

V. CULTURAL FEATURES OF THE MEMPHIS LANDING

In addition to the stone mosaic, itself an artifact of monumental proportions, smaller cultural features are also present at the Landing. These include moorings for river craft and infrastructure additions such as culverts, stone drainages, sewers, water lines, telephone poles, and electrical lines. As part of the field survey, these cultural features were located, described, photographed, and mapped. Temporary features such as concrete parking dividers and miscellaneous concrete and asphalt patching were excluded from the study. The major classes of cultural features are discussed below. Feature distributions are shown on Figures 22 and 23.

MOORINGS

A total of 112 moorings was recorded during the survey of the Landing (Figure 22). Also called "deadmen" and "ring bolts," the moorings are in various states of preservation. Many have been pulled completely out and are lost. Others are partially dislodged. Most are not functional. Some links have been stretched and broken, making them appear older than adjacent contemporary moorings.

Moorings are divided into six types on the basis of material, size, and morphology (Figures 24–29). In most cases, the descriptions refer to that part of the mooring exposed at the surface and, like the cobblestones, represent only one side of the whole. The typology proposed here very likely would be refined with additional subsurface data.

Mooring Typology

Type 1. This is the most common type of mooring (n=77, or 68.8 percent). It is present throughout the project area but most prevalent in the northern part. The type is recognized by a square iron plate at or immediately below the surface. The plate measures 1.0 x 1.0 foot and contains an oval opening through which the ringbolt stem extends from the top of the plate into an underlying cast iron or concrete block measuring 1.0 x 1.0 x 1.0 foot. The ringbolts are 2.5 inches thick and 7.5 inches in diameter. A variety of chain links can be attached to Type 1 moorings. A common configuration consists of a single large link (14.5 inches in diameter) connected to the ringbolt; two sets of smaller links (11 inches across) connect to the large link, which allows attachment by two separate tie-down lines.

Type 2. Type 2 moorings (n=4, or 3.6 percent) are nearly identical to Type 1 moorings. The major difference is the face of the square iron plate. Type 2 moorings have an indented face bordered by a raised band along the edges. Two pairs of Type 2 moorings are in the southern part of the Landing. The first pair is between North 300 and North 350, the second at about North 550.

Type 3. This type includes four examples (3.6 percent) in the northeastern section of the Landing at North 1600. One of these, M-7, is pulled completely from the ground, exposing the entire mooring. It consists of a rectangular iron plate, 12.0 x 8.0 inches, set into a fossiliferous limestone block by three bars. The limestone block is massive, measuring 27.0 x 27.0 x 50.0 inches. The iron plate has a welded ring and is separated from the stone by a thin layer of cement. The mooring was dislodged when high winds blew a moored vessel several feet to the north.

