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Reaching for the Channel: Some Documentary and Archaeological Evidence of Extending Alexandria's Waterfront

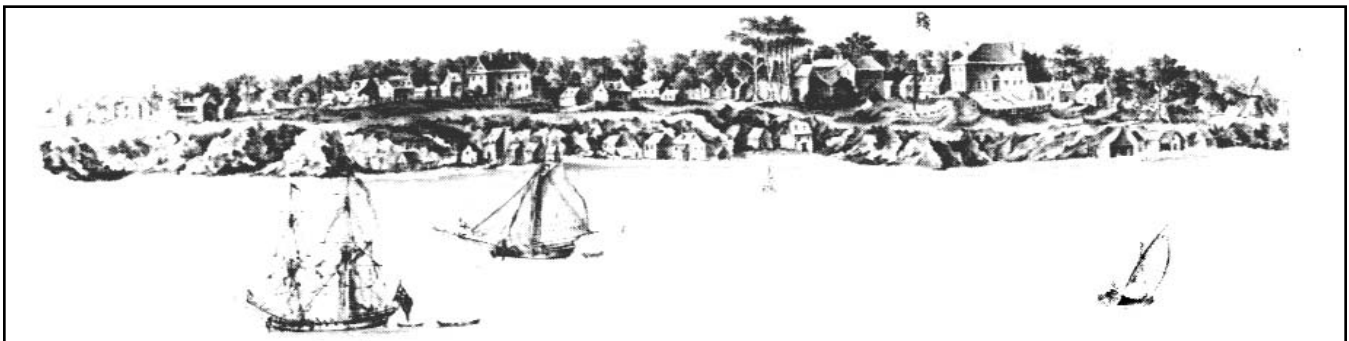
By Steven J. Shephard, Ph.D., RPA

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If somehow we could go back in time and sail up the Potomac in 1748, arriving at the site that would become Alexandria, we would find an incredibly different place than we see today — not just due to the growth of the city, but to major changes in topography. Approaching the shore, the tall banks would be impressive, and there would be a crescent bay lying between the two projecting headlands. The one to the north was West's Point, where a rough road cut through the bank down to a little wharf area (the foot of current Oronoco Street). On the banks were a scattering of wooden structures, a house, a tavern or "ordinary," and two larger tobacco warehouses. This was one of the official tobacco inspection stations authorized by Governor Gooch's act of 1730 known as Hugh

West's Hunting Creek Warehouse (Harrison 1987:II:405; Smith and Miller 1989:14). From this point a crescent bay curved south to another headland, Point Lumley (the foot of current Duke Street), named for "a certain Capt. Lumney [sic] whose vessel used to lay along there" (Thomas Graffort, 1789, in Miller 1987:4).

The land rose abruptly from the flats to a height of fifteen or twenty feet and the only road cutting down to the wharf was Oronoco, the terminus of the tobacco Rolling Road coming from the west. Travelers visiting the early town remarked on the loftiness of the banks. These banks were probably overgrown with vegetation and the flats were dry enough to build structures on. Eventually, this waterfront probably



Yorktown, Virginia in 1755 (Rouse 1975)

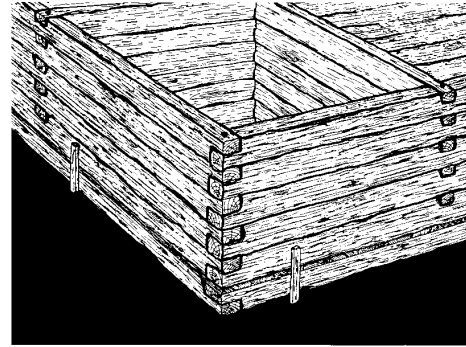
looked very similar to the depiction of Yorktown in 1755 (Rouse 1975:56-57) shown on page one. The banks were very high with buildings extending back from them and in addition, there were many structures standing on the flats below the banks.

The water depth in the Alexandria bay was recorded by George Washington in 1748 as “about seven feet at High Water” and the 1749 map shows it as being “4 or 5 feet” deep. Though somewhat shallow, this depth was adequate for shallow-draft vessels, but not for larger ships which could only tie-up at either of the two points. However, the river carried considerable silt which settled in the bay, even as it does today. In the 18th century, this was increased by the plantation practice of clearing large fields for growing tobacco or grains, resulting in soils eroding away into the rivers. Added to this, was the practice of ships dumping their ballast of sand or stones in port, and the waste run-off from the town and actual dumping of garbage and other wastes from the wharves and shore. Obviously, this caused concerns for the commercial enterprise of the port, the hope being to encourage trans-Atlantic trade. Goods could be lightered to shore from ships anchored in or near the channel, but the desire was to bring the shore closer to the channel. Plus, waterfront lot owners retained ownership of any new land they made. The channel itself was of fine depth for large ships, shown on the 1748 map as eight fathoms, which is forty-eight feet deep. It passed the bay nearly touching the two points.

Wharf Construction

As early as the 1750s, active filling of the bay began and progressed most rapidly in the 1780s. The Alexandria bay was the area of the most extensive filling, but numerous wharves were constructed all along the Alexandria waterfront. This was carried out by various means, but in general involved building wharves by two basic methods: creating structures that projected out from the shore into the water, and building walls parallel to the shore which were then filled in from the land side. The latter are termed “marginal” or “bulkhead” wharves, and in Britain are termed “quays” (Norman 1987:7). The walls of these wharves, the bulkheads, were constructed by stacking and interlocking the ends of long timbers. The timbers were sometimes left in their natural state with bark attached, but at other times were cut to form two or four flat sides. Sometimes the bulkhead walls were held in place by timbers called “back braces,” that

were attached to the wall and projected back into the wharf fill. Another way of supporting the bulkhead wall was for piles, sometimes called “sheet piles,” to be driven into the river bottom against the outside of

