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Memorandum

To: William Lee, Gowanus Environmental Remediation Trust
From: Kathryn Whalen, Ph.D., RPA- Principal Investigator, and Ed Button, M.A., RPA- Field Director
Date: August 12, 2024

RE: Memo #5- Summary of visit to Cashman Yard, Staten Island, NY, on August 7, 2024

Activities on August 7, 2024

On August 7, 2024, Mr. Ed Button, Field Director for Chronicle Heritage, was on site at the Cashman Yard at 3001 Richmond Terrace, Staten Island, NY to inspect a piece of steel truss identified as an object for inspection during Level 1 monitoring of dredging within RTA-2 Gowanus Canal on Thursday, August 1, 2024.

Cashman dredging operators removed the steel truss section from Gowanus Canal in the vicinity of sonar target 31c – near 186 3rd Street (Whole Foods property) on August 1. Cashman photographed the truss section and contacted Chronicle Heritage (via email communication, Ben Romagnoli, Construction Manager II, GZA) to report the identified item for inspection (Photograph 1). Cashman handled the truss with care and placed it into a mini hopper in a viewable location, then transported the truss to the Cashman Yard on Staten Island to be inspected by Chronicle Heritage.

The truss is in a poor state of preservation, heavily twisted and corroded (Photograph 2 and 3). The truss appears to be four-foot tall and 18-inches wide, constructed using C-channels, I-beams, and iron/steel rivets. The truss segment is approximately 15-foot long. No markings or attached information plates were observed.

Photograph 1. Steel Truss identified in Level 1 monitoring of dredging within TB-6 (Geosyntec Consultants/GZA, August 1, 2024).

Photograph 2. Steel Truss: Recovered in vicinity of sonar target 31c (Chronicle Heritage, August 7, 2024).

Photograph 3. Steel truss: Detail of angle iron and rivet construction (Chronicle Heritage, August 7, 2024).

RECOMMENDATIONS

Chronicle Heritage does not recommend retention of the steel truss discussed in this memo. The constructed truss section is in very poor condition with unknown previous function. In its current damaged condition, it cannot be definitively placed in time or usage, and, therefore, has little research value.

September 13, 2024 Addendum

At the request of the EPA further research was conducted on the steel truss recovered from the Canal and reported on in Memo 5. The truss was dredged from the Canal between the Carroll St and 3rd St Bridge. It was found approximately 500 ft upstream of the 3rd St Bridge, which is conversely about 300 ft downstream of the Carroll St Bridge. EPA asked that the Trust undertake further analysis to address whether this item might be associated with the nearby bridges. As described below, it has been determined that it is unlikely to be associated with either of the bridges.

Figure 1. Historic photo of a bridge similar to the 3rd St Bridge, early 20th century (https://historicbridges.org/bridges/browser/?bridgebrowser=newyork/3rdstreetbridge/#photosvideos)

The 3rd St bridge was built in 1903 or 1905 (records differ) and was constructed of steel girders and concrete. As stated on historicbridges.org: "This is one of two surviving rolling lift bascule bridges on this canal which are among the oldest such bridges in the country". Figure 1 shows a bridge of this type in action. According to the National Bridge Inventory Data sheet from 2019 (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://historicbridges.org/newyork/3rdstreetbridge/nbisheet.pdf) the 3rd St Bridge was reconstructed in 1982 and is not eligible for the NRHP.

Documentation, including photographs and the plans for this type of bridge, do not show any use of a metal framing like the one found in the Canal.

A Carroll Street Bridge

Figure 2. Photo from the mid to late 20th century showing the Carroll St Bridge in midground, looking north. Note the temporary structures on the east bank of the canal and the metal roof bus garage on the west (https://www.urbanarchive.org/stories/1iAGXpKNYNB).

The bridge closer to the location of the find is the Carroll St Bridge (Figure 2). This bridge was built in 1889 with a steel frame and timber deck. According to the National Bridge Inventory Data Sheet from 2009 (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://historicbridges.org/newyork/carroll/nbisheet.pdf) this bridge is eligible for the NRHP. This bridge is of a unique design and is one of only three extant in the country. Part of the span is attached to a set of rails and can be slid out to allow for water traffic to pass through the space. While this bridge does have an overhead gantry (Figure 3) made of a steel webbing, it differs in its construction from the one found in the Canal.