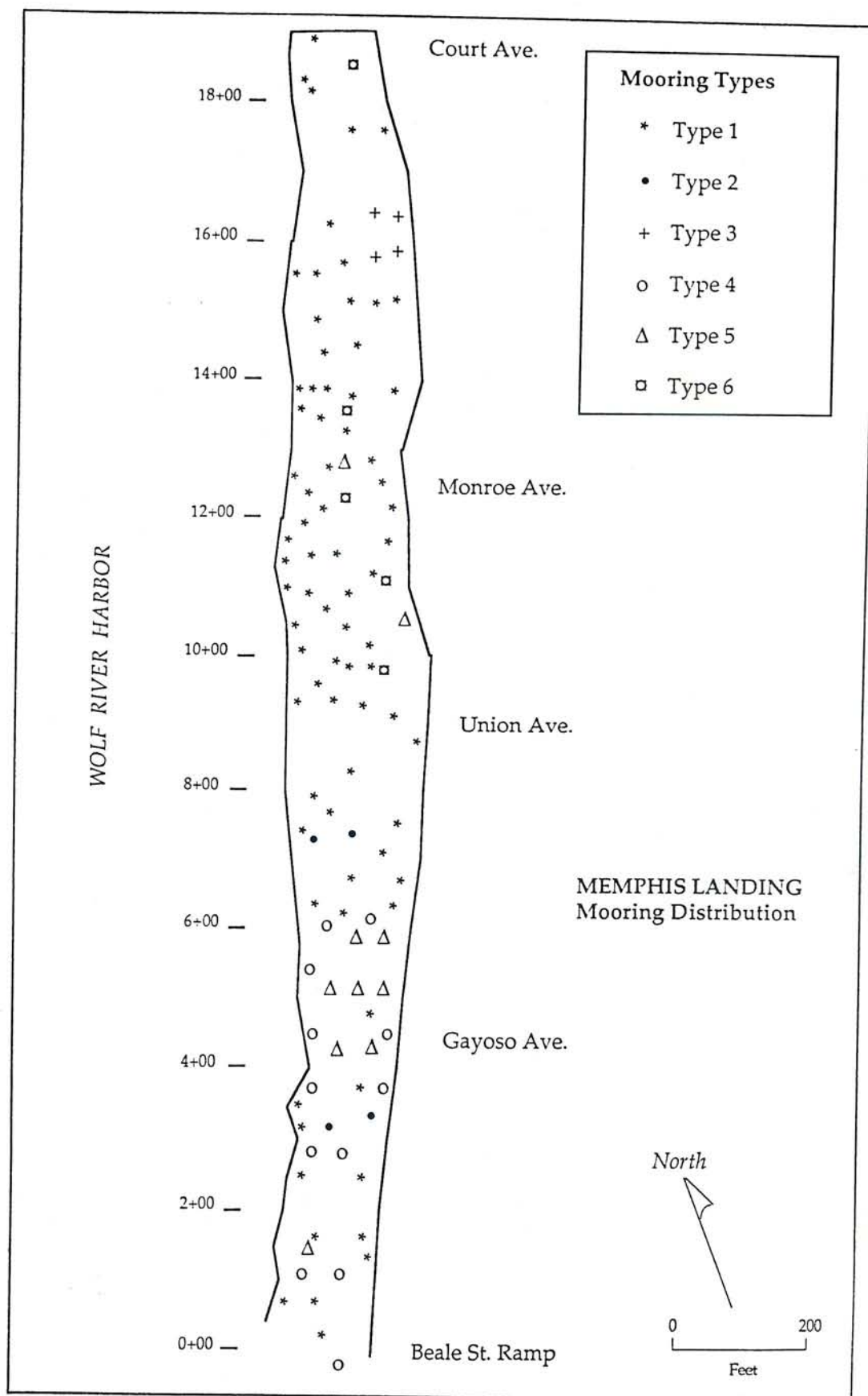


Figure 22. Mooring Distributions at the Memphis Landing.

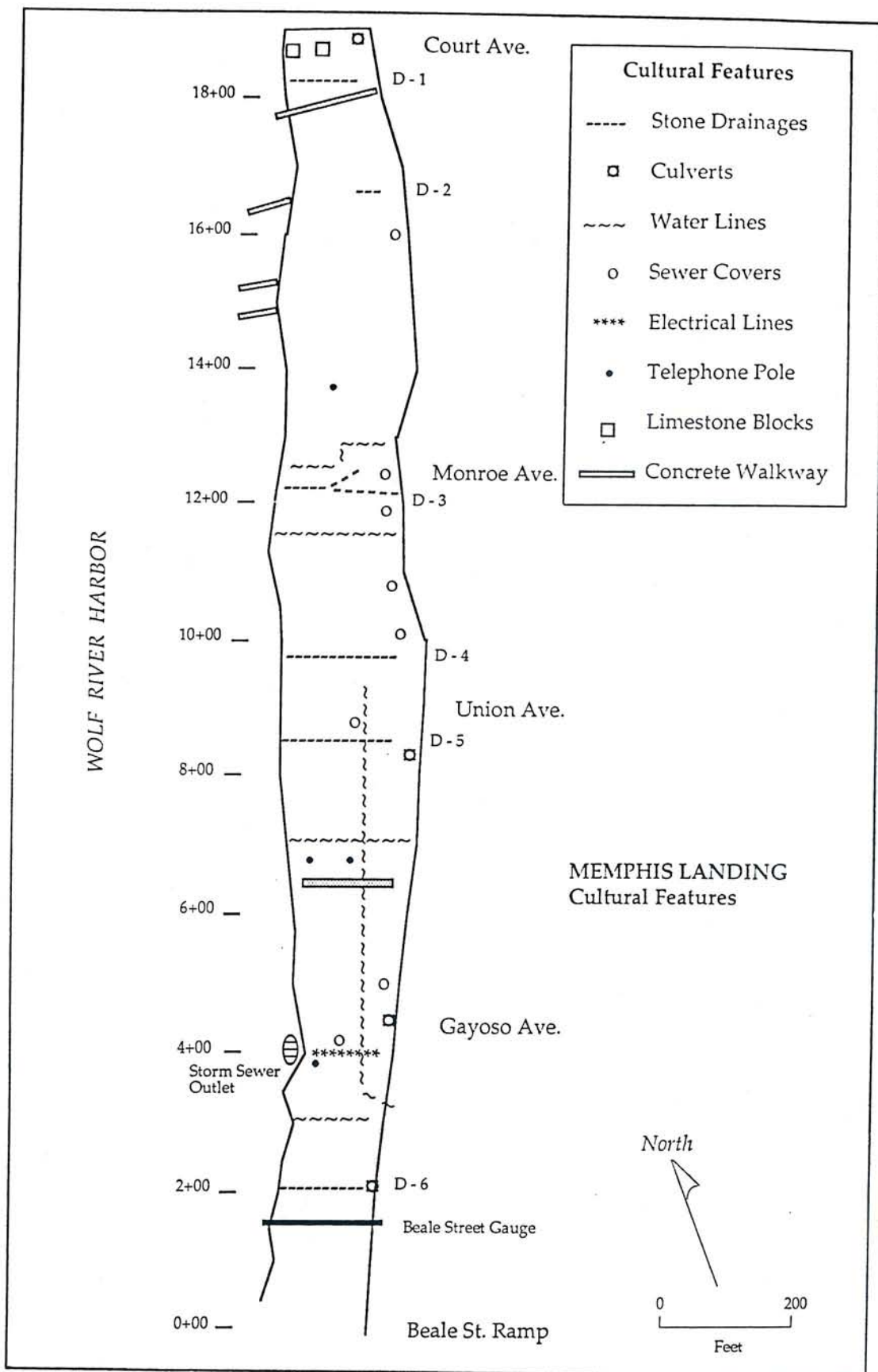


Figure 23. Miscellaneous Cultural Features at the Memphis Landing.



