

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No:	FIT.936
Historic Name:	Upper Rollstone Street Bridge
Common Name:	B & M Railroad Fitchburg Main Line Bridge #A-73
Address:	
City/Town:	Fitchburg
Village/Neighborhood:	Fitchburg
Local No:	
Year Constructed:	
Architect(s):	
Architectural Style(s):	
Use(s):	Other Rail Related; Other Transportation
Significance:	Engineering; Transportation
Area(s):	FIT.E: Nashua River Area
Designation(s):	



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Commonwealth of Massachusetts
Massachusetts Historical Commission
220 Morrissey Boulevard, Boston, Massachusetts 02125
www.sec.state.ma.us/mhc

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MASSACHUSETTS HISTORIC BRIDGE INVENTORY

Municipality: Fitchburg District: 3Street name/Rt. #: St 31, Rollstone St.Over
Street name/Rt. #: Broad St., N. Nashua R.Bridge key #: 747 387 002 101 Photo #s: 42: 33A-36A, 43: 0A-2A, 4ABridge plan #: F-4-12Common/historic name: Upper Rollstone Bridge; orig. part of B&M RR Fitchburg Main LineCurrent owner: Bridge # A-73, later # 50.21UTM coordinates: _____ AASHTO rating: 309 (7-1-88)

National Register status (insert date) _____ Field rating: _____

Entered: _____ Potential: _____

Eligible: _____ Non-eligible: _____

Date built (source): 1909 (plans)

Date(s) rebuilt (source): _____

Builder (source): _____

Designer (source): _____

Structural type/materials: 309, and 9-panel,

2 simple spans, riveted steel 8-panel Pratt deck trusses over river; 1 span built-up steel through plate girder over Broad St. Steep gradient of roadway contributes to non-uniformity of trusses. Both trusses bear on their lower chords on the shared river pier, both trusses bear on their upper chords at their opposite ends. Southern truss span trusses have parallel chords, but chords rise at 4.6% grade from N. to S. Northern truss span truss upper chords also rise at 4.6% grade, but lower chords of these trusses are horizontal.

Overall length: 231' Deck width/layout: 40.6' out-outSkew: -Main unit, # spans: 2 lengths: 2 @ 86'Approaches, # spans: 1 lengths: 55'Plaque: none seen location: -

Alterations, unusual features, comments:

1949-50 original timber stringers, plank deck, and granite block wearing surface replaced by present WF steel stringers, and concrete deck. Present steel guardrail replaced iron posts and timber rails. Some repairs to steelwork of trusses; much new steel plate welded onto webs of plate girder span.

1957 repairs to piers and abutments.

Visual quality (bridge and setting): High _____ Average X Low _____Site integrity: Retained X Violated _____

Describe: Bridge connects the old Upper Common commercial/civic core of Fitchburg with the later residential areas on Rollstone Hill, slicing through the formerly industrial district along the Nashua. This bridge rises alongside the old, low-level bridge across the Nashua, F-4-13, an 1870 Parker pony truss.

History of bridge and site:

The Upper Rollstone Bridge was built by the B&M RR, the City of Fitchburg, and the State as part of a railroad grade crossing elimination project. Prior to this time, traffic crossing the Nashua River on the old, low-level Rollstone St. bridge had then to cross the B&M tracks at grade before beginning a steep ascent up the side of Rollstone Hill. In 1909, the B&M built a plate girder span (F-4-27, reconstructed in 1977) to carry highway traffic over the tracks; a short, filled embankment linked the railroad span to the 3-span Upper Rollstone Bridge. These new bridges and connecting embankment are located alongside (northwest of) the 1870, low-level Parker truss bridge, which still remains on its original site.

Sources:

D.H. ✓

Main ✓

Plans 1909, 1949, 1957

RR Bay-side 1978

Old D.H. ✓

Summary statement of significance:

The 2nd newest of the 5 known Pratt deck trusses in the MDPW data base. A peculiar example of the type, with the trusses distorted to accommodate the 4.6% grade of the roadway which they carry.

Somewhat altered in mid-20th century, with deck, stringers + guardrails completely replaced.

Deck trusses actually form only 2/3s of this bridge, with a (heavily repaired) through plate girder span over Broad St. comprising the remainder of the bridge.

Adjacent to the 1870 Parker pony truss Lower Rollstone Bridge (F-4-13) which has been agreed to be eligible for listing in the National Register.