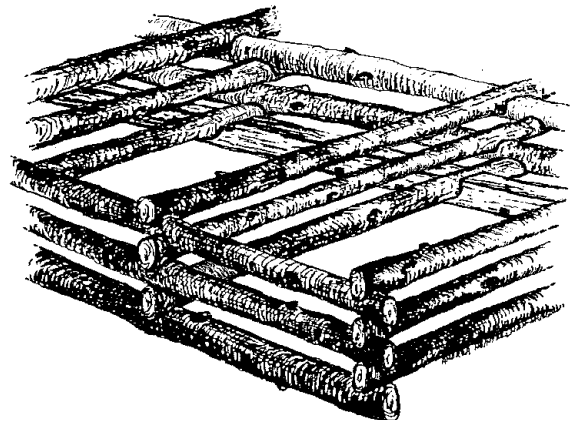


Crib Wharf Structure (Alexandria Archaeology)

the wall. Both types of wharves were utilized in extending the Alexandria waterfront, but the focus of the discussion here will be primarily on projecting wharves.

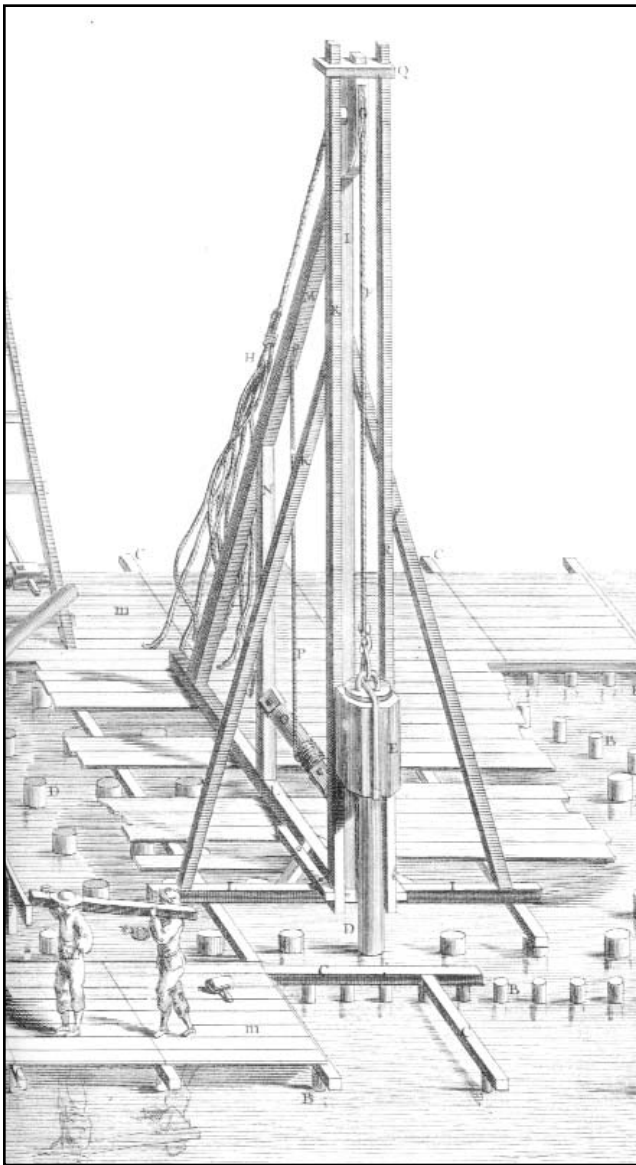
Projecting wharves were commonly built in three ways: by constructing a filled crib or cobb framework; by building a filled enclosure using horizontal pieces of wood held in place by vertical sheet piles; or by filling a stone enclosure. Stone wharves were common in Europe during the 18th century, mostly due to the scarcity of wood, but were rarely built in America at this time because of the great abundance of timber (Norman 1987:7). The wharves built in Alexandria in the 18th and 19th centuries were made of wood; it is this type of wharf that will be considered here.

Crib and cobb wharves were built from frameworks of timber filled with wood, stones or dirt. A crib

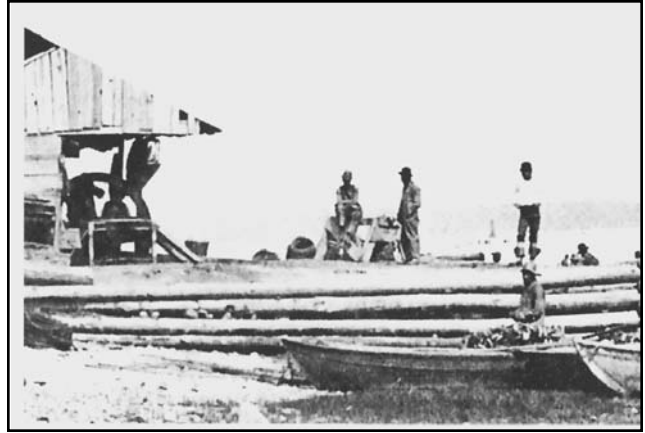


Cobb Wharf Structure (Heintzelman-Muego 1983)

wharf was built using tightly stacked timbers, usually with multiple interior divisions, or “cells,” some of which were floored with planks. The corner timbers were notched to hold together and were often pinned with long iron spikes or wooden dowels originally called “tree nails,” then shortened to “trunnels.” Trunnels were made from hard woods like locust, oak or hackmatack (Heintzelman-Muego 1983:20). Small wooden wedges were hammered into one or both ends of the trunnel to expand it to fit tightly. Crib frames were usually constructed on shore and then pushed out into shallow water where the walls were built upward and some fill put in before being floated into place. Then the walls were completed and the rest of the fill



An 18th Century Wharf Pile Driver (Diderot 1993)



Crib wharf at Stoney Point, Virginia (Tilp 1978)

added. Wood might be used as fill in the early stages of construction to serve as platforms for the workers to stand on as they worked from the inside to build up the walls, and the wood was light and allowed the frame to float (Norman 1987:33-34). Once in place, the framework would be filled in with earth and stone. Tilp provides a very good example of what appears to be a crib wharf shown in a late 19th-century photograph of fishermen at Stoney Point, Virginia, on the Potomac. The large size of the logs can be seen and their extension into the shore itself. The common method of notching the timbers to link them together is visible here at the water end of the wharf.