Figure 24. Mooring Type 1.



Figure 25. Mooring Type 2.

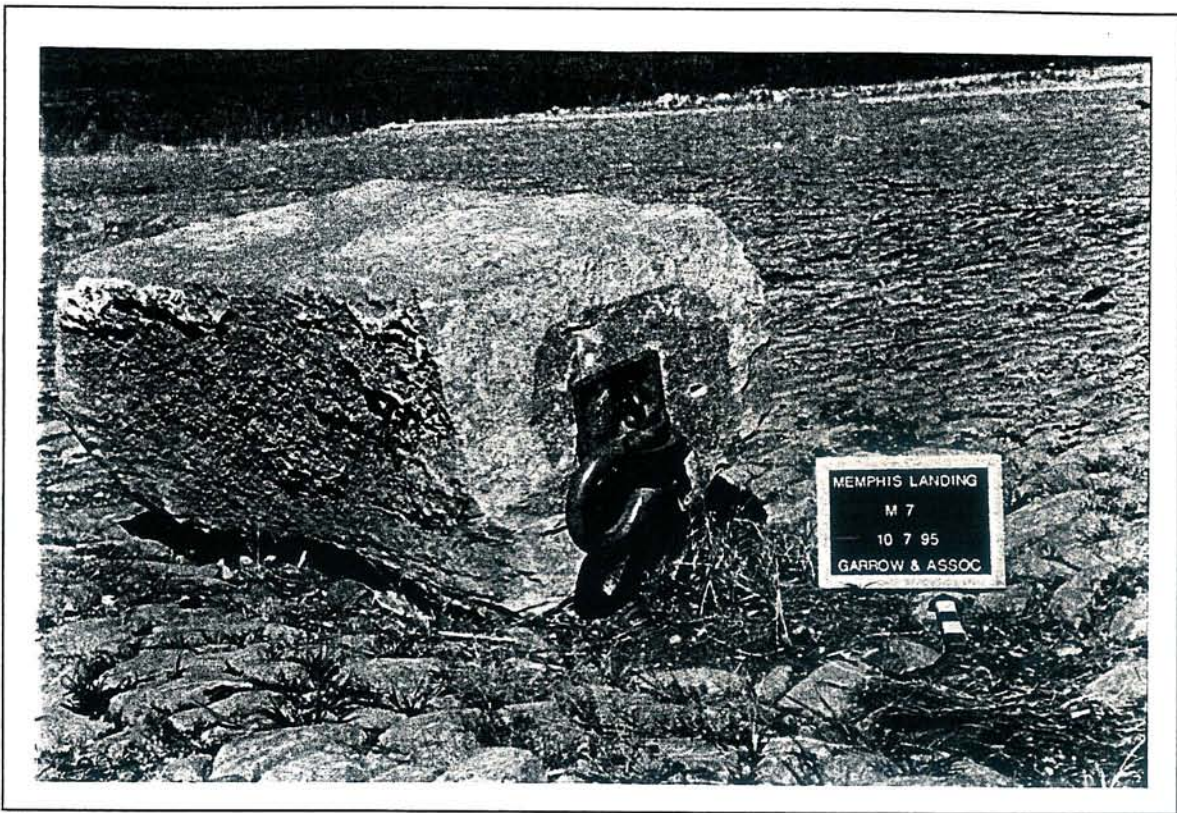


Figure 26. Mooring Type 3.



Figure 27. Mooring Type 4.



Figure 28. Mooring Type 5.

