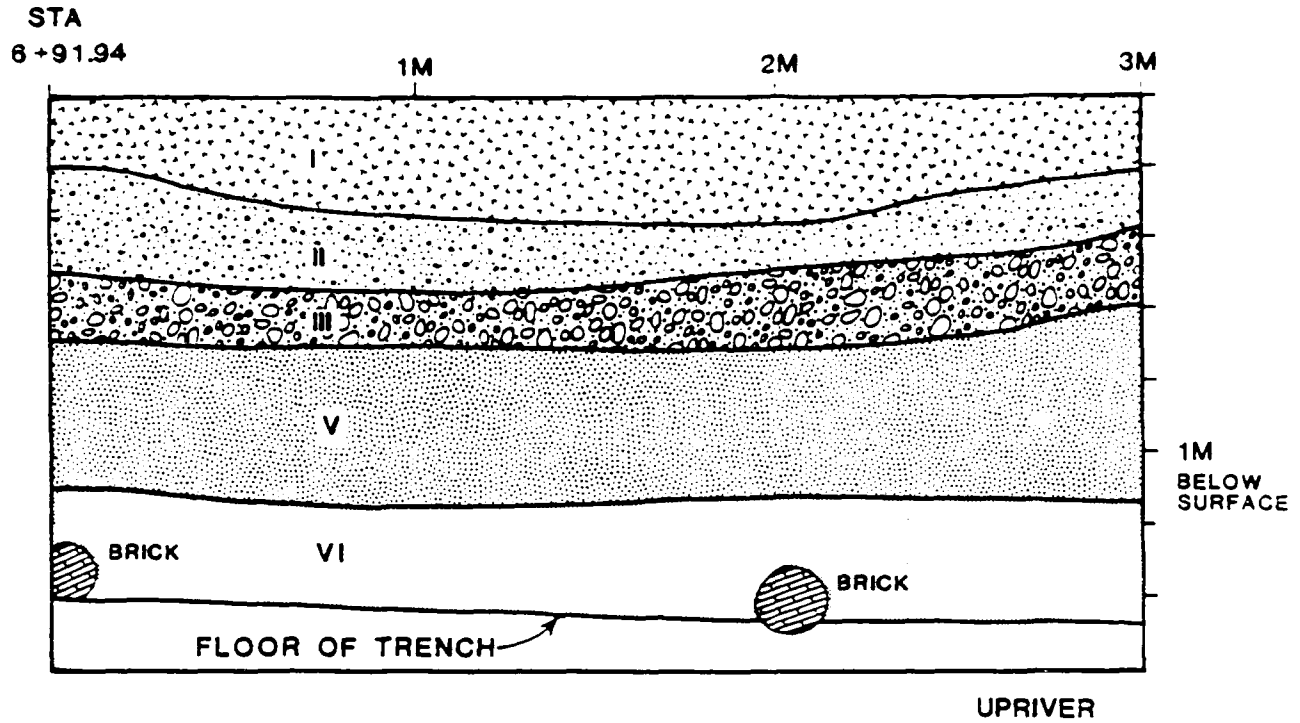
SYMBOL LEGEND

- ⊙ — DMH DRAIN MANHOLE
- ⊙ — WMH WATER MANHOLE
- ⊙ — M H MANHOLE
- ⊙ — S S STORM SEWER
- ⊙ — P P POWER POLE
- ⊙ — C B CATCH BASIN
- ⊙ — L P LIGHT POLES
- ⊙ — R F SW RAILROAD SWITCH
- ⊙ — P M PARKING METERS
- ⊙ — N C B NEW CATCH BASIN
- ⊙ — N V M NEW VALVE MANHOLE
- ⊙ — UTILITY IDENTIFICATION
- ⊙ — UNDISTURBED TYPE BORING
- ⊙ — GENERAL TYPE BORING
- ▨ — NEW FLOODWALL
- — — — — WATERLINE
- - - - - SEWERLINE
- - - - - POWER LINE
- - - - - FENCE
- - - - - BURIED TEL CABLE
- - - - - AERIAL TEL CABLE

SCALE: 1"=20'



FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 111 LOCUS 1



KEY

- | | | |
|-------------|--|---|
| Stratum I | | Rangia Shell Fill (10 YR 2/1) |
| Stratum II | | Brown Silty Sand Fill (10 YR 5/3) |
| Stratum III | | Black Coarse Silt/Gravel Fill (5 Y 2.5/1) |
| Stratum V | | Light Brownish Gray Sand (2.5 Y 8/2) |
| Stratum VI | | Dark Gray Clayey Silt (7.5 YR 4/0) |

Figure 16. Profile of Locus 1, Site 16 OR 111.

4 ceramic sherds, 1 glass sherd, and 1 piece of coal.

Locus 3 was located at wall line station 6+22.14 (Figure 15). The feature consisted of a small concentration of brick with no associated artifacts or remains. The bricks were located in a stratum of grayish beige sand that appears to be levee fill.

Locus 4 was located at wall line station 6+26.47; it consisted of a single creosote soaked plank in the wall of the trench (Figure 15). No artifacts were noted in the area of the plank, which was located within a stratum of grayish brown sand (levee fill) (Figure 17). The plank appeared to be a remnant of a modern feature, perhaps associated with the railroad.

Locus 5 was located between wall line station 8+41.57 and 8+52.46 (Figure 15). It consisted of a series of four circular stains located in the trench floor at a depth of approximately 90 centimeters below surface. The stains were located at 1.1 meter intervals along the trench. One stain, located at wall line station 8+44.87, contained several brick fragments. The three other stains were sterile. No other artifactual remains were associated with any of the stains. Examination of the stratigraphy showed the stains as dips in the stratum immediately overlying them. The origin of these features is unclear.

Locus 6 was located at wall line station 8+52.46 (Figure 15). The feature consisted of a circular stain containing three to four brick fragments situated at approximately 1.4 meter below surface, in a stratum of grayish brown sand. No artifacts were noted or collected.

Locus 7 was located at wall line station 8+90.03 (Figure 15). It consisted of a circular stain in the floor of the trench at a depth of approximately 1.6 meters below surface. Several brick fragments were associated with the stain; no artifacts were noted or collected.

Locus 8 was located at wall line station 9+23.43 (Figure 15). The feature consisted of three 1-meter-long planks in the wall of the trench at a depth of approximately 1.2 meters below surface (Figure 18). No artifacts, stains, or other features were associated with the planks. It is possible that they represent remains of old shoring associated with the railroad or an underground pipeline. Therefore, it is likely that the planks represent a modern feature.

Locus 9 was located at wall line station 9+51.07 (Figure 15). The feature consisted of a small concentration of brick situated at approximately 97 centimeters below surface

FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 111 LOCUS 4
 STA 6+26.47

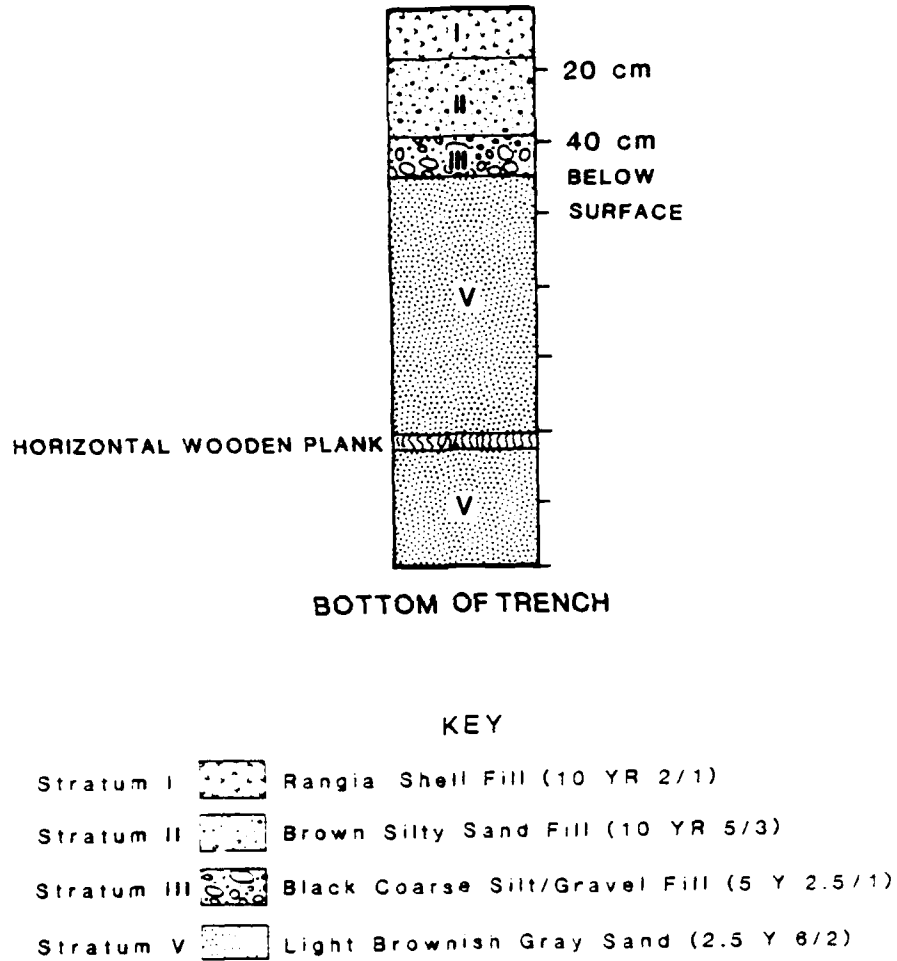
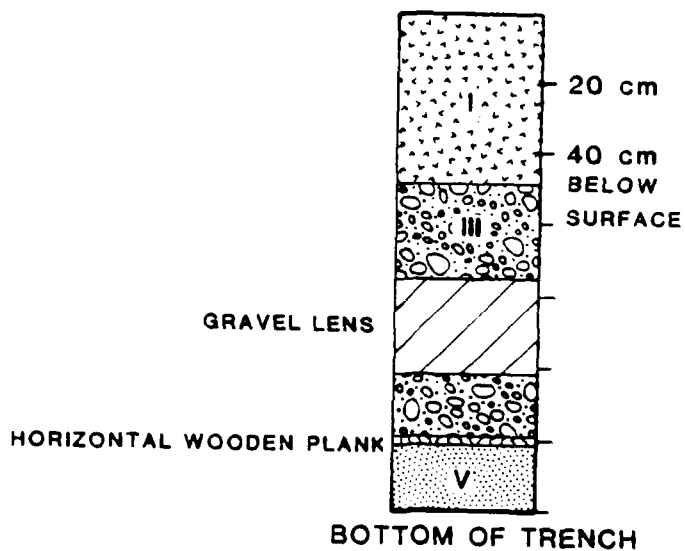


Figure 17. Profile of Locus 4, Site 16 OR 111.

FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 111 LOCUS 8
 STA 9+23.43



KEY




- Stratum I  Rangia Shell Fill (10 YR 2/1)
- Stratum III  Black Coarse Silt/Gravel Fill (5 Y 2.5/1)
- Stratum V  Light Brownish Gray Sand (2.5 Y 6/2)

Figure 13. Profile of Locus 8, Site 16 OR 111.

(Figure 19). It extended for approximately 50 centimeters along the wall of the trench. Two roofing tile fragments were noted in association with the brick; no other artifactual remains were noted or collected.

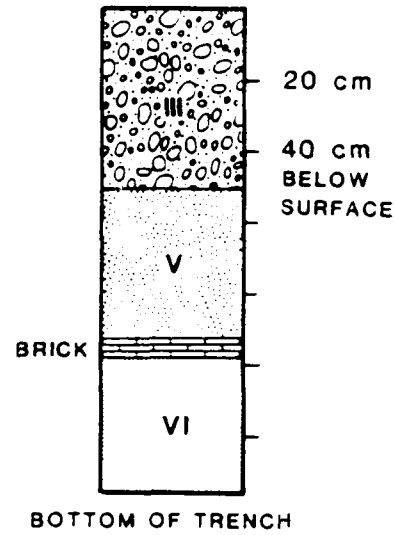
Site 16 OR 111 consisted of a number of modern and early twentieth century features. Generally, however, remains associated with the site were sparse and/or located in secondarily deposited strata (i.e., industrial or levee fill). The lack of depositional integrity, the paucity of artifactual remains, and the absence of intact features, negates the site's eligibility for nomination to or inclusion on the National Register of Historic Places.