Figure 3. Detail of overhead gantry on Carroll St Bridge
(https://historicbridges.org/bridges/browser/?bridgebrowser=newyork/carroll/#mapslinks)

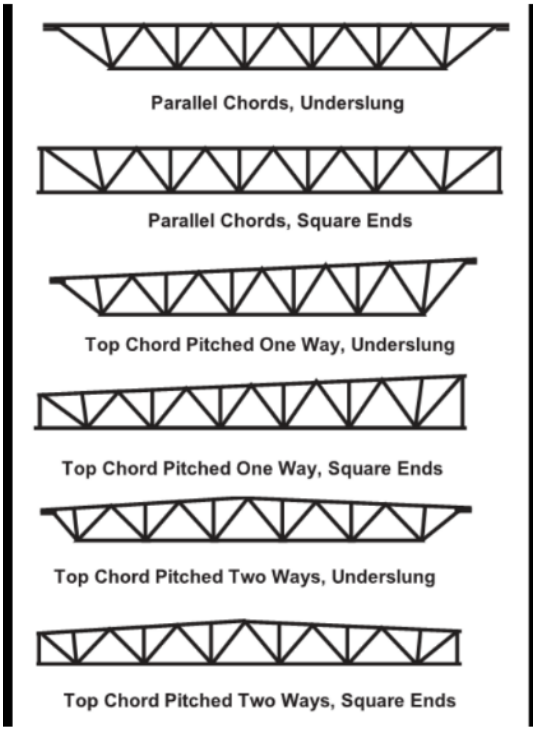
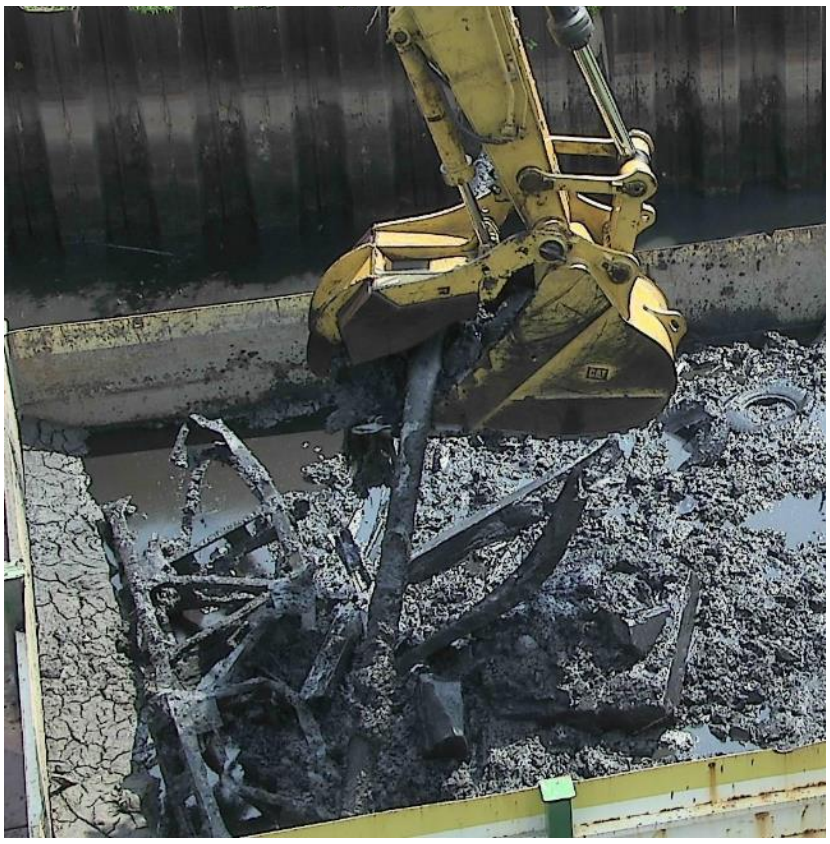


Figure 4. Diagram of open web steel joists, also known as k series
(https://en.wikipedia.org/wiki/Open_web_steel_joist#/media/File:Steel_Joists.png)

Upon further review of the item pulled from the Canal, it was determined that the truss is a k series steel joist (See Figure 4). These have been produced since the late 1920s into today for the purpose of holding static loads on structures like roofs. With that probable interpretation in mind, there is a strong possibility that this item is not related to either of the two bridges but rather came from one of the now razed buildings located on the upland parcels adjacent to the Canal. Figure 2 gives an idea of the types of buildings that were prevalent in the area during the 20th century that were constructed of steel structures like the one found in the Canal. K series joists are still popular construction materials for industrial buildings, temporary buildings, or partial structures like pole barns.

Photograph 4. Joist in Mini-Barge after dredging.



Photograph 5. Close up of joist after dredging.

Photograph 6. Joist after cleaning.

The condition of the joist and its location within the canal makes it difficult to definitively attribute it to any structure within the area, let alone the nearby bridges. The origin of the joist could be from a number of industries that lined the canal in that area. Previous occupants of this section of the canal includes lumbar and coal yards, a feed mill, and oil works. Many of these industries would have had steel construction buildings, most of which are not extant on the landscape today. Additionally due to its simple rivet construction, it is difficult to date its construction to the period of significance. Because of the nebulousness of the origins of the joist, it is recommended that it not be retained as an object of local interest.

Figure 5. Approximate location of the joist find (*Google Maps, 2024).*