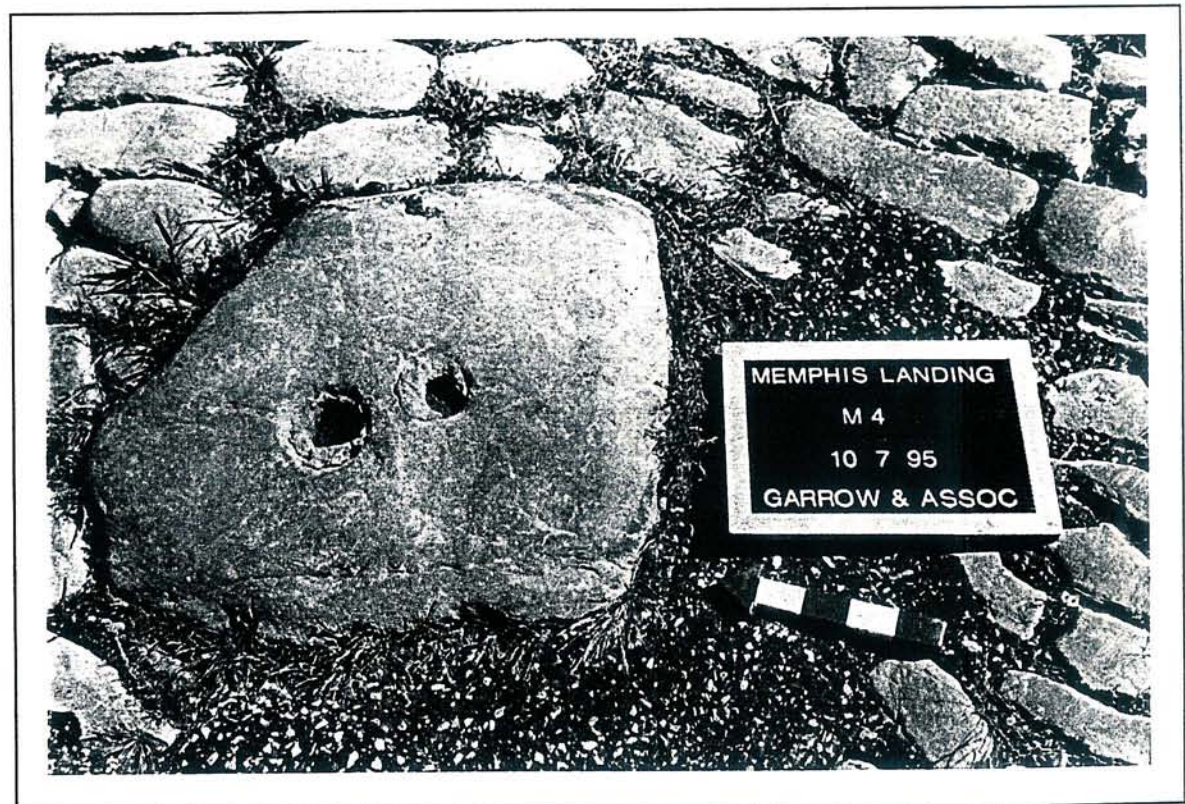


Figure 29. Mooring Type 6.

Type 4. Type 4 moorings (n=12, or 10.7 percent) are distinct in form, consisting of a pan-shaped basin 29.0 inches in diameter. The ringbolt is 7.0 inches in diameter and 2.5 inches thick. These mooring are restricted to south of North 650 and are arranged in pairs perpendicular to the river.

Type 5. This category (n=10, or 8.9 percent) includes a variety of different forms, all apparently noncommercial in manufacture. Many consist of a simple bent iron bar set in concrete. Type 5 moorings are found south of Monroe Avenue (North 1300), with seven examples concentrated between North 600 and North 400.

Type 6. This is the most unusual category of mooring at the Landing, consisting of five (4.5 percent) large fossiliferous blocks exhibiting one or two drilled holes partially filled with lead. It is assumed some sort of iron ring was attached, although their function as moorings cannot be confirmed at this time. These features are exclusive to the northern half of the Landing between North 1900 and North 950. No examples are found south of Union Avenue.

The first example, M-4, is at North 1830/West 30. The limestone block is roughly pentagonal (approximately 27.0 x 21.0 inches). Two holes, 3.5–4.0 inches in diameter, are spaced 5.5 inches apart. Both holes are partially filled with lead. M-27 (North 1305/West 0) has a square exposure measuring 22.0 x 24.0 inches with a single drilled hole 3.25–3.75 inches in diameter. M-36 (North 1220/West 10) measures approximately 28.0 x 23.0 inches, with two drilled holes 3.5–4.0 inches in diameter. The stem of an iron link is attached to one of the holes with lead. The fourth example, M-46 (North 1130/East 25), measures approximately 29.0 x 27.0 inches and has a single lead-filled hole about 2.5 inches in diameter. The southernmost example, M-59 (North 970/East 40), is a square block of limestone measuring approximately 27.0 x 28.0 inches. A single irregular hole about 2.5 inches across was drilled. A twisted iron bar fragment is in the hole, but no lead remains.

Mooring Distributions and Chronology

The distribution of the moorings is shown on Figure 22. Of particular interest is the pattern of concentric arcs associated with the Type 1 moorings north of Union Avenue. As outlined above, the historical and lithological evidence suggests the Landing north of Union Avenue predates the South Memphis Landing. The association with Pattern 1 limestone suggests the Type 1 moorings are original to the stone fabric and were placed in a designed configuration. Type 1 moorings are present south of Union Avenue but are located in a random fashion. These may represent moorings salvaged from earlier construction.

Type 6 moorings are also restricted to the northern part of the Landing. These limestone blocks with lead-filled holes seem to fit with the surrounding stone matrix and are also probably associated with the 1860s construction stages. The five examples tend to be located along the eastern side of the Landing. Whether they represent an original form predating the Type 1 moorings is unknown.

The location and overall condition of the other mooring types suggest they are later additions. The four Type 3 moorings appear almost new and are probably the most recent. The pan-shaped Type 4 moorings may date from the 1870s or 1880s, but they often appear to be intrusive into the surrounding cobblestone matrix, suggesting they were placed after the major building episodes. The “handmade” moorings classified as Type 5 are also quite recent. The concentration of Type 5 moorings between North 400 and North 600 suggests they were constructed and used by the Waterways Marine wharfboats.