Cobb wharves were built using timber frames that were not as tightly built as crib frames, so fill of wood or stone was used rather than soil. The term “cobb” could derive from the cobblestones used as fill or might refer to the less solid nature of the structure, as “cob” in 18th century usage means something of poor quality construction (Norman 1987:13-14). Cobb wharves were built in similar stages to crib wharves, but could either be completely floored and filled in or have the floor built toward the top, leaving the lower timbers open with water flowing through. The distinction between the two types of wharves is evident in an 1819 account from Salem, Massachusetts, which describes improving cobb wharves by filling them in completely and making them “solid” (Norman 1987:12).

Driving piles along the bulkheads of wharves was a method of strengthening the walls and helped keep them in place. However, this required a pile driver and experienced men to operate it. David Shaon (or perhaps Sharon) advertized his ability to provide this kind of wharf construction in the *Alexandria Gazette*, on July 21 of 1785:

David Shaon

WHOSE profession it is...can command any reasonable number of good workmen from Baltimore, who await his orders. He professes also the capacity of building a complete pile driver, one being sufficient for the whole place, and recommends the driving of large piles on the outside walls of every wharf, which is the custom in Baltimore even in the Bason; but is more peculiarly suitable here from the steepness with which the channel of Potomack is formed. Such a machine is too expensive to be born by an individual, therefore if made at more general expence he will give proof of the interestedness of his advice.

The pile driver he used was probably of fairly simple construction, similar to one illustrated in an 18th-century print in the *Diderot Encyclopedia*. It was composed of a heavy iron or stone weight attached to a large number of heavy ropes, which teams of men would haul on to raise the weight and then drop it to drive the pile (Diderot 1993: Plate 285).

A less frequent wharf building method was to secure an old ship's hull along the shore and use it as a frame to fill with stone and dirt. A request to sink an old hull for a wharf was made by William Robert and John Miller in 1825, who applied to and received permission from the City Council to sink the hull of the ship "Young Hero" along the shoreline of their lot between Wilkes and Gibbon Streets in order to build a wharf (Erickson 1988:1:212 and 2:29; *Alexandria Gazette* 1825). This would have expanded their lot to the east of Union Street and the hull may still be buried there. It is very possible that hulls of vessels were used to fill in Alexandria's bay in the 18th century. In fact, in 1799, the Council passed three acts outlawing the practice of tying up old vessels to wharves or piers on the pretense of repairing them, then cutting them to the waterline for firewood and permitting the hulls to sink (Moore n.d.:23). A very well known Civil War period photograph of the Alexandria waterfront shows both a good example of a sheet pile bulkhead wharf alongside which is a sunken vessel hull. The wharf is visible in the lower center of the picture with stacked horizontal planks held in place by the sheet piles, which are the vertical wood posts. The edges of the gunnels of the sunken vessel are just visible at the

Waterfront Filling: Some Documentary Evidence and Visible Remnants



George Washington's plat of the Alexandria bay in 1748 (Stephenson 1981)

water's surface and it is easy to see how this frame could be filled in and serve as a base for a wharf.

In Lower Manhattan in 1982, an early 18th-century ship's hull that had been used as a wharf frame was excavated. It was found next to Water Street, two blocks from the current waterfront. The ship was a British merchant frigate about 82 feet long probably built in Virginia or the Carolinas and used to transport tobacco from the colonies to Europe. The hull was sunk to build the wharf in about 1754. The bow of the ship was saved and is now being conserved at the Mariner's Museum in Newport News, Virginia (Pedersen 2003:2-3).

There is both documentary and archaeological evidence that many of these land-creating methods were used to fill in Alexandria's bay between about 1750 and 1790. The bay was completely filled in by about 1798 and Union Street established. Unfortunately, there is no specific historical account of this undertaking, but there are many clues in the documents. One key element to the study of this filling is the source of most of the fill: the high banks along the waterfront.

Tons of dirt were moved, both when streets were cut through and when the bluffs were cut down to "bank out," as it was called. While there are a few records of cutting the banks, we know they were an impressive feature of the waterfront from a few accounts:

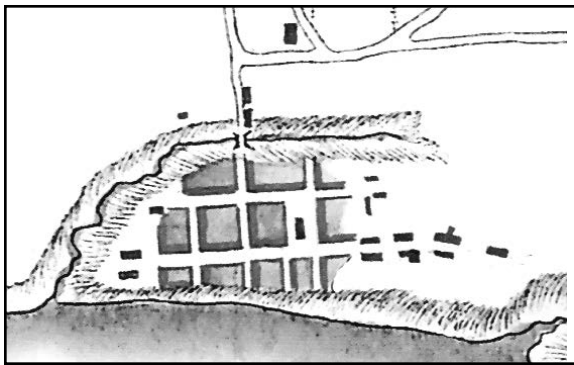
...at Alexandria...the Potomac rolls its majestic stream with sublimity and grandeur, sixty-

gun ships may lie before the town, which stands upon its lofty banks, commanding, to a great extent, the flatter shore of Maryland. (Marquis de Chastellux, 1782, in Miller 1987:32)

...Alexandria, formerly called Belhaven, was settled later than Georgetown, but grew incomparably faster. Like Georgetown it stands on the high and almost perpendicular banks of the Potomack, which for the great convenience of shipping not only ebbs and flows at this place also somewhat about Georgetown. (Johann Schoepf, 1783, in Miller 1987:29)

...That your Petitioners at the sale aforesaid purchased the two Lotts of ground lying upon the North and South sides of Franklin Street and east side of Water Street...and are now engaged in filling it in with Earth at a very heavy expense....That the contraction of the street will not in any manner injure the regularity of the Town it being at the side and under a Bank at least thirty feet high. (Legislative Petition 1785)

Today, there is little visible evidence of Alexandria's bay and the high earthen banks that stood high above the waterfront. Examination of historic maps, scattered references in documentary records and



The Rochambeau 1782 map of Alexandria (Stephenson 1981)

data recovered from archaeological excavation provide some information on the filling of the bay and the extent of the original banks. There is additional evidence hidden in basements along Lee Street and visible still in the topography of certain places in Old

Town that can offer an idea of where the original water's edge was and where the lofty banks were cut down..

