

Merritt Parkway, Madison Avenue Bridge
Spanning the Merritt Parkway at the 30.11 mile mark
Trumbull
Fairfield County
Connecticut

HAER No. CT-117

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
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HISTORIC AMERICAN ENGINEERING RECORD

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HAER No. CT-117

Location: Spanning the Merritt Parkway at the 30.11 mile mark in Trumbull, Fairfield County, Connecticut

UTM: 18.648125.4565780
Quad: Bridgeport, Connecticut

Construction Date: October 1939

Engineer: Connecticut Highway Department

Architect: George L. Dunkelberger, of the Connecticut Highway Department, acted as head architect for all Merritt Parkway bridges.

Contractor: Mariani Construction Company
New Haven, Connecticut

Present Owner: Connecticut Department of Transportation
Wethersfield, Connecticut

Present Use: Used by traffic on Madison Avenue to cross the Merritt Parkway

Significance: The bridges of the Merritt Parkway were predominately inspired by the Art Deco and Art Moderne architectural styles of the 1930s. Experimental forming techniques were employed to create the ornamental characteristics of the bridges. This, combined with the philosophy of incorporating architecture into bridge design and the individuality of each structure, makes them distinctive.

Historians: Todd Thibodeau, HABS/HAER Historian
Corinne Smith, HAER Engineer
August 1992

For more detailed information on the Merritt Parkway, refer to the Merritt Parkway History Report, HAER No. CT-63.

LOCAL HISTORY

In 1668, there were only five settlers living beyond the two-mile limit of the Stratford meeting house. Shortly after this date, the land north of Stratford was surveyed, laid out and assigned to individuals. It is unknown if anyone settled there before Abraham Nichols and his family arrived from Stratford in 1690. Other families soon followed, creating a district known as Nichols Farms.¹

As the population increased, the desire for a local church and government became evident. In 1725, Nichols Farms residents petitioned the General Court for village privileges and a committee was named to view their case. The General Assembly acted in favor of their petition and in October 1725 the Assembly granted the residents of Nichols Farms the "liberty of village privileges," as the Society of Unity. Unity was still a part of Stratford, but could maintain its own meeting house and school, through a local tax.²

At the same time, residents from Fairfield were clearing lands west of Unity. This area came to be known as the Long Hill region and faced many of the same problems as Nichols Farms. These settlers were forced to pay for a church and school that were too far away for them to use.³

In 1740 the General Assembly granted the Long Hill region an exemption from paying taxes for the school and meeting house in Stratfield, between December and mid March. Furthermore, Long Hill was allowed to develop its own meeting house during these months. Thus, the Winter Society of Long Hill was created; this arrangement continued for four years.

¹History of Trumbull: Dodrasquicentennial, 1797-1972, (Trumbull: Trumbull Historical Society, Inc., 1972), 25.

²History of Trumbull: Dodrasquicentennial, 26.

³David A. Cronin, "History of Trumbull, Connecticut," Historical Sketches of Trumbull, Connecticut: Tercentury Celebration, (Trumbull: The Trumbull Historical Committee, 1935), 5.

In 1744, the parishes of Unity and Long Hill, only five miles apart, were consolidated into the Society of North Stratford. The new society functioned in virtually the same manor as the Unity parish. As they were now allowed to manage their own religious and educational affairs, residents became anxious to obtain complete independence from Stratford. For more than fifty years North Stratford sought to become an individual township. In October 1797, the General Assembly passed the "Trumbull Bill" establishing the Society of North Stratford as the town of Trumbull.⁴

The Boston Post Road and the main line of the railroad both passed to the south of Trumbull, isolating the community as a rural farming region until the completion of the Merritt Parkway in 1940. Trumbull was the location the Connecticut Highway Department's main field office during the construction of the Merritt Parkway.

BRIDGE CONSTRUCTION HISTORY

Madison Avenue commences at North Avenue/Route 1 and proceeds north to the Monroe town line where the road is called Hiram Hills Road. The Osborn-Barnes Construction Company of Danbury, CT, received the contract to grade the Merritt Parkway from the Black Rock Turnpike, in Fairfield, to Main Street/Route 25, in Trumbull (ConnDot project #180-52). While the Madison Avenue Bridge is located within this section of the Merritt, the grade separation and bridge contract went to the Mariani Construction Company of New Haven, CT (ConnDot project #180-87).⁵ The bridge cost \$34,848 and was under construction from May 22, 1939, to the fall of 1939. The paving work for this region of the

⁴History of Trumbull: Dodrasquicentennial, 28.