SURFACE DRAINAGES

There are two types of drainage patterns at the Landing: 1) shallow swales, usually consisting of rectangular stone laid perpendicular to the river; and 2) "de facto" drainage patterns across the stones from culverts running beneath the berm at Riverside Drive. The former appear to have been included in the original design and construction of the stone fabric. They efficiently funnel rainwater toward the river, except where the channels have been disrupted by patching or blowouts. The second pattern is associated with later road construction. Except in one case, the culverts beneath Riverside Drive are not aligned with the stone drainage channels on the Landing. Therefore, the surface drainage from these outlets disperses randomly, eroding the soil matrix and dislodging the cobblestones.

Six channeled stone drainages are visible today. Each consists of 1–8 courses of stones, with long axis of the stone perpendicular to the waterline. These are discussed below.

Drainage 1

Beginning at the north end, the first drainage (designated D-1 on Figure 23) crosses the baseline at approximately North 1810. Beginning at the base of the Court Street ramp, the east half of this drainage consists of one course of roughly rectangular Type 1 stones set perpendicular to the river and the surrounding stone matrix. The west half is wider and consists of two stone courses. Portions of the drainage are affected by bow thruster holes and later concrete repairs.

Drainage 2

East of Mooring No. 7 (at approximately North 1668/East 20) is a short drainage segment (D-2). The drainage is approximately 24.0 feet long and consists of nondimensional Type 1 stones, five courses wide, laid perpendicular to the river and the surrounding matrix stones. The feature is disrupted by the stone-paved service road at the base of the berm to the east. Evidently, the west side of the drainage extending toward the river is also obscured by later paving, although no observable changes in the stone fabric indicate this.

Drainage 3

Drainage 3 crosses the baseline at about North 1250 (Figure 30). West of the baseline, the drainage consists of six courses of perpendicular Type 2 stones. The use of oolitic limestone in this section of the Landing suggests that the drainage is younger than the surrounding Type 1 matrix. East of the baseline, the drainage pattern branches into two diagonal drainage patterns (at about 30 degrees to the main stem) composed of Type 1 stones. The two diagonal patterns are totally obscured by small, discontinuous repair patterns at their eastern ends. The drainage is obliterated at North 1250/West 65 by recent repairs near the 10 foot watermark.

Drainage 4

Drainage 4 crosses the baseline at about the North 975 line. The western part of the drainage pattern is composed of eight courses of perpendicular Type 1 stones. East of the baseline, the drainage tapers to four stones wide and then one stone wide as it crosses the service road. East of the baseline, the drainage angles slightly to the south (less than 10 degrees). The stones are

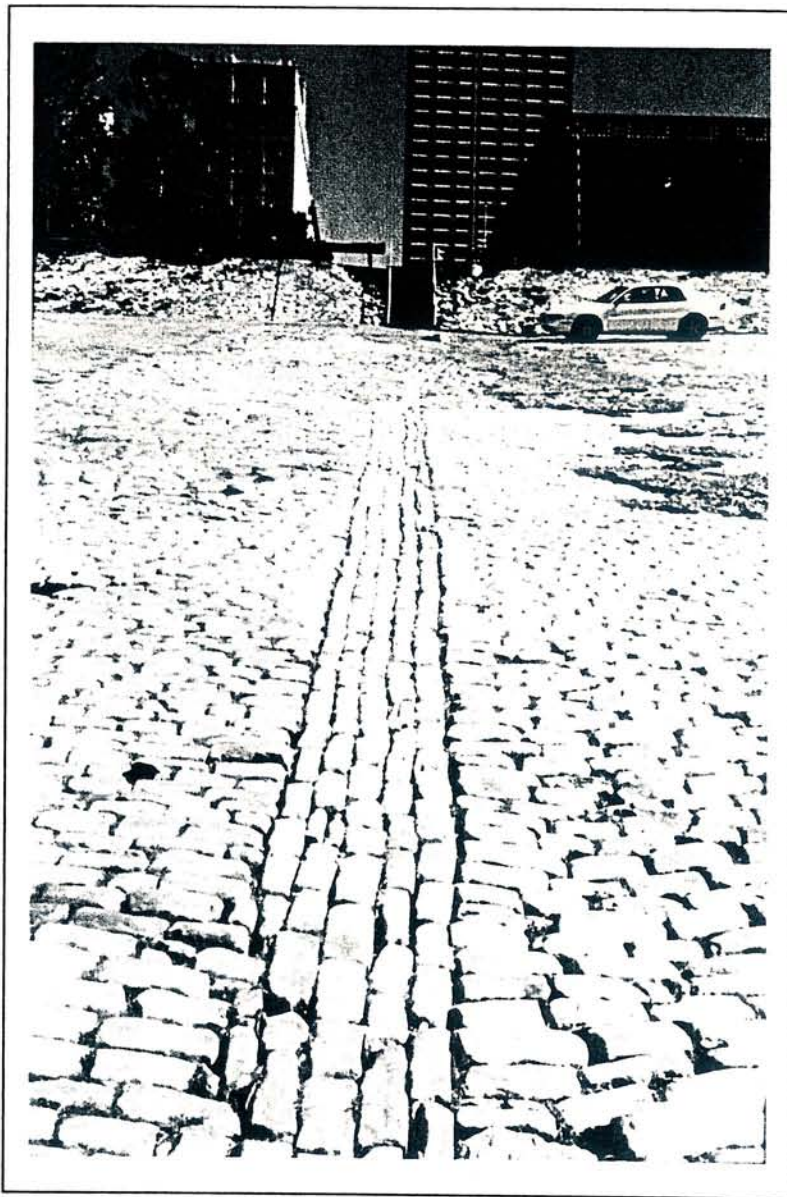


Figure 30. Drainage 3 (View to the East).

predominantly uniform in size and dimension, but many nondimensional stones are present. It ends abruptly at the west end at a patch of dimensional limestone.