First, it is important to examine the 18th-century maps we have of Alexandria. George Washington's 1748 map does not show any bank line behind the shoreline, but his written comment is informative: "Note that in the Bank fine Cellars may be cut from thence Wharfs may be extended on the flats with. [without] any difficulty & Ware Houses built thereon as in Philadelphia." Substantial banks would be needed if cellars were to be dug in them. And, it seems that he means that the excavated dirt from the banks could be used as fill for wharves that would extend out from the flats.

The 1749 and 1763 Alexandria maps do not show any indication of bluffs or filling of the bay, but the 1782 Rochambeau map does. It must be noted that this is, however, a sketch rather than a scaled map. There is a distinct bank line shown back from the waterline and parallel to it. Both are shown as relatively straight, and there is little indication of any remains of the bay.

Andrew Ellicott's 1794 map shows no indication of the bank line and inaccurately shows the turnpike from the north coming in to St. Asaph Street rather than Washington Street. If the block layout was as shown, Fairfax Street would not yet be cut through to the north and we know from other records that it is in reality Water Street that is not cut through. Again, the bay seems to be completely filled in.

There are also references about building "under the bank:"

...The warehouse was built on north side Duke on point Lumney. There was dry ground on the north side of Duke Street under the bank where the warehouse was built and he understood that there was dry ground enough belonging to the point to build another house to the north of that Warehouse as he was informed by the Trustees. At that time there was dry ground adjoining the north side of the warehouse but Muir did not know of what quality. He remembered that a man could pass (and he himself had) between the west end of the warehouse and the bank about the time warehouse was built. (Deposition of John Muir, 1755, Prince William County, Virginia Land Causes, 1789-1793, in Miller 1987:12)

At a meeting of the Trustees, this 30th December 1769, from the large increase of the flour and grain trade seems a necessity to make buildings under the bank at the point known as West's Point..." (Proceedings of the Board of Trustees, Town of Alexandria, Virginia 1749-1780, December 30, 1769)

Construction on the sandy flats under the bank must have been done in a singular manner to insure that the foundations were stable and would not be undercut by the tides that must have flooded the area at certain times of the year. A hint at this construction is contained in the Proceedings of the Trustees in 1755, that stipulates that the warehouse to be built at Point Lumley by John Carlyle was to be "...One hundred feet long twenty four feet Wide thirteen feet Pitch'd. To be three Divisions double studded, the sills to be raised four feet from the ground & so compleatly finished." After it was constructed the Trustees had the work inspected and "agreed that the Ware house at Point Lumley be filled with Sand & Rubbish from the Point but such a manner as not to prejudice the foundation of the said house" (Shomette 2003:23-24). It seems that the warehouse was raised off the flats, perhaps for water to flow beneath it, and the filling in with "sand & rubbish" probably means that there was some sort of wooden bulkhead that was filled in behind with this material to form a protective wharf.

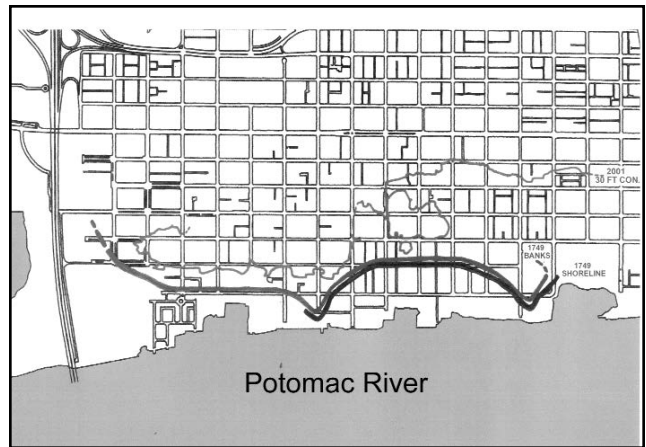
Other references to the early banks are contained in articles in the *Alexandria Gazette* in 1785. On April 14, it was reported that, "Last week as a Negro Man was digging under the Bank, unfortunately a large Mass of Earth fell upon him and fractured his Thigh." The other, in the September 7th issue, stated that "...a Labourer, on Messieurs Harper and Keith's Wharf, lost his Life, by the falling of the Bank." It is curious that the laborers seem to be digging the banks from the bottom, which would be much more dangerous than digging from the top down.

Many photographs of the Alexandria waterfront were taken during the Civil War. One of these is a view of the Quartermaster's Wharf at the foot of Montgomery Street. It shows a large cut bank next to the river, that has been cut on the land side. A group of men are standing and sitting on top of it and two men, one a Union soldier, stand on a road below it. Gaging from the height of the standing men, the bank appears to be about fifteen feet tall.

This evidence along with information gathered

from lot records suggests that the banks were just behind the shore's edge as shown on the 18th-century maps. The east edge of the flats was not drawn. To relate this information to the current Old Town topography a composite map was created showing the 1749 shoreline, the projected 1749 bank line and the thirty-foot-above-sea-level contour on a 2001 topographic map. This thirty-foot contour represents the current remnants of the banks.