Site 16 OR 112 (Floodwalls 1987-5). Site 16 OR 112 comprises the city block between Montegut Street and Clouet Street, or Trench 6 of the preconstruction inspection trench excavation (Figure 20). The site is situated on the east (left descending) bank of the Mississippi River. This portion of the inspection trench is located approximately 8 feet (2.4 meters) city side of the NOPBR right-of-way. The site consists of seven loci of cultural materials dating from the late nineteenth century to early twentieth century.

Locus 1 consisted of the remains of one brick pier and a lens of historic glass sherds and other refuse, located at a depth of approximately 1.53 meters below surface (Figure 20). The pier, a lens of brick approximately one meter in length, is situated in a stratum of water-logged dark gray (7.5 YR 4/0) clayey silt. Brick also was located in the back dirt. Immediately downriver from the brick concentration (between sta. 0+66.0 and 1+16.82) was a lens of glass sherds; other refuse material also was present. The glass lens continued in the floor of the trench for approximately 14 meters. The relationship between the brick concentration and the glass lens is unclear. Included in the artifacts recovered from the trench are 79 glass fragments, 8 stoneware bottle sherds, 8 glass bottle bases, 6 glass bottle rims, and several pieces of roofing slate. Diagnostic artifacts (i.e., the glass bottle bases and rims, and the ginger beer bottle fragments) yielded a date ranging from 1845 to 1920. Logistical problems, including ground water seepage and trench wall collapse, prevented detailed examination of the area at the time of initial documentation. It was hoped that the area could be re-examined at a later date; however, right-of-entry problems prevented doing so. As a result, the nature and function of this component of 16 OR 112 are unclear.

Locus 2 was located at wall line station 4+79.01 (Figure 20). The locus consisted of a small scatter of late nineteenth century to early twentieth century artifacts. No stains or features were located within the area of these

FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 111 LOCUS 9
 STA 9+23.43



KEY




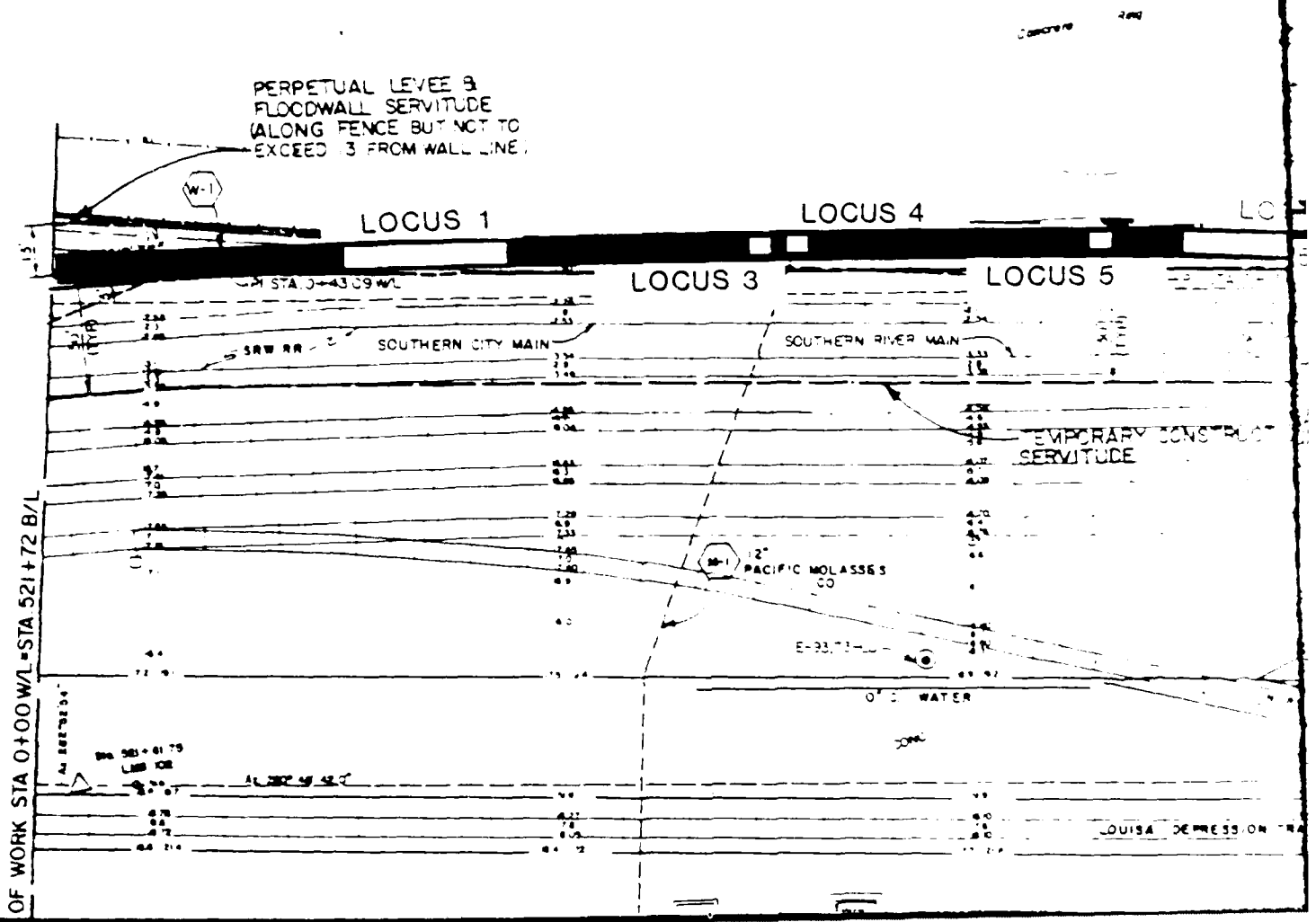
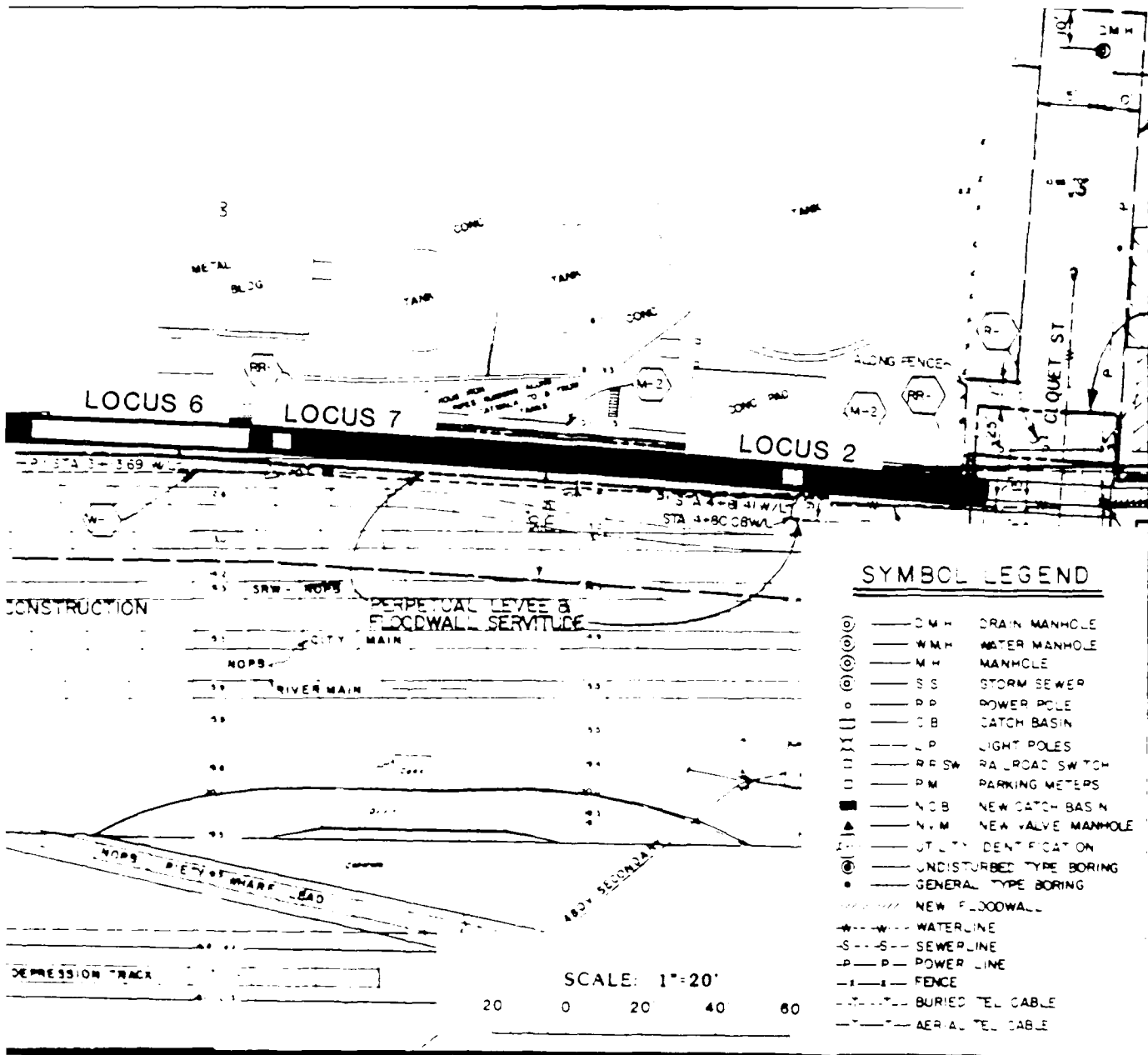
- Stratum III  Black Coarse Silt/Gravel Fill (5 Y 2.5/1)
- Stratum V  Light Brownish Gray Sand (2.5 Y 6/2)
- Stratum VI  Dark Gray Clayey Silt (7.5 YR 4/0)

Figure 19. Profile of Locus 9, Site 16 OR 111.

FLOODWALLS 1987 TRENCH 6 16 OR 112

PERPETUAL LEVEE &
FLOODWALL SERVITUDE
(ALONG FENCE BUT NOT TO
EXCEED 13 FROM WALL LINE)





SYMBOL LEGEND

- ⊙ --- DMH DRAIN MANHOLE
- ⊙ --- WMH WATER MANHOLE
- ⊙ --- MH MANHOLE
- ⊙ --- SS STORM SEWER
- ⊙ --- PP POWER POLE
- ⊙ --- CB CATCH BASIN
- ⊙ --- LP LIGHT POLES
- ⊙ --- RR SW RAILROAD SWITCH
- ⊙ --- PM PARKING METERS
- ⊙ --- NCB NEW CATCH BASIN
- ⊙ --- NVM NEW VALVE MANHOLE
- ⊙ --- UT CITY IDENTIFICATION
- ⊙ --- UNDISTURBED TYPE BORING
- ⊙ --- GENERAL TYPE BORING
- ⊙ --- NEW FLOODWALL
- WATERLINE
- SEWERLINE
- POWER LINE
- FENCE
- BURIED TEL CABLE
- AERIAL TEL CABLE

remains. Materials were collected from a stratum of coarse black (5 Y 2.5/1) fill, located at a depth of approximately 60 centimeters below surface. They included 1 ceramic ginger beer bottle, 7 ceramic sherds, 1 machine-made glass bottle (circa 1920), 1 glass bottle base, and 5 glass sherds. The locus appears to represent redeposited refuse.

Locus 3 was situated at wall line station 1+73.26 (Figure 20). The locus consisted of the remains of a brick pier including three courses of brick, and of a large concentration of brick rubble. No artifactual remains were noted in the area of the pier. Immediately downriver from this concentration, at wall line station 1+79.20, was a large molasses pipeline from the Pacific Molasses Company. The molasses plant is located in the Montegut Street to Clouet Street block on Chartres Street. The brick pier, therefore, appears to be a shoring foundation associated with the pipeline; thus, it is a modern structure.