Drainage 5

Drainage 5 crosses the baseline at approximately North 875. The drainage pattern is composed of Type 2 (oolitic limestone) intrusive into the Type 1 stones that surround it. It is composed of six courses of perpendicular, dimensional cobbles. Drainage 5 extends to the western edge of the cobbled Landing but at its eastern edge terminates abruptly at the service road. The eastern part of the drainage was impacted by a recent water line.

Drainage 6

Drainage 6, which crosses the baseline at about North 220, is the most complex drainage pattern at the Landing (Figure 31). At the eastern end, the drainage begins at a culvert beneath Riverside Drive. The section crossing the service road consists of horizontal Type 3 (sandstone) surrounded by horizontal Type 2 (oolitic limestone). Between North 220/East 30 and North 220/West 35, the drainage consists of an outer edge of one course of perpendicular Type 2 outlining 10 horizontally placed Type 2 pavers. One course of perpendicular Type 2 stones is at the center.

West of North 220/West 35, the drainage pattern changes to Type 3 (sandstone) and shifts slightly to the north. The overall width of the Type 3 drainage is 18 inches, slightly wider than the Type 2 drainage to the east. The northern edge in this portion is in sharp contact with the surrounding Pattern 10 limestone; the southern edge is transitional with Pattern 9b. The northern half of the sandstone drainage is composed of one perpendicular course at the contact with Pattern 10, followed by six horizontal and three perpendicular courses in the center. On the south half, 5–8 horizontal courses are at the transitional contact with Pattern 9b. The westernmost section of Drainage 6, between the sandstone and the edge of the pavement, consists of three courses of perpendicular Type 1 and Type 2 stones.

The nature of the contacts in this drainage pattern suggests the eastern part (Type 2) was laid first, followed by the middle part (Type 3) and finally the Type 1 and 2 mixture.

Culverts

Four culverts are situated along the base of the Riverside Drive berm (see Figure 23). Beginning at the north end, the first is opposite Court Avenue at approximately North 1873. The second is south of Union Avenue (North 870) and almost matches the stone-paved Drainage 5. There are one culvert near the intersection of Riverside Drive and Gayoso Street (North 450) and one north of the Beale Street Ramp (North 220). The latter corresponds to Drainage 6.

STORM SEWERS

Apparently, two kinds of storm sewers are present at the Memphis Landing: those dating from the twentieth century, which are intrusive into the original stone paving; and nineteenth century sewers, constructed at the same time or shortly after the stones were laid at the Landing.

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(probably photos)

The locations of twentieth century storm sewers are evident from manhole covers (n=8) and changes in the stone fabric at the surface. One manhole cover at North 1600 is marked "SEWER," and a series of four manhole covers runs along the east side of the Landing between North 1600 and North 1000 (between Monroe and Union avenues). These locations are consistent with the sewer system indicated on a plan provided by the Bureau of Sewer Design, which shows a 21 inch sewer line extending south from Jefferson Davis Park. The line runs along the west side of the Court Avenue ramp, then follows the service road to the west side of the Monroe Avenue ramp. From there, a 27 inch line extends south along the service road toward Union Avenue. This sewer system was probably constructed at the same time as Riverside Drive (ca. 1935).

Unfortunately, sewer lines are not indicated on the next Bureau of Sewer Design plan drawing, which covers the area south of the Monroe Avenue ramp. An open manhole at about North 890/East 30 corresponds to the approximate centerline of Union Avenue. From the surface, the sewer appears to extend to the southwest and may connect with the sewer outlet at Gayoso Avenue. However, no surface indications suggest this.

The Gayoso Street sewer drains into the harbor at North 400 (Figure 32). The sewer was constructed after the original stone fabric, as evident in Pattern 10a (Appendix 1). A manhole cover is about midway between the water's edge and the service road. This feature may represent the massive Memphis Siphon storm water sewer constructed ca. 1915-1920.

Documentary evidence suggests that sewer lines were laid in association with the original paving as early as 1860. These nineteenth century sewers are not usually evident at the surface. The Bureau of Sewer Design plan of the Landing indicates an "abandoned" 18 inch line that begins at Jefferson Davis Park and extends beneath the ramp at Court Avenue to the west side of the Monroe Avenue ramp. There the line connects with a 20 inch line that turns west down the centerline of Monroe Avenue to the river. This line probably corresponds to a cast-iron drainage pipe visible at the west side of the cobblestone pavement during low water (Jimmy Ogle, personal communication 1995). The plan indicates a second "abandoned" line extending from the south side of Court Avenue to the harbor. This line may be buried under the talus slope of Jefferson Davis Park. In all likelihood, there are other, undocumented nineteenth century sewer lines in the southern part of the Landing.