⁵Contract Card File, Map File and Engineering Records Department, Connecticut Department of Transportation, Wethersfield, CT.

Merritt also extended from the Black Rock Turnpike to Main Street/Route 25. This contract was awarded to the New Haven Company of New Haven, CT (ConnDot project #180-102). In 1989, the Madison Avenue Bridge had all loose and spalling concrete removed and patched (ConnDot project #144-158).⁶

BRIDGE DESCRIPTION

The Madison Avenue Bridge is a single-span, reinforced-concrete, barrel-type rigid-frame bridge spanning 80'-11-5/8" with a clear roadway 30' wide. Parallel wing walls form the approach for the underpass. The Merritt Parkway travels under the bridge at a skew of 28°-26', with a clear roadway of 60'.

The rigid-frame design allows the engineer to decrease the structural material at the center of the span, thus forming an arched opening. (See the Merritt Parkway History Report, HAER No. CT-63, for a more detailed description of the rigid-frame.) The intrados of the span rises 3'-6" from the springline to the crown, while the extrados remains horizontal from knee to knee. The frame thickness at the crown is 30". The outside of the knee is notched, and the inside of the knee is a corner with an obtuse angle. The frame leg thickness increases from about 42" at the base to 72" at the knee. The exposed face of the legs remains vertical, and the hidden face slopes away from the roadway. The minimum clearance provided is 14' at the outside edge of the roadway.

The drawings recommend a sequence for the concrete pouring of the bridge. The footings for the frame are poured first. Then the rigid-frame legs are poured with an expansion joint, 1/2" wide, filled with cork and 16-ounce copper flashing, placed between the leg and the pylon. The deck slab is poured next, followed by the footings for the wing walls and pylons. After the frame faces are poured

⁶Madison Avenue Bridge, DOT #747; Bridge Maintenance File, Engineering Department, Connecticut Department of Transportation, Newington, CT.

monolithically with the curbs and railings, the wing walls and pylons are poured monolithically with the curbs and railings.

Waste molds in the formwork are responsible for the concave-shaped vertical panels, the decorated curves of the pylons, and the recessed ornament in the railing, all of which were influenced by the Art Deco style. The drawings specify that the molds should not be less than 2" thick. The dominant architectural feature of the bridge, the vertical panels, form an integral spandrel face and railing. A fleur-de-lis is recessed near the top of each panel. The panels are repeated on the exposed faces of the frame legs. The pylons are formed by two adjacent panels curling outward. Spirals with flowers adorn the top of the pylon and a step near the bottom. The shape of the spiral near the bottom required that the mold include extra concrete which was carved out when the forms were removed.

BIBLIOGRAPHY

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- Cronin, David A. "History of Trumbull, Connecticut." Historical Sketches of Trumbull, Connecticut: Tercentury Celebration. Trumbull: Trumbull Historical Committee, 1935.
- . History of Trumbull: Dodrasquicentennial, 1797-1972. Trumbull: The Trumbull Historical Society, Inc., 1972.
- . Contract Card File. Map File and Engineering Records Department, Connecticut Department of Transportation: Wethersfield, CT. This includes construction drawings, copies of which are in the HAER field records.
- . Bridge Maintenance File. Engineering Department, Connecticut Department of Transportation: Newington, CT.

PROJECT INFORMATION

This recording project was undertaken by the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER) Division of the National Park Service, Robert J. Kapsch, Chief. The Merritt Parkway recording project was sponsored and funded by the Connecticut Department of Transportation (ConnDot) and the Federal Highway Administration.

The fieldwork, measured drawings, historical reports and photographs were prepared under the general direction of Eric N. DeLony, HAER Chief, and Sara Amy Leach, HABS Historian.

The recording team consisted of Jacqueline A. Salame (Columbia University), architect and field supervisor; Mary Elizabeth Clark (Pratt Institute) and B. Devon Perkins (Yale University), architectural technicians; Joanne McAllister-Hewlings (US/ICOMOS-Great Britain, University of Sheffield), landscape architect; Corinne Smith (Cornell University), engineer; Gabrielle M. Esperdy (City University of New York) and Todd Thibodeau (Arizona State University), historians; and Jet Lowe, HAER photographer.