Locus 4 was located at wall line station 1+79.20 (Figure 20). The feature consisted of a brick pier, including several courses of brick. Like Locus 3, this feature is associated with the Pacific Molasses Company's molasses pipeline. It, therefore, represents a modern feature.

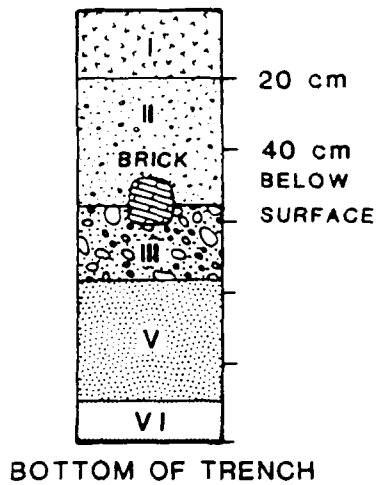
Locus 5 is located at wall line station 2+64.02 (Figure 20). The locus consists of a single course of brick covered with mortar and located at a depth of approximately 1.1 meters below surface. No artifactual remains were noted in association with the brick.

Locus 6 was located between wall line station 2+37.29 and 3+38.23 (Figure 20). The feature consisted of a series of nine concrete conduits situated at a depth of approximately 48 centimeters below surface; they are regularly spaced at an interval of approximately 5.66 feet or 1.7 meters. No artifacts were found in association with the feature. The conduits appear to be modern, and it may represent cross ties (supports) for a concrete retaining wall located immediately city-side of the inspection trench.

Locus 7 was located at wall line station 3+41.47 (Figure 20). The feature consisted of a small concentration of brick fragments located at a depth of 47 centimeters below surface (Figure 21). No artifacts were found in association with the feature.

Site 16 OR 112 consisted of late nineteenth and early twentieth century remains, as well as of a number of modern features. The major component of the site, Locus 1, was not clearly defined due to the aforementioned logistical problems. However, site 16 OR 112 does not have sufficient

FLOODWALLS 1987
 MONTEGUT TO INDEPENDENCE
 SITE 16 OR 112 LOCUS 7
 STA 3+41.47



KEY

- Stratum I Rangia Shell Fill (10 YR 2/1)
- Stratum II Brown Silty Sand Fill (10 YR 5/3)
- Stratum III Black Coarse Silt/Gravel Fill (5 Y 2.5/1)
- Stratum V Light Brownish Gray Sand (2.5 Y 6/2)
- Stratum VI Dark Gray Clayey Silt (7.5 YR 4/0)

Figure 21. Profile of Locus 7, Site 16 OR 112.

depositional or structural integrity to warrant further work. The site, therefore, is not considered eligible for nomination to or inclusion on the National Register of Historic Places.

Site 16 OR 113 (Floodwalls 1987-3). Site 16 OR 113 is represented by the city block between Desire Street and Piety Street, or Trench 4 of the preconstruction inspection trench excavation (Figure 22). The site is situated between wall line stations 18+55.62 and 14+60.43. The area around the site is overgrown heavily with small shrubbery and vegetation. The inspection trench cuts through a steep area built up by the railroad bed. Excavation in this portion of the inspection trench was difficult because of this steep grade. The angle of excavation continually resulted in the undercutting of the trench wall, causing continual collapse of the riverside wall of the trench. The site consists of five loci of cultural material dating to the late nineteenth and early twentieth centuries.

Locus 1 was located at wall line station 18+32.75 (Figure 22). It consisted of approximately 63 ginger beer bottle sherds representing a minimum number of four vessels. The bottles, located at approximately 50 centimeters below surface, probably were broken by the backhoe during excavation, as evidenced by the fresh breaks on the sherds. A date of 1850 to 1900 has been assigned to the remains. No other artifacts, features, or stains were associated with the bottle sherds. All were located in a stratum of black (5 Y 2.5/1) fill. The stratigraphic location of the remains suggests that they represent a secondary deposit.

Locus 2 was located at wall line station 15+85.14 (Figure 22). It consisted of a small concentration of late nineteenth century to mid-twentieth century artifacts. These remains include 1 ginger beer bottle, 1 bone fragment, and two whole machine-made bottles. No other features or stains were noted. Stratigraphically, the site was located in a stratum of coarse black (5 Y 2.5/1) fill, at a depth of approximately 60 cm below surface. It is likely the locus represents redeposited remains.

Locus 3 was located between wall line station 13+06.62 and 18+15.92 (Figure 22). The feature consisted of a line of approximately five vertical timbers situated at a depth of 74 centimeters below surface to an unknown depth at the bottom of the trench. No artifactual remains were associated with the feature, which may constitute shoring for the railway line. Alternatively, it may have been associated with a water line located immediately upriver. However, the feature clearly is modern.

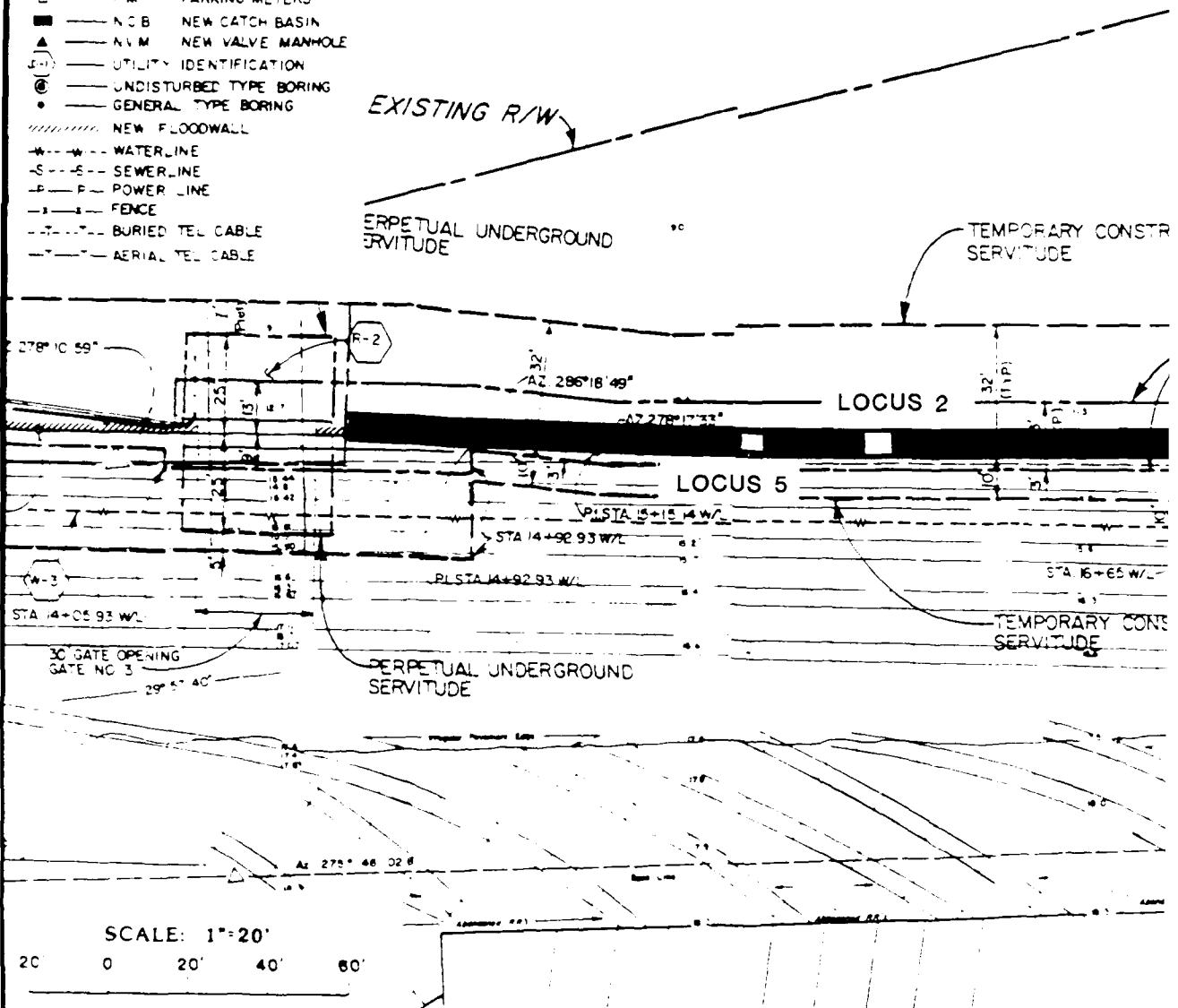
SYMBOL LEGEND

- ⊙ — D.M.H. DRAIN MANHOLE
- ⊙ — W.M.H. WATER MANHOLE
- ⊙ — M.H. MANHOLE
- ⊙ — S.S. STORM SEWER
- ⊙ — P.P. POWER POLE
- ⊙ — C.B. CATCH BASIN
- ⊙ — L.P. LIGHT POLES
- ⊙ — R.F.S.W. RAILROAD SWITCH
- ⊙ — P.M. PARKING METERS
- — N.C.B. NEW CATCH BASIN
- ▲ — N.V.M. NEW VALVE MANHOLE
- ⊙ — UTILITY IDENTIFICATION
- ⊙ — UNDISTURBED TYPE BORING
- ⊙ — GENERAL TYPE BORING
- ▨ — NEW FLOODWALL
- *—*— WATER LINE
- S—S— SEWER LINE
- P—P— POWER LINE
- X—X— FENCE
- T—T— BURIED TEL. CABLE
- A—A— AERIAL TEL. CABLE

FLOODWALLS 1987

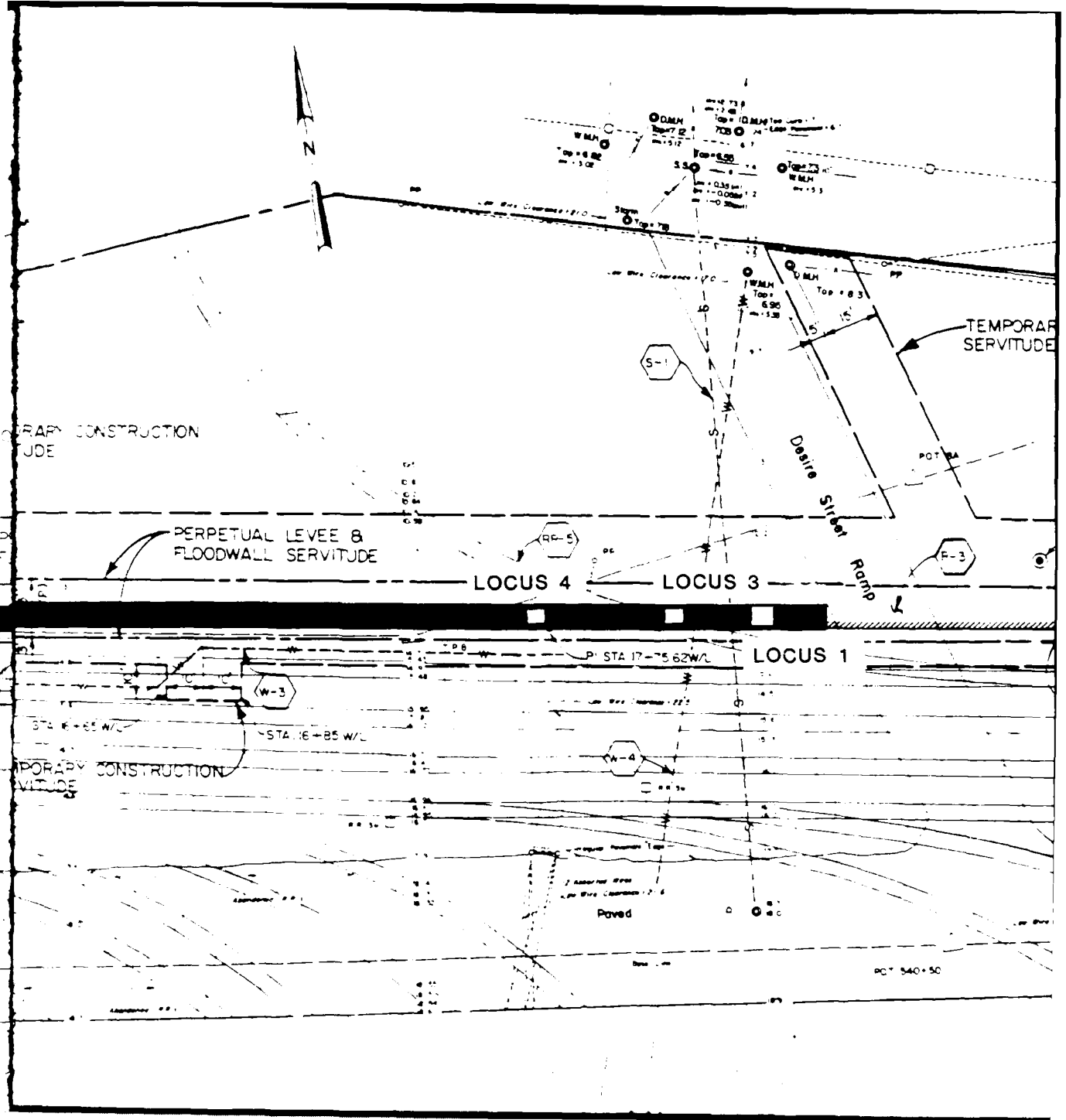
TRENCH 4

16 OR 113



SCALE: 1"=20'

20 0 20' 40' 60'



Locus 4 consisted of a small concentration of wine bottles located at wall line station 17+75.69 (Figure 22). The bottles, all manufactured in the twentieth century, were situated in a stratum of Rangia fill. They probably represent refuse from a bar that was located on the corner of Chartres and Desire Streets. The locus, therefore, is a modern deposit.