UTILITIES

Below-ground utility lines from the twentieth century include at least five water lines and one electrical line (see Figure 23). Water lines were recognized from the placement of water meters and spickets that tie into a water main that runs north-south beneath the Riverside Drive berm. Most the east-west water lines crossing the Landing are small. Except for a water line at North 330 covered with concrete, repaving has incorporated salvaged stones, and the lines are fairly inconspicuous. The exception is the large water line disturbance extending north-south across the pavement from about North 300 to Union Avenue (see Figures 23 and 33). The trench for this line was excavated in about 1992 to serve the Stacker Lee restaurant. The trench is approximately 3 feet wide and accommodates two PVC pipes. The stones were replaced haphazardly, resulting in alternating swales and ridges along the 600 foot length of the trench. The base of the trench is lined in concrete, which has disrupted the natural drainage by accumulating moisture and promoting vegetation (Figure 33).

Electrical service to the Landing is by buried cables under the Monroe Avenue ramp, as indicated on a plan provided by Memphis Light, Gas, & Water. An above-ground cable extends west from the ramp to a pole and then to the floating complex maintained by the

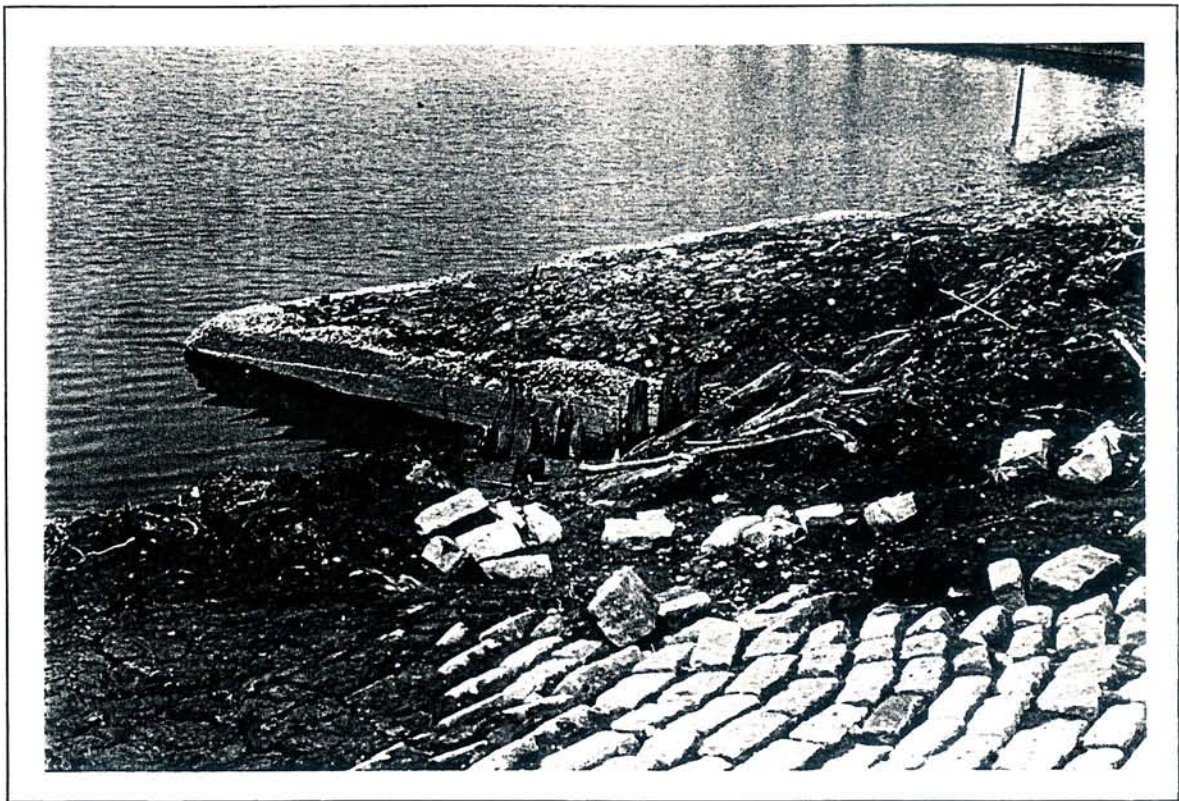


Figure 32. Gayoso Street Sewer (View to the North).



Figure 33. Trench for Water Line (View to the North).

Memphis Queen Line. Buried cables indicated on the plan extend south from the ramp under the service road toward the Beale Street ramp. A buried connection to this line, covered in concrete, extends east-west from the service road to the former location of the Waterways Marine. This buried cable follows the line of the Gayoso Street sewer (see Figure 23).

WALKWAYS AND ASPHALT DRIVEWAYS

Modern alterations to the surface of the Landing include six concrete walkways, four asphalt walkways, four asphalt driveways, and dozens of smaller concrete or asphalt patches.