But, is there actual visual evidence of the original banks and shoreline that can be seen today? Relatively undisturbed portions of the banks exist on the far north waterfront along the shore in front of the PEPCO plant. The flats below the bank are also probably similar to the flats referred to on George Washington's 1748 map. There are also reduced sections of the banks rising up to the west of the 500 Block of South Union Street in Windmill Hill Park.



Map showing the 1749 shoreline and projected bank line and the 32 feet above sea level contour line in 2001 (Alexandria Archaeology)

Although the banks are eroded and smaller in size, this embankment paralleling South Lee Street is a remnant of the original banks.

One very significant extant portion of the bank is the property included within Carlyle House Historic Park where the English merchant, John Carlyle, built his house atop the bank in 1753. A conception of the height of the banks can be gathered by comparing the elevation of the house itself with the current level of Lee Street, which would have been the flats under the bank at that time. And this street, of course, was originally named Water Street. This bank, however, may well be reduced from its original size by removal of dirt from the property when James Green owned it. He placed a notice in the newspaper in 1849, stating: "I

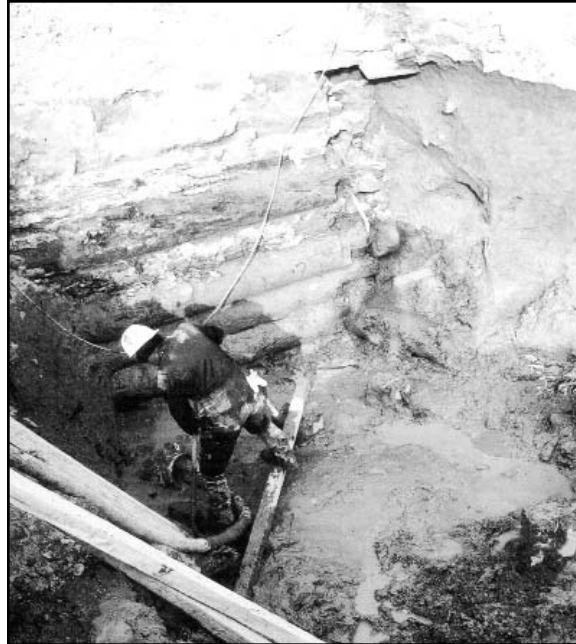
desire to have removed about two thousand cubic yards of clay and sand from the bank east of the Mansion House. Persons wanting such material, or desirous of contracting for the removal of the same, will please apply to JAMES GREEN” (*Alexandria Gazette* August 31, 1849). John Carlyle did actually utilize the sand flats below the house by having the Carlyle & Dalton blacksmith shop built “under the bank” (Munson 1986:127).

Just across Cameron Street from the Carlyle House Historic Park is another indication of the rise of the original bank. Looking north, at the fronts of 211 and 213 Cameron Street, it is very apparent that the two properties are at significantly different elevations.

Other indications of the waterside edges of the land below the banks are remnants of early sea walls. On the east side of the 200 block of South Lee Street there stands a house advertized in the *Alexandria Gazette* in 1766, as having “a front on the river, of near seventy yards, defended from the water by a stone wall, to which wall, boats and other small vessels may come at a moderate tide.” On the next block to the north, again on the east side of the street, there is a house with part of a stone sea wall incorporated into the house foundation. The owner of this house described the wall as having heavy iron rings secured to the wall for tying up boats, which are similar to the ones described in the 1766 advertisement. Unfortunately, this wall has been covered over and is no longer visible. In addition, a section of sea wall was reported as being in the crawl space beneath a nineteenth-century house on the 100 block of Prince Street. The locations of these sea walls are an indication of how Lee Street, appropriately called Water Street in the 18th-century, ran along the edge of the water, with a stone wall along the water side. As the flats were filled over and the river pushed eastward, houses could be built on the new land on the east side of the street, some houses using the wall as part of their foundations.

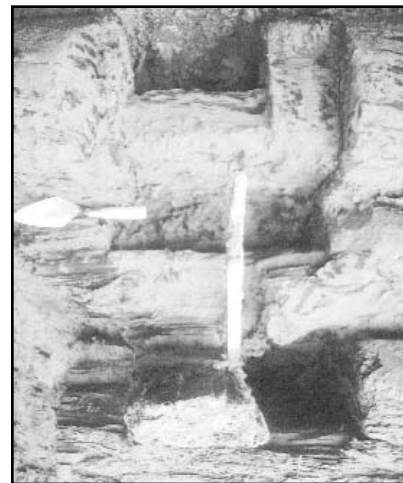
Waterfront Filling: Some Archaeological Evidence

Archaeologists with Alexandria Archaeology have conducted or overseen excavation work in Alexandria since 1978. There have been many sites along the waterfront that yielded evidence of the building of wharves and the filling in of the river to create new land, always extending the waterfront toward the channel.



A section of the Carlyle-Dalton Wharf in 1982 (Alexandria Archaeology)

Four sites along the waterfront have provided archaeological evidence of this filling process. Merchants John Carlyle and John Dalton built a long wharf from the base of Cameron Street in 1759. They conducted extensive trade and needed ample space where large ships could be unloaded and loaded with cargo. This wharf would extend beyond the silted-in water’s edge and out toward the channel. The Alexandria trustees approved the construction of the wharf on the condition that half be dedicated to public use. The wharf was approximately 200 feet long and



The notched corner timbers and spike of the Carlyle-Dalton Wharf (Alexandria Archaeology)

66 feet wide (the latter being the standard street width in Old Town Alexandria).