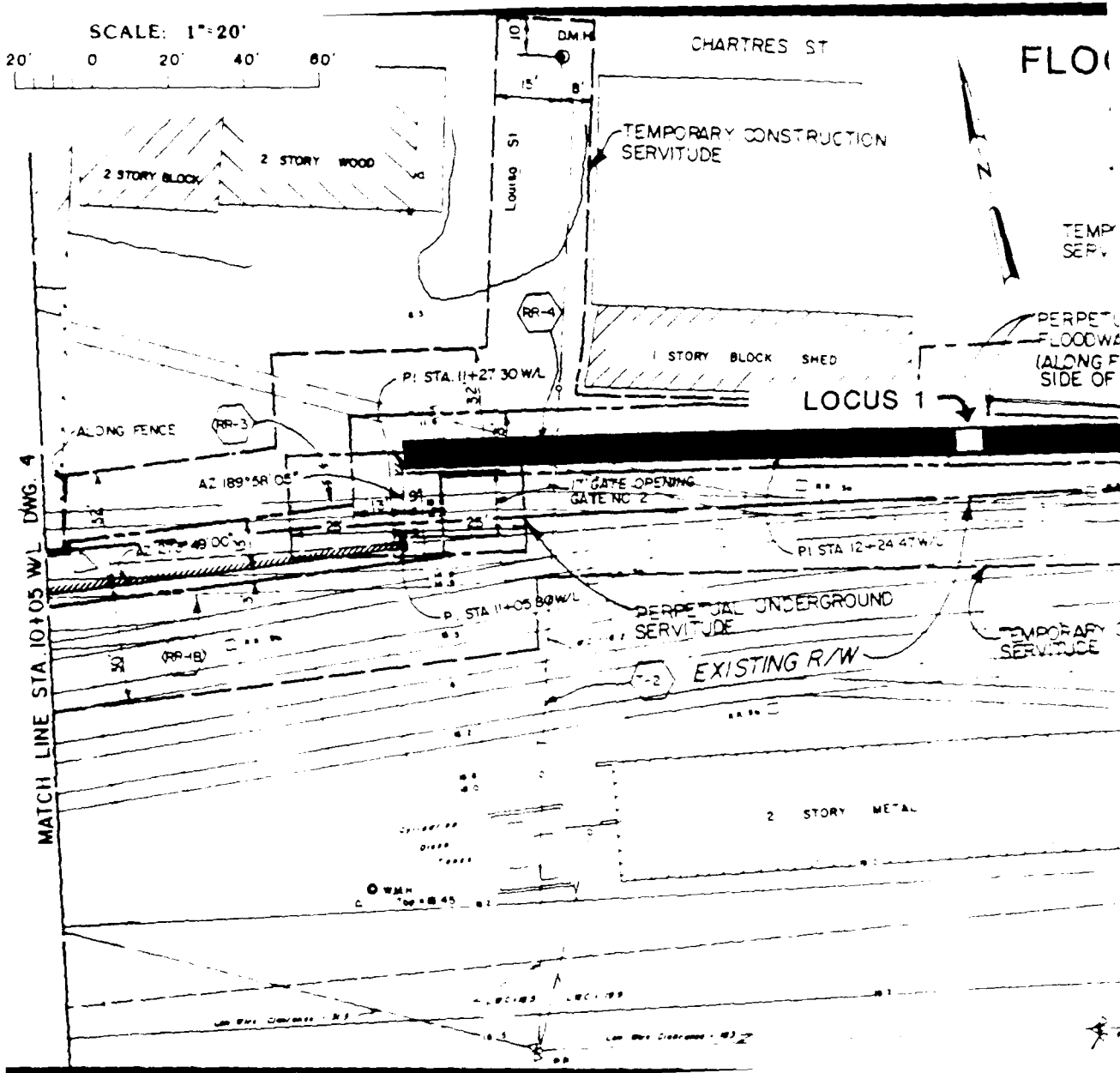
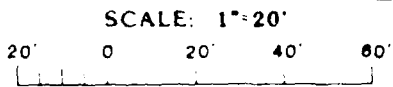
Locus 5 was located at wall line station 15+60.94 (Figure 22). It consisted of a concrete/aggregate piling approximately one meter wide. Although the feature was excavated to a depth of 1.5 meters, the bottom could not be found. No artifacts or other remains were associated with this piling. As a result, it was determined to be modern.

Site 16 OR 113 consists primarily of secondarily deposited refuse and modern features. No stains or historic structural remains were encountered. As such, the site lacks sufficient depositional integrity, and artifactual materials to warrant consideration for nomination to or inclusion on the National Register of Historic Places.

Site 16 OR 114 (Floodwalls 1987-11). Site 16 OR 114 is the city block between Piety Street and Louisa Street, or Trench 7 of the preconstruction inspection trench excavation (Figure 23). The site was located between wall line stations 14+15.78 to 11+27.30. The area around this portion of the inspection trench is covered in gravel from the NOPBR railroad right-of-way located approximately 8 feet riverside of the trench and overgrown vegetation. The vegetation was cleared prior to excavation of the trench. One locus of cultural remains was identified at wall line station 12+77.30. It consisted of a sparse scatter of late nineteenth century to mid-twentieth century artifacts. No features or stains were associated with the remains. All remains were located in a stratum of coarse black (5 Y 2.5/1) fill, at a depth of approximately 60 cm below surface. Recovered remains included 1 glass bottle sherd, 5 brick fragments, and 1 cut spike. The association of these remains with a stratum of fill indicated that they represent redeposited materials. Therefore, based on the lack of contextual integrity, the paucity of artifactual remains, and the absence of intact structural features, the site is not thought to be eligible for nomination to or inclusion on the National Register of Historic Places.

Summary

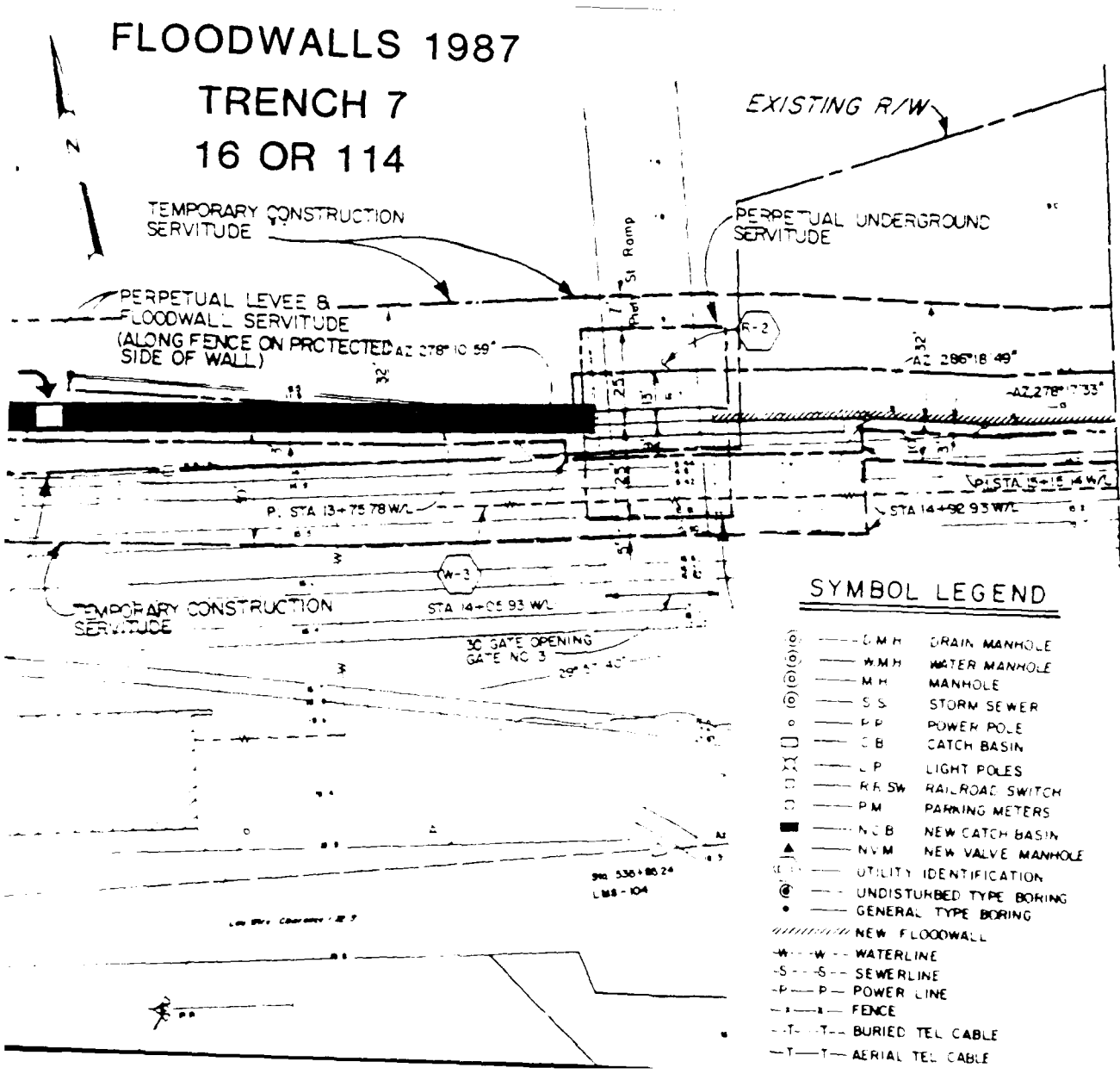
Archeological monitoring of the Montegut Street to Independence Street floodwall alignment recovered numerous subsurface historical features and artifact concentrations.



FLOODWALLS 1987

TRENCH 7

16 OR 114



SYMBOL LEGEND

- D.M.H. DRAIN MANHOLE
- W.M.H. WATER MANHOLE
- M.H. MANHOLE
- S.S. STORM SEWER
- P.P. POWER POLE
- C.B. CATCH BASIN
- L.P. LIGHT POLES
- R.R. SW. RAILROAD SWITCH
- P.M. PARKING METERS
- N.C.B. NEW CATCH BASIN
- N.V.M. NEW VALVE MANHOLE
- UTILITY IDENTIFICATION
- (○)--- UNDISTURBED TYPE BORING
- GENERAL TYPE BORING
- /--- NEW FLOODWALL
- W--- WATERLINE
- S--- SEWERLINE
- P--- POWER LINE
- F--- FENCE
- T--- BURIED TEL. CABLE
- T--- AERIAL TEL. CABLE

MATCH LINE STA. 15+45 W/L DWG. 6

310 536+80.24
LMS-104

See Also Drawing 16.7

A total of six sites were designated throughout the floodwall alignment. Twenty-five loci of cultural materials were distributed within these sites. All sites contained late nineteenth to early twentieth century remains deriving from the use of the area as a railroad corridor, (i.e. wooden shoring, concrete ties, concrete piers, etc.). Some evidence of residential structures also was noted. This included construction remains such as roofing slate, bricks, and nails, along with a variety of household related artifacts such as glass bottles, ceramics, and faunal remains. None of the sites contained intact deposits, features, or structural remains. As such, none of the six identified sites are considered to be eligible for consideration for inclusion on the National Register of Historic Places.