Two of the six concrete walkways were laid east-west over the stone pavement; the rest are at the western edge of the pavement (see Figure 23). The 45 inch wide concrete walkway crossing the Landing between North 1800 and North 1700 is visible on photographs from the 1940s. The second example at approximately North 650 is of similar construction and may have led to boats at the Waterways Marine.

Asphalt was used to construct the circular drive serving the Memphis Queen Line west of the Monroe Street Ramp. At low water, the western edge of the drive is connected to the water's edge by four asphalt walkways and one concrete walkway (see Appendix 1). A second asphalt drive, extending from the base of the Beale Street ramp at the southern end of the Landing, is used to launch boats. Remnants of two other asphalt drives running east-west across the Landing are present at approximately North 305 and North 250 (see Appendix 1). One badly deteriorated east-west asphalt walkway crosses the Landing at about North 1385.

OTHER FEATURES

Limestone Blocks

At the northern end of the Landing are two fossiliferous limestone blocks much larger than the surrounding limestone matrix stones. Located southwest and southeast of Mooring No. 1, at approximately North 1890, both measure 27.0 x 28.0 inches. Their function is unknown.

The Beale Street Gauge

The Beale Street River Gauge, at about North 150, is an iron ribbon 6.0 inches wide set in a concrete foundation 16.0 inches wide (Figure 34). The gauge is in two sections and is marked in tenths of feet. On the Landing proper, the distance between one-foot marks is 80.0 inches (1:6.66 slope). At the western edge, the gauge is covered by sediments below the 9.2 foot mark; the stone paving begins at about 10.0 feet. On the east, the gauge becomes part of the Riverside Drive berm at the 35 foot mark. The gauge top at the roadway level is 48 feet. On the berm, the one-foot marks are 22 inches apart (1:1.83 slope). Given that the gauge does not appear to run under the berm, the gauge probably was constructed sometime after Riverside Drive (ca. 1935).

Metal Poles

Between North 1800 and North 1675, at least eight 3 inch diameter metal pipes are set into the pavement and cut off at surface level. These probably were the bases of metal poles. The rectangular pattern suggests some sort of fencing in this section of the Landing.

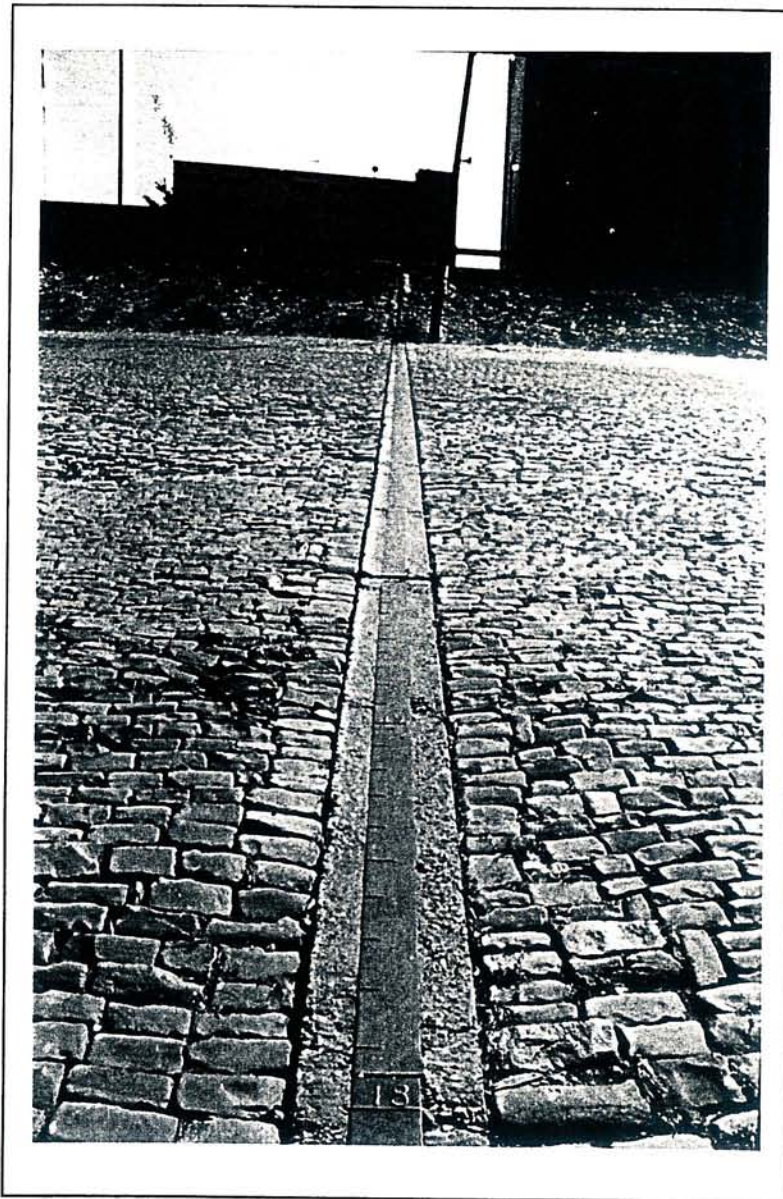


Figure 34. Beale Street Gauge (View to the East).