In 1982, during construction of the Torpedo Factory condominiums, remains of this wharf were discovered along the southern edge of Cameron Street. The stacked timbers of this crib wharf were of yellow pine with the bark intact. The wood was in excellent condition when it was uncovered. At the east end of the crib wall was the corner of the wharf, and here the timbers had rectangular notches which fit one log to the next, a large wrought iron spike serving to secure them. Excavations were made around the north side of this notched timber end, and no attached logs were present indicating that this was apparently the north-east corner of the wharf. Several posts and horizontal timbers were found beside the wharf wall and may have facilitated the tying up of the ships (Shephard 1985:1). One of these timbers had a rectangular notch at one end and a trunnel still in place which had once held the timber securely in position.

Four sections of the wharf were uncovered and indicated that what was exposed was the interior side



Artifacts recovered from the Carlyle-Dalton Wharf: nails, possible gunflints and ceramics (Alexandria Archaeology)

of the north wall of the wharf, the remainder being under Cameron Street. A few artifacts were found in the silt beside the wharf, including rose-head nails, possible gunflints and ceramics dating to the 17th century. These were fragments of Iberian storage jars and majolica ware and English wares. Also, sherds of German and British wares from the mid-eighteenth century were recovered (Shephard 1985:1-2). Some of the early pieces were water-worn. These 17th-century ceramics could have been left by early visitors to

the bay or may have been dropped along with ballast from ships at a later time.

The second site was on the block bounded by Lee, Queen, Union and Cameron Streets. It was excavated by archaeologists from the firm Dames and Moore and



Stone paving at an 18th century wharf at the Lee Street site (Alexandria Archaeology)

by Alexandria Archaeology staff and volunteers. The stone-paved surface of an 18th-century wharf was found along with a small section of a timber wharf bulkhead. Their locations provided clues to the progression of the bay filling in this area. A lack of associated datable artifacts for either of these features prevented the determination of age of these structures. However, records indicate that the block was filled to Union Street by 1780, so the wharves are earlier than that date.

A large crushed plaited wooden basket with wooden handles was found next to the stones on the wharf's surface. It should not have been surprising to find it there because baskets were used in an amazing variety of tasks in the 18th and 19th centuries. Baskets were used for transporting and storing various market goods, in the processing of tobacco and as containers for field crops such as cotton. Here on the Alexandria waterfront baskets were used in moving fresh products like vegetables and fruit as well as in processing fish and shellfish. A 19th-century photograph shows a basket being used to unload fish from a schooner docked at Fishtown on the north waterfront of Alexandria. Another interesting artifact, found lost between the stones at the Lee Street site, was a 14 inch-long wooden fid. A fid is a common sailor's tool used to tease apart strands of rope, or to make knots and do rigging work. The fid is now on display at the Alexandria Archaeology Museum in the Torpedo Factory Art Center.

Roberdeau's Wharf is another site excavated

Drift-wood wanted,

For which the Subscriber will pay, as soon as delivered and deposited into his wharf as he shall direct, at the rate of ONE DOLLAR per cord.

He can accommodate some of the best feet for stores on his wharf, and many within 30 feet of navigable water, as he intends to finish said wharf this spring; which has for some time accommodated vessels of various burthens, as the depth of water is sufficient for any. He has also a large Stone-warehouse, with eleven or twelve different apartments, all private, and a Sail-Lot 50 feet square; either of these unoccupied may be immediately entered upon, monthly, or yearly; or the whole let together. He has other Lots more distant, and some on the bank, to accommodate dwellings, as well as store-houses. For terms apply to the subscriber.

DANIEL ROBERDEAU.

Alexandria, March 31, 1791. t. f.

Ballast will be accepted in lieu of wharfage.

An advertisement for Roberdeau's Wharf in 1791 (Kate Waller Barrett Library)

along the waterfront. It was located at the base of Wolfe Street and in 1989 the archaeological firm, Engineering Science, conducted an archaeological investigation there. This work was undertaken in preparation for the building of the Harborside townhouse development. The merchant Daniel Roberdeau built the wharf in about 1774. When finished it was about 400 feet in width and extended into the river about 300 feet (Knepper and Prothro 1989:9-10). It was constructed using timber bulkheads held in place by sheeting piles like those described in Shaon's advertisement of 1785 referred to earlier. Roberdeau continued to expand the wharf, advertising in the *Alexandria Gazette* for ship's ballast in 1790 and for driftwood in 1791. It is unusual for driftwood to be requested rather than cord, or fire, wood. It may seem odd to use wood at all, because of the possibility of decomposition, but if wood — especially of a kind saturated with sap, like pine — was used in the bottom levels of fill, the low-oxygen environment under water would slow this process.

The archaeologists found a series of 18th-century wharf surfaces covered with scattered planks, possibly a rough walkway, in one area and with a wooden drain gutter running across another area.

In other places the surfaces were covered with thin scraps and chips of wood, sawdust and pine tar, some-

times then covered with a sealing layer of sand and another similar surface on top of that. The artifacts found on the wharf included hand-wrought nails, scraps of canvas, oak dowels, pieces of oakum for caulking, rope, an oarlock, fish scales and even kernels of corn. Interestingly too, prehistoric chipped stone tools were recovered testifying to the use of fill soil taken from the banks that contained Native American sites (Knepper and Prothro 1989:96,45-46, 95).

