

Merritt Parkway, Main Street/Route 110 Bridge
Spanning Main Street/Route 110 at the 36.8 mile mark
on the Merritt Parkway
Stratford
Fairfield County
Connecticut

HAER No. CT-130

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
P.O. Box 37127
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HISTORIC AMERICAN ENGINEERING RECORD

Merritt Parkway, Main Street/Route 110 Bridge

HAER No. CT-130

Location: Spanning Main Street/Route 110 at exit 53, at the 36.8 mile mark on the Merritt Parkway in Stratford, Fairfield County, Connecticut

UTM: 8.658960.4567500
Quad: Milford, Connecticut

Construction Date: 1940

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 the Merritt Parkway to cross Main Street/Route 110

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 spring 1639, sixty-five settlers came to Cupheag (now Stratford) on the west bank of the Housatonic River where it meets the Long Island Sound. This group migrated from Wethersfield, led by the Reverend Adam Blakeman.¹

As the town grew, land was bought from the surrounding Indian tribes until the community stretched twelve miles long and ten miles wide. In 1685, Stratford received its town patent from the Colonial Government of Connecticut. The community retained its original boundaries until 1789 when Huntington was granted civic independence; Trumbull separated in 1797, Bridgeport in 1821, and Monroe in 1823. The present town covers an area of nineteen-and-one-half square miles.²

Early Stratford was primarily a shipping and fishing center. The community was also the main crossing point for the Housatonic River. A ferry operated on the river from 1648 until the first bridge was built in 1795.³

The New York, New Haven and Hartford Railroad reached town in 1850. The railroad failed to bring manufacturing enterprises, but did encourage the summer-vacation industry. At the same time, the buying and selling of real estate became big business in Stratford.

The railroad also helped neighboring Bridgeport develop into a manufacturing center. Even though Bridgeport developed rapidly, Stratford remained primarily a residential community. The town's population started to increase in the 1880s as industrial workers from Bridgeport moved to

¹Dorothy Euerle, "History of Stratford, 1637-1989," (Manuscript, Stratford Public Library Vertical File).

²Euerle, 2.

³"Stratford, the Unhurried Town," (Manuscript, Stratford Public Library Vertical File, 1959), 2.

Stratford, to escape the noise and pollution within that city. This migration increased after 1890, when the Bridgeport Horse Car Company introduced service to Stratford. Within five years ridership warranted extending and electrifying the line.⁴

When plans for the Merritt Parkway were first announced, Stratford residents were upset by the route, which called for the road to cut south into their downtown before linking up with the Post Road/U.S. Route 1, and crossing the Housatonic River on the Washington Bridge. They realized the congestion this would create in their community and campaigned for a second bridge spanning the Housatonic.⁵ In 1938 the state obtained federal funding to build the Housatonic River Bridge. After completion the parkway does not appear to have had a dramatic impact on Stratford. The town was already a bedroom community for Bridgeport, and too far from New York City to attract a high number of commuters.

BRIDGE CONSTRUCTION HISTORY

Paralleling the Housatonic River, Main Street/Route 110 was historically the primary link between agricultural community of Shelton and the port at Stratford. The Peter Mitchell Construction Company of Greenwich, CT, received the contract to grade the Merritt Parkway from Cutspring Road, in Stratford, to the Housatonic River. While the Main Street/Route 110 Bridge is located within this section of the Merritt, the grade separation and bridge contract went to the Mariani

⁴"Stratford, the Unhurried Town," 4.

⁵Helen Binney Kitchel, "Story of the Merritt," Greenwich Press, 28 April 1938, p. 15.

Construction Company of New Haven, CT (ConnDot project #180-142).⁶ The bridge cost \$56,355 and was completed in 1940.⁷ The paving work for this region of the Merritt also extended from Cutspring Road to the Housatonic River. This contract was awarded to the Osborn-Barnes Construction Company of Danbury, CT (ConnDot project #180-170).

The Main Street/Route 110 Bridge has received little maintenance since it was constructed. From February 26, 1957 to September of 1958 the four existing interchange ramps were eliminated and seven new ones were installed. This modification was needed to accommodate increased traffic from the Sikorsky aircraft plant.⁸

BRIDGE DESCRIPTION

The Main Street Bridge is a single-span deck bridge comprising nine steel rigid frames that span 62'. Parallel wing walls of varying lengths form the approach for the overpass. Spaced 10'-6" on center, the frames support a reinforced-concrete slab of varying depth. Two 26'-wide roadways for the Merritt Parkway travel over the bridge at a skew of 31°-8' and a grade of 3.94 percent. The concrete pavements are separated by a 22'-4" wide strip of open-mesh steel decking.

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 almost 2'-11"

⁶Contract Card File, Map File and Engineering Records Department, Connecticut Department of Transportation, Wethersfield, CT.

⁷Main Street/Route 110 Bridge, DOT #760; Bridge Maintenance File, Engineering Department, Connecticut Department of Transportation, Newington, CT.

⁸Main Street/Route 110 Bridge, DOT #760; Bridge Maintenance File.

from the springline to the crown, while the extrados follows the grade of the parkway. The frame thickness at the crown is 22". The inside face of each leg remains vertical, while the outside face slopes to thicken the leg from 3'-3" at the bottom to over 4'-6" at the knee. The knee thickness varies from one end of the frame to the other due to the slope of the parkway. The steel frames are I-sections built up with 1-1/8" thick flange plates welded to 3/4" thick web plates. A triangular heel is placed at the base of each leg to increase the bearing area. The legs bear on a rectangular, reinforced-concrete footing and are anchored with five bolts.

The Main Street Bridge employs the boldest use of colored concrete and aggregate on the Merritt Parkway. The arched shape of the rigid frames is continued at the wing walls with arced stripes alternating between white and green. The stripes are a thin precast panel placed in the face of the concrete formwork. The green color is achieved with green cement and a facing layer of chips of green mica and green glass. The white color is achieved by exposing white mica chips in regular cement. A band of relief work above the precast panel was formed with reverse molds in the formwork.

The rest of the bridge's ornament is metal. A three-dimensional steel pattern of oversized leaves and flowers covers the legs and knees of the exterior steel frames. In the field a torch was used to shape the flora. Cast iron rosettes are bolted to the malleable cast iron railing posts. The posts are bolted to the steel plates and angles which form the edge of the pavement slab. The balustrade is composed of curved steel bars. Every other bar is decorated with either a fleur-de-lis finial or an acanthus leaf face ornament.

In an historic photograph, the steel rigid frame and the railing are a dark color, and the floral

pattern is a shade lighter. Presently, the frame is a light color with white legs, and the railing and pattern are silver.

The present condition of the bridge is good. The metal ornaments and railing are rusty. On the wing walls, the precast stripes are flaking, exposing the reinforcing mesh.

BIBLIOGRAPHY

Euerle, Dorothy. "History of Stratford, 1637-1989." Manuscript, Stratford Public Library Vertical File, 1989.

Hurd, D. Hamilton. History of Fairfield County, Connecticut. Philadelphia: J. W. Lewis and Company, 1881.

Kitchel, Helen Binney. "Story of the Merritt." Greenwich Press. April 28, 1938, p. 15.

----- . "Stratford, the Unhurried Town." Manuscript, Stratford Public Library Vertical File, 1959.

----- . 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.