Riverside Avenue Bridge
On Riverside Avenue over Northeast
Corridor Railroad Right-of-way
Greenwich
Fairfield County
Connecticut

HAER No. CT-13

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D. C. 20240

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HISTORIC AMERICAN ENGINEERING RECORD

RIVERSIDE AVENUE BRIDGE

HAER No. CT-13

Location: On Riverside Avenue over Northeast Corridor Railroad Right-of-way
Greenwich, Fairfield County, Connecticut

UTM: 18.618660.4543010
Quad: Stamford

Date of Construction: 1871

Designer: F. C. Lowthrop

Fabricator: Keystone Bridge Company

Owner: Amtrak

Significance: Riverside Avenue Bridge is one of but a handful of cast-iron truss bridges still in use. Designed by F. C. Lowthrop and built by Keystone Bridge Company in 1871, the structure was originally part of a six-span, double-track bridge over the Housatonic River in Stratford, Connecticut. That bridge was replaced in 1884 and some ten years later this single span was re-erected near Riverside State in Greenwich. The double-intersection Pratt through truss, with vertical end posts, is 164' long andd 22' wide. The top chord consists of hollow cast-iron cylinders, two per panel, which flare to over one-foot diameter where they are joined. Verticals are similar, but instead of being joined in the middle, they are connected by ribbed boxes through which the diagonals pass. Diagonals are groups of wrought-iron rods, varying from 2-1/8" diameter at end panels to 1-1/2" at the middle panels, bolted into connecting blocks at top and bottom panel points. The lower chord consists of threaded wrought-iron rods, except for the end panels where a cast-iron cylinder is substituted. Top lateral bracing is achieved by cast lattice-girder struts and wrought tie rods. Elaborate curved brackets brace between the uprights and struts at the portals and at every third panel. Abutments are a random ashlar of rough-surfaced brownstone. Floor system of plate-girder cross beams and steel stringers was built around 1925. This bridge reveals the increasing

understanding of static in bridge design in the 19th century; the graduation in size of the diagonals, for instance, shows recognition that shearing stress increases toward the abutments. Lowthrop patented three improvements on this type of bridge: the junctures at the base of the verticals and the ribbed boxes through which the diagonals pass.

Transmitted by: Donald C. Jackson and Jean P. Yearby, HAER, 1985