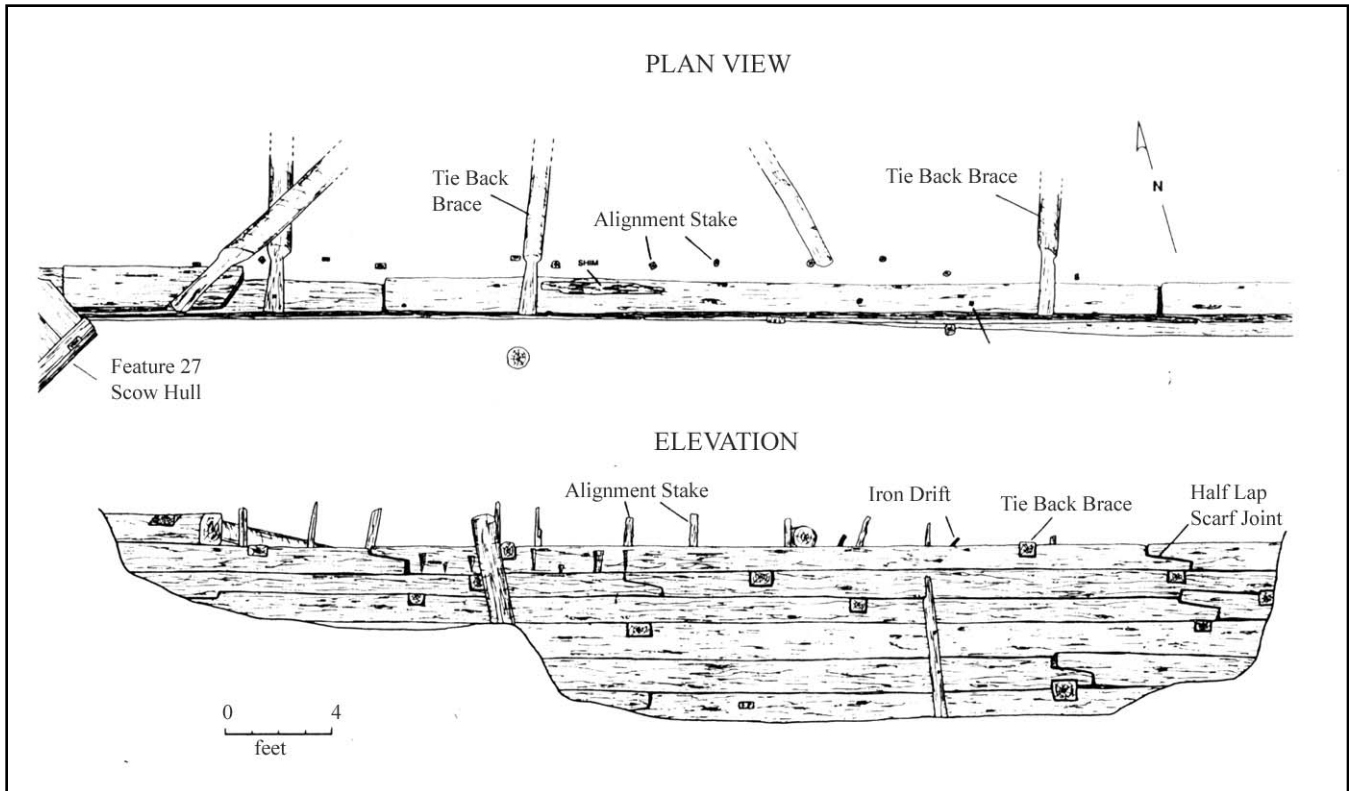
The site with perhaps the most impressive finds along the Alexandria waterfront was excavated in 1993 in preparation for the Ford's Landing townhouse development at the base of Franklin Street. This was



Roberdeau's Wharf excavation by Engineering-Science archaeologists in 1989 (Alexandria Archaeology)

the location of Keith's Wharf which was built in 1785 using fill taken from the nearby banks. This is where the laborer, mentioned earlier in the *Alexandria Gazette*, was killed in 1785. The wharf projected out from shore about 400 feet and was approximately 500 feet wide (Engineering-Science, Inc. 1993:38). Engineering Science archaeologists also excavated this site and made incredible finds including a 350 foot-long shipway, nine derelict vessel hulls, a marine railway and a wharf bulkhead wall — all dating to the 19th century. Seven of the vessel hulls were the remains of well-used heavy transport craft, scows and barges, typical of 19th-century river commerce. In addition, the bow of another wooden vessel was uncovered. It was a 19th-century heavily-used keeled vessel, possibly a tug or ferry (Engineering-Science 1993:347-348).

In addition to these discoveries dating to the 19th



Drawing of the 18th century wharf bulkhead of Keith's Wharf (Engineering-Science, Inc.)

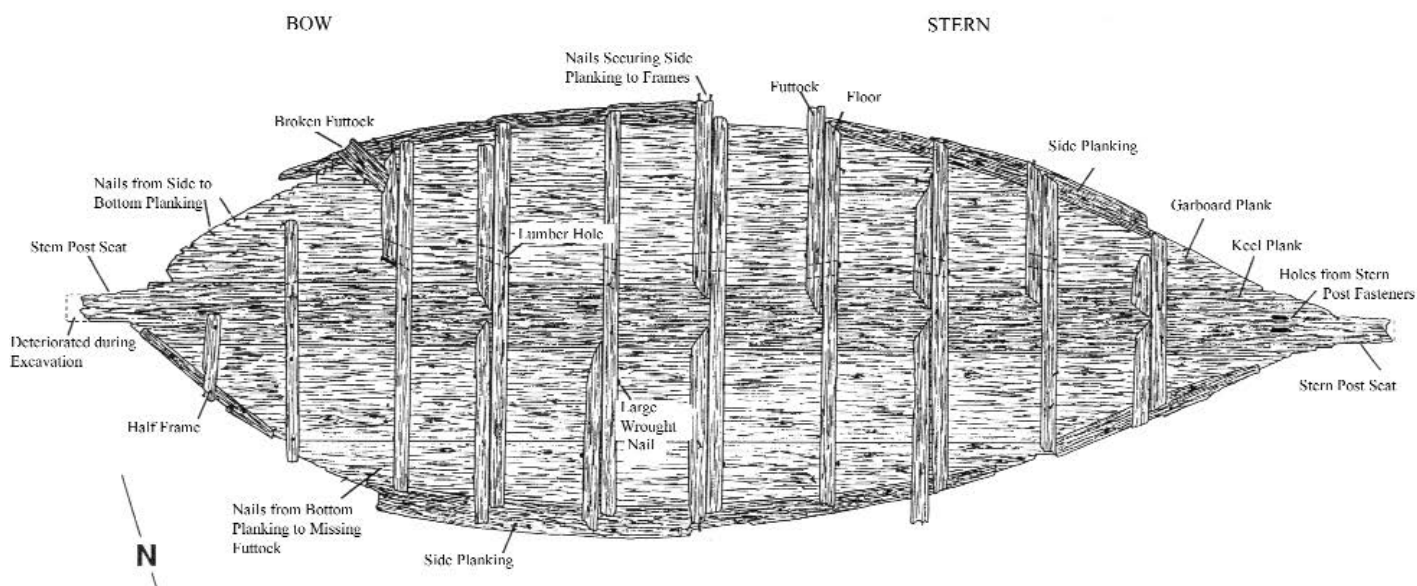
century, the 18th-century wharf bulkhead wall was found. This bulkhead was built of stacked adze-squared southern yellow pine timbers. The southeast corner of the structure was found and the timbers were notched so as to hold together securely. The bark was left on the upper and lower surfaces of the logs and ends were connected with scarf joints secured together by iron spikes. The bulkhead face was anchored by back brace timbers connected to the bulkhead wall timbers with dove-tailed notching. Next to this wharf bulkhead near the original shore, the bottom of the hull of a bateau was found possibly having been abandoned there early in the 19th century. The lines of the hull were of a style typical of boat construction in New England in the 18th century (Engineering-Science 1993:347). Few artifacts were found in the disturbed wharf fill, but 262 prehistoric stone artifacts and one pottery sherd were found dating from the late Archaic to the Late Woodland Periods, about 5000 to 500 years ago, again showing that Native American camps once occupied the bluffs above Alexandria's waterfront (Engineering-Science 1993:267-268).

