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Geismar

2009

# 109 Waverly Place

## Backyard Cistern

## Greenwich Village, New York

### Memo Report



Prepared for Aries Construction & Builders Co., Inc.

Prepared by Joan H. Geismar, Ph.D., LLC

January 2009

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## ARCHAEOLOGICAL MEMO REPORT

To: Aries Construction & Builders Co., Inc.  
From: Joan H. Geismar/Joan H. Geismar, Ph.D., LLC  
Re: 109 Waverly Place, Manhattan  
Report Date: January 2009

To comply with a request made by the New York City Landmarks Preservation Commission (NYCLPC) to determine if a mid-19th-century water cistern might survive at 109 Waverly Place (Block 553, Lot 34), a worksite located in the Greenwich Village Historic District, Aries Construction & Builders Co., Inc., engaged Joan H. Geismar, Ph.D., LLC, to investigate the matter. An NYCLPC map review had suggested that the cistern, a ubiquitous and often archaeologically rewarding backyard feature, might survive under a late-19th-century, rear building extension. At the time of the request, construction was in progress in the backyard of the 4-story house erected on the north side of Waverly Place west of Washington Square Park in 1839 or 1840.

Subsequent but limited research (maps, census manuscripts, deed index, New York City Directories) indicated the builder was Asaph Stone,<sup>1</sup> a British-born merchant. Stone also owned and built neighboring 105, 107, and 111 Waverly Place (Tax Assessments 1841), with 107 Waverly his home. Until 1855, 109 Waverly Place was rented to various merchants, but in that year, Stone's descendants sold 109 Waverly Place to August Noel, then a window glass merchant. According to the 1855 state census, 109 Waverly Place was then vacant. It is not known if Noel rented out his new house, but his documented occupancy began in 1862 and continued until 1896 (NYC Directories). Map data indicate that alterations to the back of the house that would have rendered the cistern inaccessible occurred sometime between 1864 and 1885 (Perris 1864 [not illustrated]; Robinson 1885; see Figure 2). That is, during August Noel's ownership and residency.

A site visit on November 14, 2008, revealed that the building's rear extension covered a circular, 7-foot diameter, mortared brick cistern under the western end of the building extension. It was also found that shoring required to support the rear extension during construction and to expose the area in question had damaged the cistern's wall and partly disturbed its upper soils. However, the lower soils, which can be the most archaeologically sensitive of a feature deposit, remained intact. Consequently, on December 8, 2008, Joan H. Geismar, accompanied by Shelly Spritzer, returned to the site to investigate and document what remained of the feature and its deposit.

The highly disturbed condition of the site—and of the cistern—called for a somewhat unorthodox method to accomplish the assessment. Since there was no safe or viable way to sample the cistern's remaining soils *in situ*, the southern segment of the cistern wall, which was still standing, was removed by the small backhoe used for yard excavations. This revealed the feature's deposit that appeared (and proved) to be a virtually sterile soil introduced in two, and possibly three, episodes. A thin but distinct diagonal stratum of pink sand separated the stony sand in the upper part of the feature from the finer, less stony sand below. Seven 5-gallon buckets of soil from the lowest cistern levels, the soils most likely to contain significant artifacts, were screened through 1/4-inch wire mesh and confirmed they were nearly devoid of any such artifacts. Observation and artifact screening indicated that at least two relatively large fill

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<sup>1</sup> Parenthetically, in the early 19th century, the land belonged to Thomas Ludlow, an owner of property on the west side of what is now Washington Square Park (Deed Index 1916:LD 71:486; see also Geismar 2005).

episodes had occurred (divided by the thin layer of pink sand) after the cistern was abandoned, and that that both fills complied with sanitary laws that called for filling with clean sand<sup>2</sup>.

While the cistern's deposit did not contain significant cultural material, the feature itself was an interesting artifact. Meant to collect and store water, cisterns are constructed to hold water. Typically, this entails mortared brick sealed on the inside with a coating of mortar.<sup>3</sup> While the wall of the 109 Waverly Street cistern was well constructed of mortared bricks and sealed with mortar, the feature did not have a mortar-sealed bottom. Instead, a black, impermeable layer was noted that appeared to comprise pitch and stone. The current contractors apparently found a layer of a similar if not identical material throughout the yard. It is more than likely that both served as a water control: the one at the bottom of the cistern to retain water in the feature, the other throughout the yard to keep groundwater, which proved to be high enough to call for a change in construction plans, out. The depth of the cistern was also unique. While most are typically about 6 feet deep, the depth of the 109 Waverly Place cistern was 7.5 feet and its diameter about 7 feet. It is more than likely that 111 Waverly Place, also built by Mr. Stone, would have, or would have had, a similarly constructed cistern behind the house.