Results of monitoring along the Montegut Street to Independence Street floodwall are similar to those of the investigations along the Independence to Inner Harbor Navigation Canal alignment, the Barracks to Montegut alignment, and the Canal to Toulouse alignment. These investigations, conducted in 1985 by R. Christopher Goodwin & Associates, Inc., identified a total of nine sites including a timber shoring framework, several brick surfaces, a number of brick and mortar structures, and two areas of refuse disposal (Goodwin et al. 1986). However, none of the ten sites had sufficient integrity to be considered eligible for nomination to or inclusion on the National Register of Historic Places. Like the sites designated in the Montegut to Independence alignment, these ten sites appear to derive from the heavy use of the area as a railroad corridor throughout the late nineteenth century and twentieth century.

CHAPTER VI

LABORATORY METHODOLOGY AND RESULTS

Introduction

Laboratory analysis focused on the chronological, functional, and socioeconomic parameters of site occupation. Prior to the examination of the artifact assemblages, all remains were washed, labelled, and catalogued according to provenience. Ceramic artifacts were classified according to decoration and paste. Glass artifacts were classified by technological and formal attributes. Metal and other miscellaneous artifacts were identified whenever their condition permitted; these classes of artifacts received less formal classificatory attention than did the more time-sensitive artifact classes.

Chronological determinations were based on a number of manufacturing processes and maker's marks. Maker's marks were dated by use of reference books including Kovel (1986) and Toulouse (1971). Indirect references based on the popularity of specific patterns also were used. A summary of the general date ranges for glass, ceramics, and nails is provided in Table 4.

Functional analysis was based on the system developed by Stanley South (1977). South's functional groups and classes were developed to accommodate historic sites predating 1950. Artifacts were classified by type (i.e. annular pearlware, blue painted pearlware), ware (i.e. pearlware, creamware), material (i.e. earthenware, stoneware, pewterware), class (i.e. ceramics, wine bottle, glassware, tableware), and group (i.e. kitchen, architecture, furniture). It was intended that the organization of the data into such categories would produce interpretive results varying with the level of generalization (i.e. at the type level or at the group level) (South 1977:93). As South states:

It is expected that broader cultural processes will likely be revealed at the group level of generalization due to the functional relationship between the group and generalized behavioral activity in the cultural system. Comparison at the type or style level of classification is expected to reveal answers to questions about nationalistic or ethnic origin, trade routes, culture contact, and idiosyncratic behavior, depending on the questions being asked... (South 1977:93-94).

TABLE 4

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ARTIFACT DATE RANGES AND SOURCES

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ARTIFACT TYPE	DATE RANGE	SOURCE
Ceramics		
Stoneware Ale Bottle	1850s-1900s	Goodwin et al. 1986
Whiteware, scalloped rim, incised straight lines	1820-1840	Miller 1980 Lofstrom 1977
Yellowware	1830-1900	Ramsey 1947
Ironstone	1813-1900	South 1977
Whiteware, transfer printed	1820-1860	Miller 1980 Lofstrom 1977
Whiteware, decal	Post-1902	Wheaton and Garrow 1985
Glass		
Iron Pontil	1845-1880	Muncey 1970
Post Bottom Mold	1820-1920	Jones 1985
Dipping Tool	1850-1920	Muncey 1970
Plate Bottom Mold	1850s-1920	Muncey 1970
Machine-made Bottle	Post-1920	Jones 1985
Turn Paste Mold	1880-1910	Muncey 1970
Nails		
Cut Nails	1815-1870	Nelson 1963
Wire-drawn Nails	Post-1870	Nelson 1963

However, archeologists working with sites that post-date 1850 have found that South's types and groups do not encompass the full range of artifact types represented in an assemblage generated during and/or after the industrial revolution. Archeological remains recovered during monitoring of the Montegut Street to Independence Street floodwall reflect a time period spanning both the pre- and post-industrial revolution. Therefore, in order to use South's methodology for this study, a number of changes were required. These alterations are listed below.

1. Expansion of the bottle classification in the Kitchen group was necessary to accommodate technological advancements in glass-container manufacturing since the mid-1850s.
2. Colono-Indian pottery was moved from the Activities group to the Kitchen group.
3. An additional Miscellaneous group was created in order to include the quantitative and date specific information provided by a range of artifacts that included coal, corroded metal, and small glass fragments. Also included in this group were distinct objects that could not be identified as to their original function.
4. Since the purpose of this organization was to determine functional relationships, the Bone group was eliminated due to its non-functional classification. Bone, when cut, was placed within the Kitchen group. Modified bone objects were placed within the appropriate classificatory unit.
5. The Activities group was expanded to include industrial artifacts such as machine parts.

The socioeconomic parameters of a site also may be reflected in the artifactual assemblage. Scaling of the artifacts is undertaken in order to establish a hierarchical ranking of the artifacts and the people associated with them. For example, items such as jewelry, fine crystal, and silverware, typically are high status indicators. The absence of social status indicators in the Montegut Street to Independence Street floodwall alignment, however, hindered

attempts to assess the socioeconomic makeup of the assemblages.

Glass Artifacts

Glass remains recovered from the Montegut Street to Independence Street floodwall alignment project area consisted primarily of whole bottles or large glass bottle sherds. Materials were obtained primarily from backdirt associated with the inspection trench. Since exact provenience could not be determined, only materials with possible diagnostic attributes were collected. Consequently, the majority of glass remains could be assigned a temporal date. Artifactual assemblages date primarily from the early twentieth century, although late nineteenth century remains were present.

All identified glass recovered from the project area falls into one of three categories of manufacturing processes. These include molded, hand-held molded, or machine made bottles. The technology for mold-produced bottles has existed for centuries. However, it was not until the late seventeenth century to early eighteenth century, when hinged metal molds were developed, that mold-blown bottle manufacturing began to replace free-blown bottle making (Munsey 1970:38). The use of hinged metal molds did not become widespread before the early 1800s. At this time, the pace of technological advancements in many aspects of glass manufacturing was increasing rapidly. These developments included shoulder and full height molds, new empontilling methods, and improved finishing techniques.

Shoulder height molds are characterized by the absence of, or disappearance of seam lines just above the curve of the shoulder. The main types of molds used were the shoulder height multi-piece mold and the one piece dip mold. The multi-piece mold generally was in use from the 1820s through to the 1920s. The one-piece dip mold manufactured bottles were not found in the present study area.

Bottles made in the full height mold have vertical seams from the base to just below the lip. Above this point, seams were obliterated during the finishing process. The principal varieties of this mold type included a bottom hinge mold with a basal seam running either diagonally or straight across the bottom (circa 1810-1880) (Munsey 1970:39); a multi-part leaf mold with two, three, or four vertical leaf parts and a separate base part (circa 1850-1920); and, a three part dip mold which allowed for variation in bottle shape (circa 1850-1920).

Two molding variations also used at that time were turn-paste and plate molds. Turn-paste molds, used between 1870 and 1920, produced a symmetrical bottle by turning the bottle inside a paste-coated mold. This method, in addition to obliterating seam lines, also prevented the embossment of the bottle. Plate molding (circa 1821-1920) was an adaptation of previously mentioned mold-types; the removable or interchangeable plates allowed the manufacturers to produce bottles with a variety of embossments.

In addition to mold-made, bottles also were hand-blown (free or mold blown). Both free-blown and dip-molded bottles had to be held by some method while the bottle was finished; this was accomplished using a pontil. Four methods of holding bottles during the finishing stage were common historically; each produced a temporally diagnostic mark on the base of the bottle. All of the methods allowed the craftsmen free access to finish the bottle neck and lip. Two of these methods utilized either a glass tipped solid iron bar or a glass tipped blow pipe to hold the bottle for finishing. These solid iron bar pontils are characterized by a solid jagged circular scar left when the rod was broken off of the bottle base. Blow pipe scars consist of a number of jagged rings, rather than the solid scar left by the iron rod. Both of these methods were replaced by bare iron empontilling in the mid-1800s. No examples of either iron bar or blow pipe empontilling were found in the Floodwall site assemblages.

The introduction of bare iron empontilling increased the efficiency of bottle finishing. This process involved the use of a flared iron rod that was applied directly to the bottle base surface while red hot. This technique left a smooth indented circular scar on the base of the bottle. The popularity of this method continued until the early 1870s, when the snap case method replaced the bare iron rod empontilling process. The snap case empontilling device is a four pronged clip attached to an iron rod. The neck of the bottle was allowed to protrude. This method left no distinctive scar.

Two methods of lip finishing were employed during the mid- to late nineteenth century. These were the tooled lip and the flared or fired method. Lip tooling was done with a handheld clamp and plug device. The plug was placed in the bore of the neck, and the two pronged clamps were placed around the outer edge of the reheated bottle. The tool was rotated to form the desired lip shape. Diagnostic characteristics of this method are the obliteration of mold seams on the neck, horizontal striations in the glass, and puddles of excess glass on the neck.

The flared or filed lip formation method involved the reheating of the neck of the bottle. This reheating retted and smoothed the rough edges left by the mold. Additionally, this process also faded or obliterated seam marks, depending upon the amount of reheating and the distinctiveness of the seams.

Towards the end of the nineteenth century, glass manufacturing was becoming mechanized. The introduction of Owens' bottle machine in 1903 represented the first successful implementation of a fully mechanized process. By the 1920s, the Owens machine was in common use in the United States where it had replaced hand blown molded bottles almost completely.

Ceramic Artifacts

Primarily nineteenth century ceramic artifacts were recovered during monitoring of the Montegut Street to Independence Street floodwall inspection trench. Although archeological classification of eighteenth century ceramics is fairly coherent and well developed (Noel Hume 1978), there is no comprehensive typology of nineteenth century ceramics. Prior to 1850, ceramic technology changed at such a rate that technological and stylistic changes together could be used to provide a tight ceramic chronology. The primary ceramic types utilized during this period were creamwares and pearlwares. Developments in ceramic technology during the nineteenth century, however, facilitated production of newer ceramic types. The two most notable products of these developments were whitewares and ironstones, which gradually replace pearlwares and creamwares. South (1974) presented a taxonomy of nineteenth century ceramic types; however, South's taxonomy is not particularly sensitive either to technological developments or to relationships between certain nineteenth century types. Miller (1980) suggests classification should be based on decorative type and on form. This method tends to obscure or ignore both variability in paste and important chronological information. More recently, Worthy (1982) suggested that classification and interpretation of late nineteenth century and early twentieth century ceramics should integrate technology, form, function, and decoration (Worthy 1982:329). The following discussion presents a general description of the formal classificatory system utilized during analysis of the artifacts recovered during monitoring at the Montegut Street to Independence Street floodwall alignment.

As noted above, the nineteenth century saw the development of a new type of ceramic, the whitewares and ironstones. Also included in this new group of ceramics are

Yellowares. Generally referred to as refined earthenwares, these wares are characterized by harder, whiter paste. Most have a lead-based glaze, and usually are distinguished by the different color and characteristics of their glaze (Noble and Goodwin 1987).

Whitewares and ironstones, the major ceramic type recovered during monitoring of the Montegut Street to Independence Street floodwall project right-of-way, have similar pastes and share similar stylistic characteristics. This makes differentiation based on these attributes difficult. Ironstones do have a slightly harder paste due to the use of calcined flint in the paste. While true ironstone has been characterized by a semi-vitrified, true white paste, underfiring and impurities in pastes can produce ware indeterminate from that of whiteware. Therefore, as differences between whitewares and ironstones have not been defined clearly, this study will refer to all artifacts that cannot be definitively assigned to one or other category as whiteware/ironstone. Dating of whiteware/ironstone artifacts is based on decorative designs when present.