Keith's Wharf was on the northern edge of a large bay that eventually became known as Battery Cove, because of the Union fortification built here to defend

the Capital during the Civil War. In 1911 and 1912, the Army Corps of Engineers filled this bay with dredge spoil removed from the shipping channel in front of Alexandria. A stone wall was built first across the mouth of the cove to retain the fill and then the dredge spoil was pumped in behind it. As the clamshell dredges removed the silt from the channel bottom, they also removed twelve vessel hulls. Unfortunately, no descriptions of these wrecks were recorded at the time. This project created fifty acres of additional land at Jones Point which may contain the buried hulls of these twelve ships dredged from the Alexandria channel (Shomette 2003:215).

Waterfront Filling: Conclusion

While it is easy to understand how Alexandria's waterfront filled in slowly, moving out from the shore toward the channel through the construction of docks, piers and wharves, the surprising fact is that the entire Alexandria bay was filled in during a period of about thirty-five to forty years. This obviously required the procuring and placement of an enormous quantity of dirt and other fill. There is no documentary evidence that the filling was the result of a concerted effort made by the city government. City Council minutes



Drawing: hull of an 18th century bateau found beside Keith's Wharf (Engineering-Science, Inc.)

from the 18th and 19th centuries contain references to various issues relating to the filling in of the bay by individuals, but there is no indication that the city fathers implemented any plan to have this feat accomplished. Perhaps they believed that the commercial motivations of ship owners and merchants would serve this purpose or that the provision, that all land created by expanding waterfront lots into the Potomac would become the property of the lot owners, was enough. An amusing anecdotal reference to the filling of the bay was related in the history William F. Carne wrote of Alexandria in 1860:

...in 1780, except the roadways by which Oronoko Street reached Point West and Duke Street sloped to Point Lumley, there was no way to reach the river shore except the rough and precipitous inclines cut through the high bluff which overtopped the river side. The earth cut from the hills was used in filling up the cove in front of the town; "banking out" the process was called. While this grading was in progress, before porches could be completed, and while temporary steps and ladders furnished access to the doors, a number of the fast young men says Parson Weems, in the "Drunkard's Looking Glass," got upon a spree. The carts employed to haul the dirt and fill out the ground between Water and Union Streets, were at rest by the river side, and the

wells from which with windlass and buckets inhabitants drew their supply of water, quiet as they had been, at midnight in a respectable, thrifty, law loving town. The young men took the ladders and steps and threw them into the wells, and ran the carts so far into the river, that, when high tide came with morning no vestige of them could be seen. There was early falling, as well as early rising the next morning, for the first comer to the door generally pitched out. The ropes broke at the clogged wells, and there was no coffee at breakfast, because no water could be procured. The cartmen swore that the devil had made way with their carts, and a town so bewildered and worried might well set the old parson wondering with Shakespeare, that "men should put an enemy into their mouths to steal away their brains." The matter was soon discovered, the cartmen recovered their carts, and the young men lost their characters. (Miller 1983:231-232)

A complete history of the filling of Alexandria's bay and waterfront would require researching through thousands of individual records including newspaper advertisements, insurance records, deeds and wills. What has been presented here is the result of a limited amount of research. Much more is needed to determine the progress of the filling in specific areas of the

waterfront.

It is fitting to conclude this article with a final quote from Alexandria's foremost educator and historian, William F. Carne, who in 1860 wrote of Alexandria (Miller 1983:98):

...the original plan of the town was shaped to suit the ground, not as afterwards cutting and shaping the ground to suit the town.

Map References

All the maps listed below are reproduced in *The Cartography of Northern Virginia, Facsimile Reproductions of Maps Dating from 1608 to 1915*, by Richard W. Stephenson, published by the History and Archaeology Section, Office of Comprehensive Planning, Fairfax County, Virginia, in 1981. Page numbers are given in parentheses and the maps are listed in chronological order.

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1749 "A Plan of Alexandria now Belhaven." George Washington (24)

1763 "Alexandria." George West (27)

1782 "Camp a' Alexandrie Le 17 Juillet 15 Milles de Clochester [sic]." Comte de Rochambeau (30)

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