No further archaeological investigation is required in this part of the yard. However, should plans change to include disturbance near the rear property line, it is possible that a privy feature—an outhouse pit—may survive. In a pristine state, these features, even more than cisterns, are known to harbor significant cultural material. But this, too, may offer surprises since the yard's high water table may have called for deviation from the ubiquitous privy pit typically associated with 19th-century urban, row-house yards.

Photos and a schematic feature profile document the findings of the assessment (see Figures 1 to 9 for maps and site photos; Figure 10 for a schematic profile of the cistern deposit).

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<sup>2</sup> Laws 1867:24.

<sup>3</sup> Two Brooklyn sites, one in Bedford Stuyvesant and the other in Crown Heights, both associated with free standing structures rather than row houses, were found to have mortared stone, rather than brick, cisterns with corbelled brick openings, however brick cisterns were documented at other house sites in the area (Geismar 1994; 1996;; 2009).

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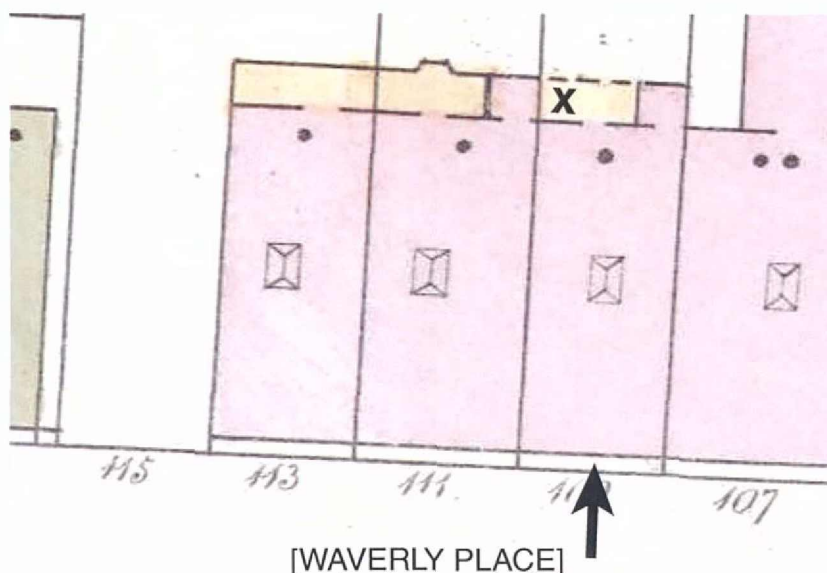
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## FIGURES

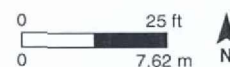
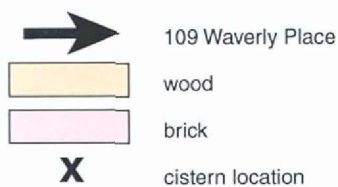








Perris 1854, detail



Robinson 1885 Plate 9, detail





**3** 109 Waverly Place looking south toward the building from the yard under excavation. An exposed and partially disturbed brick cistern feature located under a later house extension, is under the lower tarp (arrow), behind the ladder. (Geismar 11/14/08)



**4** North end of yard (behind wood shoring) not scheduled for excavation at this writing. (Geismar 11/14/08)



**5** North side of truncated brick cistern partially exposed (arrow). (Geismar 11/14/08)





**6** Cistern wall exposed in the southwest corner of the yard where a frame overhang is depicted on early maps (see Figure 2). The approximately 7.5-foot deep and 7-foot diameter cistern, constructed from the inside-out, displays a random pattern of header and footer bricks. A thick layer, possibly stones and tar, was located under the cistern (upper arrow) and a deeper layer (lower arrow), under rocky soil, was found throughout the yard. (Geismar 12/8/08)





**7** Remnant of cistern wall during its removal by backhoe to expose the fill deposit. (Geismar 12/8/08)



**8** Mortared interior of the removed remnant of the cistern's north face. (Geismar 12/8/08)



**9** Exposed cistern deposit, a rubble-filled sand separated from a cleaner sand by a diagonal band of pink sand (arrow) that indicates two fill episodes, both devoid of significant cultural material. (Geismar 12/8/08; also see profile, Figure 10)