Yellowares can be distinguished by their yellow paste and clear glaze. These wares are considered to be of domestic manufacture and are usually undecorated. Yellowares usually consisted of utilitarian items such as large bowls, chamber pots, spittoons, and ginger beer bottles. They generally were popular from the mid-1850s to the early nineteenth century. In fact, they still are produced in limited numbers today. These recent wares are usually whiter in paste with a yellowed glaze.

Porcelain is a highly vitrified ceramic with an alkaline glaze. It was first manufactured in Asiatic countries and later in England, continental Europe, and the United States. Porcelain clay was used to produce items such as fine dinnerware, serving pieces, and ornaments. The only example of this ware found in the present project area was recovered from 16 OR 111. The manufacturers mark had a date range of 1899 to 1918 (Kovel 1986).

Porcelaneous stoneware is a ware type with the combined characteristics of porcelain and stoneware. It generally was used in the United States after 1880 for hotel, restaurant, and institutional dinnerware (Goodwin et al. 1986:70). Because this ware is still in production at present, it provides only a post date for the Montegut Street to Independence Street floodwall study.

Stoneware is a hard paste, impermeable ceramic. Glazes, although often present, are considered decorative rather than functional. Stoneware artifacts recovered during the present

study fall into two categories, both of which are considered domestic in origin. The first category is the alkaline glazed sherds similar to those found in the Edgefield tradition. The second category of stoneware artifacts found during trench monitoring are the stoneware ale bottles. Stoneware ale bottles were in production into the latter half of the nineteenth century. They generally have a buff body and yellow glaze (Goodwin et al. 1986). A sizeable number of stoneware ale bottle fragments was recovered from the project area; the majority of these came from site 16 OR 113. A number of sherds have buff to gray paste; this is probably due to uneven firing or underfiring. A majority of the sherds exhibited clear alkaline (ash based) glazed interiors distinguished by a slightly green tint.

Nails

There are three stages in the technological chronology of nails: wrought nails, cut nails, and wire-drawn nails. While wrought nails still are manufactured today, they are used primarily for restoration and reproduction purposes. Wrought nails, the main source of construction fastener in the seventeenth and early eighteenth centuries, were hand forged. No wrought nails were recovered from the present study area.

Cut nails were introduced in the 1790s. These nails had a machine cut body with a hand made head. It was not until 1815, when technological advancements allowed production of a totally machine-made nail, that cut nails began to replace wrought nails as the primary construction fastener. Cut nails recovered from the inspection trench were machine-made.

Wire-drawn nails first were introduced into the United States around 1850. These early wire nails were used primarily for box construction. They were not adapted for building construction until the 1870s. However, cut nails had been replaced almost universally by wire nails by the turn of the century (Nelson 1963).

Bricks

In general, bricks located in urban contexts rarely contain sufficient diagnostic information for use as temporal indicators. The City of New Orleans, however, may have four distinct brick traditions: the French tradition (1718-1768), the Spanish tradition (1768-1788), the Creole tradition (1788-1810), and the American tradition (1810-1861), as originally developed by Servat (1976) and Shenkel and Beavers (1978).

Colonial bricks of the French and Spanish tradition were hand made and resembled tiles in shape. Most of the bricks from this period had a consistent thickness (1.5 to 1.75 inches), although they could vary greatly in width and length. Bricks were manufactured from the sandy clays of the Mississippi River. Composition and texture of these local bricks was generally soft. Color varied from reddish-orange to dull red.

The great fires of 1788 and 1794 created the need for more and better brick construction materials. These improved materials included the "Creole" bricks. Creole bricks measured 2 inches by 4 to 4.5 inches by 8 to 9 inches; they were similar to the French and Spanish bricks.

Local "country" or "New Orleans soft red" bricks were manufactured between 1810 and 1835. They measured 2.25 inches by 4 inches by 8.5 inches, and had the same soft texture and reddish orange color as earlier bricks. Since these bricks did not weather well, they were often covered with stucco, plaster, or weather board.

Between 1810 and 1835, New Orleans contractors also began importing the more standard size (or Anglo-American size) bricks from Philadelphia, Baltimore, and Pensacola. These more durable imported bricks usually were used for exposed facades. Philadelphia brick was bright red; Baltimore brick was light brown; and, Pensacola brick was dull red.

After 1834, local bricks were made from the Pleistocene clay deposits above Lake Pontchartrain. These locally produced bricks were similar in color to the "country" brick, but they were much harder. Known locally as "lake bricks," they were manufactured from Ponchatoula to Slidell and along the Gulf Coast of Mississippi and Alabama (Curtis 1933; Shenkel and Beavers 1978). Lake brick replaced the softer, less weather-resistant country brick, and conformed to the standard Anglo-American size of 2.25 inches by 4 inches by 8.5 inches.

The "St. Joe" brick was manufactured during the postbellum period and early twentieth century. It can be distinguished by its pale brown to dark brown color, its press moldings, its extreme hardness, and by the manufacturer's stamp.

Most of the brick found during excavation of the inspection trench at the Montegut Street to Independence Street floodwall was located in secondary fill deposits. There was very little evidence of brick course patterning.

The majority of brick was severely fragmented; therefore, size assessment was not possible. Several whole bricks and partial bricks were identified tentatively using the criteria outlined above. It should be noted, however, that brick reuse was a common practice in New Orleans due to the high cost of building materials. Bricks often were salvaged from abandoned or destroyed buildings.

Results of the Analysis

Site 16 OR 109 (Gallier St. - Congress St.)

Locus 1. A total of seven artifacts were recovered from Locus 1. Functional representation reflects a distribution of 71.4 per cent associated with the Architecture group, and 28.6 per cent with the Kitchen group. While architectural materials suggest the presence of structural remains, interpretation of structural use or function cannot be determined with so few associated materials from other functional groups. The secondary nature of the deposits, and the lack of intact structural remains further hinder functional classification. Materials from this locus established a terminus post quem of 1913. This date is based on two wire nails (post 1870) and one glass bottle bearing the manufacturer's mark "Louisville Glass Works (LGW)" which dates after 1913 (Toulouse 1971).

Locus 3. Analysis of the functional distribution of materials recovered from 16 OR 109 revealed that 60 per cent of the artifacts are from the Architecture group; 20 per cent are from the Kitchen group; and, 20 per cent are unidentified. However, these figures are misleading because the entire assemblage contains only five artifacts, too few to reflect accurately functional group classifications. In addition, analysis of stratigraphy indicates that the artifacts were contained within a secondary deposit.

The assemblage contained a single diagnostic artifact, a whole brick. The size, composition and color of the brick most closely resembles the standard size (or Anglo-American size) St. Joe brick. These were manufactured from the 1860s through the twentieth century.

In summary, only two of the four loci documented at this site contained artifactual remains. In addition, the functional analysis of the site cannot be determined due to the paucity of artifactual remains. Functional groups represented by a single artifact or by several artifacts are not sufficient to characterize an assemblage. The secondary nature of the deposits further blurs the determination of the function of the site.

16 OR 110 (Desire St. - Gallier St.)

Locus 1. Functional classification percentages identified for site 16 OR 110 include the Kitchen group (83.3%), and the Architecture group (16.7%). Two ceramic sherds (one yellowware and one ironstone sherd) provided date ranges of 1830-1900 and 1813-1900, respectively (Ramsey 1947). Of the two bottle glass fragments located, one supplied a direct source date of 1930. This is incongruous with the dates indicated by the ceramic artifacts. This inconsistency reflects the secondary nature of the deposits in which the remains were located. Note that Locus 2 did not contain any artifacts. Artifacts associated with Locus 3 were modern entirely and were not considered in the analysis.

16 OR 111 (Clouet St. - Louisa St.)

Locus 1. Artifacts recovered from this locus represent functionally the Architecture group (71.4%), and the Kitchen group (14.3%). An additional 14.3 per cent were unidentifiable as to functional group. The sparse remains of several brick piers helps account for the high Architecture group percentage. However, the lack of additional artifactual remains makes interpretation of the function of the structure impossible. For example, 66 per cent of the Kitchen group is represented by two pieces of ceramics. A much greater artifactual sample is required in order to determine, with accuracy, whether the structure is related to a domestic or commercial occupation. Temporal determination of the remains at this locus is based on two shell edged whiteware sherds. The combined date range for these artifacts is 1795 to 1840.

Locus 2. The seven artifacts located at this locus may be divided into two functional groups. These include the Kitchen group represented by 71.4 per cent of the artifacts, and the Architecture group represented by 14.3 per cent of the artifacts. The last 14.3 per cent (Loci 3-9) of the remains were functionally undiagnostic. Two dates ranges were evident from the ceramic remains. These were 1813-1900 for ironstone and 1830-1860 for transfer printed whiteware. One porcelain sherd displayed the maker's mark "O & EG Austria"; this mark was used by Oscar and Edgar Gutherz MFS between 1899 and 1918 (Kovel 1986).

The functional nature of this site cannot be determined due to the paucity of artifactual remains. Only two of the nine loci contained artifactual materials. Because of the small sample size and the low number of functional groups represented, the nature of the occupation (i.e., commercial

or domestic) cannot be ascertained. In addition, date ranges for the site only can be generalized.

16 OR 112 (Montegut St. - Clouet St.)

Locus 1. Functionally, artifacts from this locus of site 16 OR 112 represent the Kitchen group (91.7%), the Architecture group (6.3%), and the Personal group (1%). One per cent of the sample was functionally undiagnostic. The Kitchen group was represented by 100 artifacts. Of this number 92 were dark green liquor bottle sherds. The remainder of the artifacts included three stoneware jug fragments, and five stoneware ale bottle sherds. This strongly suggests that this locus represents an establishment that dealt primarily in the sale and distribution of liquor.

The bottle glass all indicates a nineteenth century occupation. The terminus ante quem predates the introduction of machine made bottles (1920). The dates for the stoneware bottles, 1870 to the twentieth century, correlate with the dates for the glass. One brick recovered from backdirt at the site resembles Philadelphia brick manufactured from 1810 to 1835. This is much older than the artifactual remains recovered, and it may indicate brick reuse. In addition, the secondary nature of the deposits also may account for its presence.

Locus 2. Functional pattern analysis for Locus 2 of site 16 OR 112 defined three classes of materials. These include the Kitchen group (80%), the Architecture group (10%), and the Personal group (10%). Although all artifacts within this assemblage were identifiable, artifact representation in the Architecture and Personal groups was too small to identify patterning within these groups. The Personal group is represented by a single milk glass jar. These were commonly used to hold ointments, salves, and facial creams. The single artifact within the Architecture group is an electrical insulator fragment. The Kitchen group assemblage contained artifacts indicating food and liquor preparation and service (i.e., dinnerware, liquor bottles, and ale bottles). Materials from both of these groups indicate some degree of domesticity, however, the lack of variety within the groups prevents the delineation of specific site use patterns.

Loci 3 - 7. As described in Chapter V, Loci 3-7 consisted solely of structural remains. No remains were collected from these loci for artifact analysis.

In summary, site 16 OR 112 appears to represent an early twentieth century commercial/residential occupation. The presence of both Kitchen and Personal items, and the substantial lens of artifacts located at Locus 1 suggests that the site may be a late nineteenth century midden. Logistical restraints did not allow more detailed examination of the area.

16 OR 113 (Piety St. - Desire St.)

Locus 1. Three functional groups were definable from the artifact analysis of the remains from site 16 OR 113. These included the Kitchen group represented by 97 per cent of the remains, the Architecture group represented by 1.4 per cent of the remains, and the Clothing group also represented by 1.4 per cent of the artifacts collected. Sixty-three of the sixty-eight artifacts in the Kitchen group are stoneware ale bottles sherds. Although this conforms to the overall nature of the site, this locus appears to represent a definite concentration of liquid container artifacts.

Locus 2. Functional analysis of Locus 2 determined that all functionally identifiable artifacts belong in the Kitchen group. This percentage is represented by only three artifacts, which all are fragments of liquid containers. This artifact type could be found in a number of occupational settings, and it therefore, provides no other site-specific information. The date range provided by the artifacts establishes a probable terminus ante quem for the site of 1920.

The paucity of artifactual remains makes functional classification of this site impossible. Only two of the five loci containing artifactual and/or structural remains could be considered in the analysis. Loci 3 and 5 contained no artifacts; Locus 4 contained refuse probably associated with a bar formerly located at the corner of Chartres Street and Desire Street. The sample is considered to small to reflect accurately the range of activities that may have occurred at the site.

16 OR 114 (Louisa St. - Piety St.)

Locus 1. Occupational activities at the site are reflected in the distribution of artifacts within two functional categories. These include the Architecture group (85.7%), and the Kitchen group (14.3%). Although the architectural remains may be evidence of a structure, the absence of adequate functional representation in other groups makes determination of the nature of the occupation at the

site impossible. It is not possible to identify whether the site was used for residential or commercial purposes. Indirect dates for the site were determined based on the presence of cut nails and a single "St. Joe" brick. The cut nails provide a date range of 1815-1870, while the brick derives from the postbellum period through the early twentieth century. Site 16 OR 114 lacks sufficient artifacts to ascertain the functional nature of the site assemblage. In addition, the deposits in which the artifacts were located are secondary in nature.

Summary

The majority of remains recovered during monitoring of the Montegut Street to Independence Street floodwall alignment represent late nineteenth to early twentieth century deposition. All artifacts were collected from disturbed contexts, or secondary deposits. A total of 251 field specimens were recovered, the majority of which were glass (113 sherds). The ceramic subassemblage was represented by a total of 92 pieces. The remaining artifacts were distributed among the metal, brick, bone, stone, and wood categories. These artifact counts are not considered substantial, and they make any functional analyses beyond the descriptive or chronological level suspect. The results of functional analyses are not considered to be conclusive.

Results of these analyses were similar to those of the alignments monitored in 1985 (Goodwin et al. 1986). Although a larger quantity of artifacts was collected during that monitoring project, due to small sample size and to the lack of contextual integrity, analyses beyond the descriptive/chronological level was not attempted. At site 16 OR 103 (Canal - Toulouse), 55 percent of the total number of glass sherds found in all three alignment were collected in a 50 centimeter deep refuse deposit. The deposit contained primarily glass wine bottles fragments dating from the mid to late nineteenth century. It was suggested that these could represent remains of a nuisance wharf on the former riverfront.

A similar site, site 16 OR 112, was documented in the Montegut Street to Clouet Street block. The site contained 88 percent of all the glass fragments collected in the alignment. It is possible this site also may represent a refuse disposal area, however, logistical problems at the time of monitoring prevented detailed examination of the site. Therefore, the site's function remains unknown.

In general, it was not possible to relate the six sites recovered during the course of monitoring to specific historic properties catalogued in the monitoring plan. At best, some of the remains were manufactured at a period coeval with the documented history of the study area.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

This report has presented the results of archeological monitoring of the general contractor pre-construction inspection trench along the Montegut Street to Independence Street floodwall alignment. The inspection trench was excavated during June and July, 1987. Archival information, field observations, and laboratory analyses subsequently were applied in assessment of the historical associations and research potential of subsurface historic archeological remains encountered during the course of inspection trenching. As noted above, previously compiled archival and historical data were used in formulation of an assessment of the nature and locations of potentially significant former standing structures and activity areas along the floodwall alignment (Goodwin et al. 1985; Reeves and Reeves 1983).

Delineation of these historic areas was tied to a review of developmental and economic themes significant in the history of the region (Goodwin et al. 1985); singular among these was the growth and development of the Port of New Orleans. Pursuant to methodologies specified in the monitoring plan, field crews were provided with historic maps and block-by-block listings of potentially significant historic sites and structures, so that associated remains could be recognized and recorded in the field. Laboratory analyses were designed to assist in assessment of the integrity of subsurface archeological remains; to establish a general chronological framework for the economically important riverfront area of New Orleans; and, to document any relationships between recovered artifacts and archivally identified potentially significant historic structures along the right-of-way.

Field investigations resulted in the identification of six previously unrecorded archeological sites. As noted in Chapter V, a total of 29 loci were located in the field. Subsequent to laboratory analysis, 11 of these loci were designated as sites. However, due to the unusual setting in which the sites were located, the Louisiana Division of Archeology chose to assign site numbers by city block. All cultural remains located within each block thus were lumped into a single site unit (Table 3).

The six archeological sites documented during this study (16 OR 109-114) are described above in Chapter V. In general, it was not possible to establish any clear-cut correlations between material recovered during field work and the potentially significant historic structures identified

during the archival phase of work. Table 5 lists the expected cultural resources versus the identified cultural resources by block. The majority of the sites identified during monitoring appear to relate to the intensive use of the riverfront area as a railroad corridor from the late nineteenth century to the present. Iron spikes, metal plate ties, and wooden shoring such as that noted at site 16 OR 111 were found throughout the length of the trench. In addition, remains associated with the Pacific Molasses Company were identified at site 16 OR 112. Because of lack of integrity and/or the modern nature of such remains, none of these resources are considered significant in terms of the National Register of Historic Places criteria (36 CFR 60.4).

Remains identified at sites 16 OR 109, 16 OR 110, 16 OR 113, and 16 OR 114 may represent late nineteenth century to early twentieth century residential occupations. However, the paucity of remains and the secondary nature of the deposits in which the majority of the artifacts were found negates further consideration of site significance. Archival research indicated that none of these structural types were unique, nor would they have the research potential necessary to confer significance, applying the National Register criteria [36 CFR 60.4 (d)].

Stratigraphic observations indicate that a substantial amount of fill has been deposited within the area of the present right-of-way. This is most likely a result of multiple episodes of embankment construction for the railroads. As a result, excavation of a five-foot deep inspection trench failed to penetrate any deeply buried strata containing cultural material from the early nineteenth century or before. This overwhelmingly negative research result, the failure of the remains to conform to hypothetical expectations generated during archival research, and the perturbed stratigraphic milieu observed throughout most of the inspection trench indicate a strong likelihood that any significant remains in the monitored alignment have lost contextual integrity or have been destroyed.

As noted above, the riverfront of the Port of New Orleans historically has comprised the venue of the greatest and most continuous economic activity in the city, as well as in the region. Consequently, ground surfaces in this area have been subjected to periodic if not continual modification. Destructive processes along the river reaches have included the purposive demolition of relict structures, construction activities related to the modernization of port and attendant commercial facilities, and the excavation, fill, and stabilization of the lengthy railroad rights-of-way that dominate the present landscape. This disturbed setting has been shown by the investigations described here to

TABLE 5

LIST OF EXPECTED VERSUS OBSERVED CULTURAL RESOURCES, BY BLOCK

BLOCK	EXPECTED RESOURCES	DATE	LOCATED RESOURCES	DATE
Monteque St - Clouet St	Soule's Foundry	ca. 1830	Site 16 OR 112 *Locus 1 *Locus 2 Locus 3 Locus 4 Locus 5 Locus 6 Locus 7	ca. 1840-1920 Zerah's Modern Modern Unknown Modern Unknown
Clouet St - Louisa St	Guildives Distillery	ca. 1805-1820	Site 16 OR 111 *Locus 1 *Locus 2 Locus 3 Locus 4 Locus 5 Locus 6 Locus 7 Locus 8 Locus 9	ca. 1830-1870 19th C.-20th C. Unknown Modern Unknown Unknown Unknown Modern Unknown
Louisa St - Piety St	DeClouet House	ca. 1790s	Site 16 OR 114 *Locus 1	19th C.-20th C.
Piety St - Desire St	Miller and Pierce Sawmill/Touro Alms House	ca. 1820-1860	Site 16 OR 113 *Locus 1 *Locus 2 Locus 3 Locus 4 Locus 5	ca. 1850-1900 19th C.-20th C. Modern Modern Modern
Desire St - Gallier St	Dunbar's Seafood Cannery	ca. 1877	Site 16 OR 110 *Locus 1 Locus 2 Locus 3	19th C.-20th C. Modern Modern
Gallier St - Congress St	Jackson's Defense Line	ca. 1815	Site 16 OR 109 *Locus 1 *Locus 2 *Locus 3 Locus 4	ca. 1913 Unknown 19th C.-20th C. Unknown

*ELEVEN ORIGINAL SITES (see Table 3)

possess little likelihood for the preservation in situ of any nearly complete significant historic archeological site assemblage.

In addition, and as descriptions of the pre-construction trenches contained in Chapter V have shown, trenches monitored during this effort failed to penetrate a single early nineteenth century component. Failure to observe earlier components appears to derive from a disturbed archeological milieu, from the relatively shallow depth of trenches, and from modification of the land by the railroads.

Thus, analysis of data generated during archeological monitoring of the Montegut Street to Independence Street floodwall alignment preconstruction inspection trench did not identify any significant cultural resources (36 CFR 60.4), nor are there any demonstrable adverse project impacts to significant cultural resources. All of the evidence pertaining to the sites and features recorded during this project indicate that these resources do not have the potential "to yield information important in prehistory or history" [36 CFR 60.4(d)]. In addition, no sites or remains with contextual integrity could be related to the previously developed significant themes in the history of the region and its derivative catalog of potentially significant structures and activity areas. As a result, no mitigative activities should be required for the sites recorded in the alignment; none of these cultural resources possess the quality of significance, as defined by the National Register criteria. No additional work is recommended.

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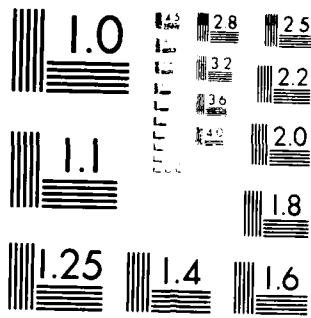
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APPENDIX I
SCOPE OF SERVICES

SCOPE OF SERVICES

Archeological Monitoring of the Montegut Street to Independence
Street Floodwall Project in the City of New Orleans,
Orleans Parish, Louisiana

1. Introduction. The U.S. Army Corps of Engineers, New Orleans District (NOD), plans to construct a floodwall along the left-descending bank (east bank) of the Mississippi River in the City of New Orleans (Attachment 1). Construction is scheduled for June, 1987. Based on previous archival research in the subject area, as well as 1986 monitoring efforts in the adjacent floodwall alignments, it is believed that portions of the impact area may contain significant historic archeological deposits which may be eligible for listing on the National Register of Historic Places.

NOD requires that intensive archeological field monitoring and recordation be conducted concurrently with the general construction contractor's initial inspection trenching in order to mitigate adverse impacts to potentially significant cultural resources. Monitoring will be conducted along the entire project reach. Monitoring will therefore provide an opportunity to identify significant cultural resources that will remain preserved in place landward of the Montegut Street to Independence Street floodwall.

2. Description of the Study Area. The overall project is called the "Mississippi River Levee, Orleans Levee District, Item M-93.9-L to M-93.3-L, Montegut to Independence St. Floodwall, Orleans Parish, Louisiana". The floodwall project work consists of the construction of reinforced concrete floodwalls with recessed arches, 5 swing gates, 3 roller gates; furnishing and driving steel piling, prestressed concrete piles, and timber piles; modifications to various utilities; construction of a storm drainage system, railroad falsework and other incidental work. The study area, however, is confined to the initial inspection trenching or other limited inspection excavations within the project right-of-way.

The Montegut Street to Independence Street floodwall is located between, and connects with, two adjacent floodwall alignments. The Barracks Street to Montegut Street alignment is located upriver from the subject floodwall. The Independence Street to Inner Harbor Navigation Canal alignment is located on the downriver end. Both of these connecting floodwalls were monitored for archeological resources in 1986.

The subject floodwall extends from Station 521+72 at its upriver terminous to Wall Line Station 0+00 (approximately B/L Station 547+00), for a total length of 2528 feet (771 meters). The floodwall generally parallels the NOPBR city main track. Two standing structures are located within this

easement. A modern one-story block building is located on the downriver side of Louisa Street and a standing structure is located just upriver from the Desire Street ramp; neither structure will be impacted by construction.

The Montegut Street to Independence Street alignment contained significant historic structures and six of its seven blocks were recommended for monitoring in 1985 (Attachment 2). However, the entire project length will be intensively monitored (blocks recommended for monitoring in 1985 are marked with an asterisk).

- *1) Montegut to Clouet Streets
- *2) Clouet to Louisa Streets
- *3) Louisa to Piety Streets
- *4) Piety to Desire Streets
- *5) Desire to Gallier Streets
- *6) Gallier to Congress Streets
- 7) Congress to Independence

3. Background Information. Because New Orleans is Louisiana's largest city and is of great historic and cultural value to the State as well as to the Nation, all efforts shall be made to record and protect significant cultural resources during floodwall construction. The State of Louisiana's Division of Archeology has identified "Historic New Orleans" as a major theme to be considered during preservation planning. The State also believes that New Orleans is a place to set positive examples of how preservation and protection of significant cultural resources can work in conjunction with progress.

NOD has determined that the Montegut Street to Independence Street floodwall project may have an effect on properties eligible for inclusion in the National Register of Historic Places. The floodwall is located in close proximity to the Vieux Carre Historic District, a National Historic Landmark, as well as, immediately adjacent to the Faubourg Marigny Historic District, listed on the National Register of Historic Places.

NOD has executed two separate Memorandums of Agreement (MOA's) with the Louisiana State Historic Preservation Officer and the Advisory Council on Historic Preservation (Attachments 3 and 4). These MOA's outline NOD's obligations concerning the preservation of historic resources in the New Orleans floodwall project areas. The MOA's require NOD to prepare a detailed historical and archival assessment to document historic land use changes in the project areas (which has been completed), as well as to investigate and evaluate localities which may contain significant cultural resources in the impact areas at the time of actual floodwall construction (the work to be performed under this delivery order).

Archeological sites in urban settings are often difficult to identify and evaluate in advance of construction because they are usually sealed beneath modern structures, fill, and paving, etc. It is therefore not practical to physically determine the existence or non-existence of archeological sites

in the floodwall project area by standard pedestrian survey methods. Instead, the probability or improbability of site existence is largely based on extensive archival studies. These studies have been conducted under contract with NOD. Previous monitoring efforts in adjacent alignments, as well as archeologically sensitive areas to be monitored in the subject alignment, are described in the following documents:

- ° Archeological Monitoring of Three Floodwall Projects in the City of New Orleans by R. Christopher Goodwin and Associates; July 1986.
- ° Archeological Monitoring Plan for Four Floodwall Projects in the City of New Orleans by R. Christopher Goodwin and Associates; May 1985.
- ° Archival Evaluation of Floodwall Alignments: New Orleans, Louisiana by Sally K. Reeves and William D. Reeves; November 1983.

4. General Nature of the Work to be Performed. Archeological monitoring can be defined as a means of locating, evaluating and assessing impacts to cultural resources during actual project construction. Monitoring is normally implemented in a project area when there is a probability that significant cultural resources will occur. Close coordination must be maintained between the archeological crew and the general construction crew.

The Contractor shall perform intensive archeological field monitoring for the entire length of the Montegut Street to Independence Street floodwall (Attachment 5). Archeological field work will be conducted concurrently with the excavation of the inspection trench. Inspection trenches are excavated in order to locate subsurface obstructions prior to construction of the floodwalls. An inspection trench is generally excavated to a depth of 5 feet below surface (approximately 1.5 meters). In all cases, the trench penetrates the culturally sterile subsoil and reaches the depth necessary to ascertain the base of any obstruction encountered. The inspection trench generally ranges from 3 to 5 feet in width (approximately 0.9 - 1.5 meters), but is expanded when deeply buried obstructions are encountered.

The study will utilize previous NOD-sponsored studies in the Port of New Orleans vicinity to the maximum extent possible. Monitoring and recordation will be performed within the context of these studies and will include subsurface testing where appropriate and the evaluation of identified cultural resources against the National Register's criteria of significance (36CFR60.4). All efforts shall be made to limit archeological excavation once the significance of archeological resources can be determined. Excavation shall be limited to provide sufficient information for research and interpretation needs concerning any significant cultural resources that will be preserved in place landward of the floodwall. The Contractor shall be responsible for all data analysis and report preparation and reproduction.

5. Study Requirements. The evaluation 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;
- ° The Advisory Council on Historic Preservation's publication entitled, "Treatment of Archeological Properties: A Handbook" dated November 1980; and
- ° The Advisory Council on Historic Preservation's Section 106, Update/3 entitled, "Manual of Mitigation Measures (MOMM)" dated October 12, 1982.

The work to be performed by the Contractor will be divided into two phases: (a) Monitoring and/or Recordation, and (b) Data Analysis and Report Preparation.

a. Phase 1: Monitoring and/or Recordation

All fieldwork for this delivery order will be guided by the monitoring plan prepared by R. Christopher Goodwin and Associates, entitled Archeological Monitoring Plan for Four Floodwall Projects in the City of New Orleans submitted to NOD in May 1985. The basic field methodology described in this report will be employed for the Montegut to Independence Street floodwall project (reference Chapters VI and VII, Appendixes 1, 2, and 5).

If field conditions warrant a diversion from the prescribed methodology, justifications for alternate methodologies must be supplied to the Technical Advisor or to the COR.

The designated reaches, Montegut to Congress Streets, recommended by Goodwin and Associates, will be intensively monitored for cultural resources predicted to be significant. Congress to Independence Streets will also be monitored using the information in Attachment 6, the "Must Call" list.

Contract personnel should be on call at all time in order to receive notice to begin monitoring reaches specified for study. Short notice may be given the Contractor for this work.

The Contractor will abide by all specifications set forth for the subject floodwall project. NOD will provide the Contractor one copy of each document pertaining to specifications (Attachment 7) as well as one

complete set of engineering drawings which relate to the project (Attachment 8).

Heavy equipment rental such as backhoes, pumps, augers, etc., shall be rented as needed. Close coordination with the NOD construction inspectors and NOD project engineers, as well as, with the General Contractor will be mandatory, if use of such heavy equipment is necessary. Any heavy equipment, such as backhoe, will be rented and utilized by the Contractor only in order to make limited extensions of the area of study beyond, and connecting with, the inspection trench or to re-excavate trenches that warrant further study or which were backfilled by the Construction Contractor. This work must be conducted under the Construction Contractor's and/or NOD's supervision.

Cultural resource monitoring and/or recordation will not be conducted near any currently used railroad tracks. All investigations should be located at least 8 feet away from the tracks.

The Contractor will not be responsible for shoring or building support structures or retaining walls for archeological excavation trenches. Work of this nature is not anticipated and all efforts should be made to avoid such situations, if possible.

Identification badges or names displaying Contractor's name on hard hats are mandatory for all Contractor or personnel for the duration of the fieldwork.

The Contractor's archeological crew will work only during the General Contractor's regularly scheduled work hours. The total trenching time is estimated to last two weeks (10 days).

A minimum of two persons will be required to monitor any given study area. If more personnel are needed for a given area, this will be acceptable if adequate justification can be made.

In times of inspection trenching delays (which can be anticipated from past experience), limited research shall be conducted into the processes of site formation and destruction in the immediate Montegut to Independence Street alignment. Any predicted stratigraphy associated with historically documented changes in land use can therefore be tested during monitoring. If land use processes have destroyed the predicted archeological resources in areas recommended for monitoring, then continuous monitoring of the inspection trench in these areas would not be warranted. Consultation with the Technical Representative shall be made concerning such matters.

The archeological team conducting the monitoring operations shall report any finds of major significance to the Contracting Officer's Representative or to the Technical Representative. The excavation of the inspection trench, or of adjacent trenches, can be halted temporarily at a specific location to allow the field archaeologist to determine the possible significance of material before it is disturbed.

Should extensive excavation beyond the limits of the inspection trench be required in order to determine or confirm the identification and significance of a resource discovered in the trench, such investigations are beyond the limits of this delivery order. If the contractor concludes that such additional work is necessary, each instance will be reported and justified to the Technical Representative and in the management summary. Where structural foundations or associated remains are located behind (on the landward side of) the proposed floodwall, features probably will be preserved in place. Where no archeologically significant remains are encountered in the monitored blocks, no further work is warranted.

The intent of the 1985 monitoring plan is to provide a clear and explicitly stated set of procedural guidelines for the most efficient resolution of in-field problem resolution. This plan was designed to avoid unnecessary delays during actual construction work and to minimize any confusion as to the proper mitigation alternatives to be implemented. Where additional construction is scheduled in areas of significant archeological remains, mitigation steps will be recommended for those cultural resources.

A management summary reporting the results of the monitoring shall be submitted to the COR within 2 weeks after completion of all fieldwork.

b. Phase 2: Data Analysis and Report Preparation. All Phase 1 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 Division of Archeology and Historic Preservation. The catalog system will include site and provenience designations.

The Contractor shall provide descriptions of geomorphology, ecology, and cultural history, as well as a summary of previous research. This information shall be integrated with the research results, survey results, and laboratory analyses to produce a graphically illustrated, scientifically acceptable draft report. Project impacts on all cultural resources located during monitoring will be assessed.

All cultural resources located in the study area will be evaluated against the National Register criteria of significance contained in Title 36CFR60.4 to determine eligibility for inclusion in the National Register of Historic Places. The Contractor shall provide justification of the criteria used and a detailed explanation of why each resource does or does not meet the National Register criteria. For each resource recommended as eligible to the National Register and assessed to be impacted by the subject project, the Contractor shall evaluate and recommend mitigation alternatives. Inferential statements and conclusions will be supported by documentation where possible. Specific requirements for the draft report are contained in Section 6 of this Scope of Services.

6. Reports

a. Phase 1 Management Summary. Two copies of a management summary, one set of 7.5 minute quadrangle maps accurately delineating site locations, and one set of site forms for all located cultural resources will be submitted to the COR within 2 weeks after completion of fieldwork. The management summary will succinctly report the results of monitoring, i.e. number, type, brief description, and assessment of project-related impacts for all cultural resources located and preliminary assessments of site significance. This summary report is not intended to be a lengthy interim report, but shall contain enough information to serve as a planning aid and a means of disseminating information immediately to the COR.

b. Draft and Final Reports (Phases 1 & 2). Six copies of the draft report integrating both phases of this investigation will be submitted to the COR for review and comment within 14 weeks after completion of fieldwork. Along with the draft reports, the Contractor shall submit one copy of support documentation for each cultural resource which the Contractor recommends as eligible for inclusion in the National Register of Historic Places. This documentation will follow the format and contain all the data required by the Guidelines for Level of Documentation appended to Title 36 CFR Part 63. The Contractor shall also provide recommendations for any further mitigation of each cultural resource that will be preserved landward of the floodwalls recommended as eligible for the National Register. 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 a 1-1/2-inch binding margin and 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. The COR will provide all review comments to the Contractor within 8 weeks after receipt of the draft reports. 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. Upon approval of the preliminary final report by the COR, the Contractor will submit 30 copies and one reproducible master copy of the final report to the COR within 4 weeks. Included as an appendix to the Final Report will be a completed and accurate listing of cultural material and associated documentation recovered and/or generated which the Principal Investigator considers worthy of preservations. In order to preclude vandalism, the draft and final reports shall not contain specific locations of archeological sites. Site specific information, including site forms, black and white photographs and maps, shall be included in an appendix separate from the main report. The Contractor shall submit 6 copies of this separate appendix with the draft report, and 10 copies and one reproducible master copy with the final report.

7. Attachments

- *1. Vicinity of proposed Montegut Street to Independence Street floodwall, Orleans Parish, Louisiana
- *2. Map of project vicinity showing blocks recommended for monitoring between Montegut Street and Congress Street
- *3. MOA for Mississippi River Floodwalls, dated 10-19-82
- *4. MOA for Canal Street to Toulouse Street floodwall, dated 12-28-82
- *5. Monitoring Information: Montegut Street to Independence Street
- *6. Categories of Cultural Remains to be reported to Monitoring Personnel (the "Must Call" List)
- *7. Specifications for Montegut-Independence Street Floodwall, U.S. Army Corps of Engineers, New Orleans District (Solicitation No. DACW29-87-B-0037; Solicitation Date: 2 March 1987).
- *8. Plans for MRL Item M-93.9-L to M-93.3-L, Orleans Levee District, Orleans Parish, Louisiana. Montegut Street to Independence Street Floodwall (File No. H-4-29986), February 1987.

* Previously furnished

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