Statement prepared by: S.J. RoperDate: 17 Aug. 1989

Field survey by: S.J. Roper, MDPW Historic Bridge SpecialistDate: 24 July 1985

MDPW RECOMMENDATION - NATIONAL REGISTER ELIGIBILITY

<u>Municipality</u>	<u>Street on</u>	<u>No.</u>
Bridge: <u>Fitchburg</u>	<u>St 31, Rollstone St. / N. Nashua R., Broad St.</u>	<u>F-4-12</u>

Historic evaluation

Significant because:

- | | | |
|--|---------------------------------|-------|
| 1) <u>Unusual</u> or unique type | Pratt deck truss | ✓ |
| | or rare survivor of common type | _____ |
| 2) Early example of type | | _____ |
| 3) Design - Valuable contribution to bridge technology | | _____ |
| 4) Retains integrity | | _____ |
| 5) Builder known and important | | _____ |
| 6) Bridge historically important to area | | _____ |

Not significant because:

- | | |
|---|-------|
| 1) Common type | _____ |
| 2) Post-1931 | _____ |
| 3) Design - no contribution to bridge technology | ✓ |
| 4) Integrity ^{lessened} lost because of: a) alterations | ✓ |
| b) disintegration | _____ |
| 5) Builder unimportant or <u>not known</u> | ✓ |
| 6) No known significance in area | ✓ |

<input type="checkbox"/> Potentially eligible	<input type="checkbox"/> Not eligible
<input checked="" type="checkbox"/> Not eligible individually, but located adjacent to Lower Rollstone Bridge (F-4-13) which has been agreed to be <u>Comments:</u> potentially eligible for listing in the National Register.	<input type="checkbox"/> Conditionally not eligible; review when 50 years old

A peculiar, somewhat altered, example of a relatively uncommon structural type (the Pratt deck trusses) used in combination with a much altered example of a common structural type (the plate girder span).

Adjacent to the NR-eligible Lower Rollstone Bridge.

17 August 1989

S. J. Roper, MDPW Historic Bridge Specialist

COMMONWEALTH OF MASSACHUSETTS

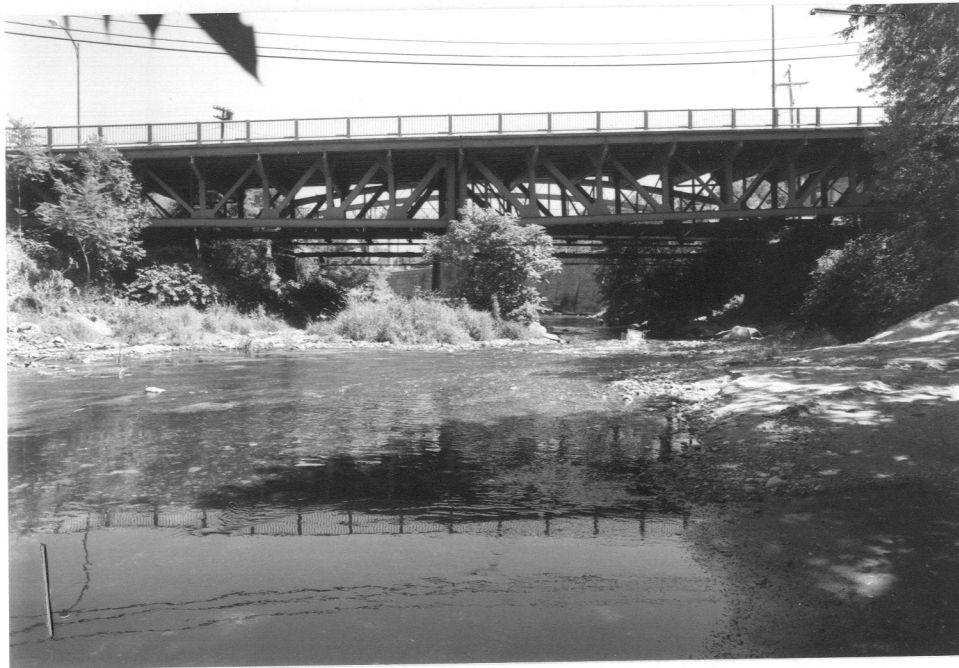
DEPARTMENT OF PUBLIC WORKS

F-4-12

FITCHBURG QUAD.

FIT. 936

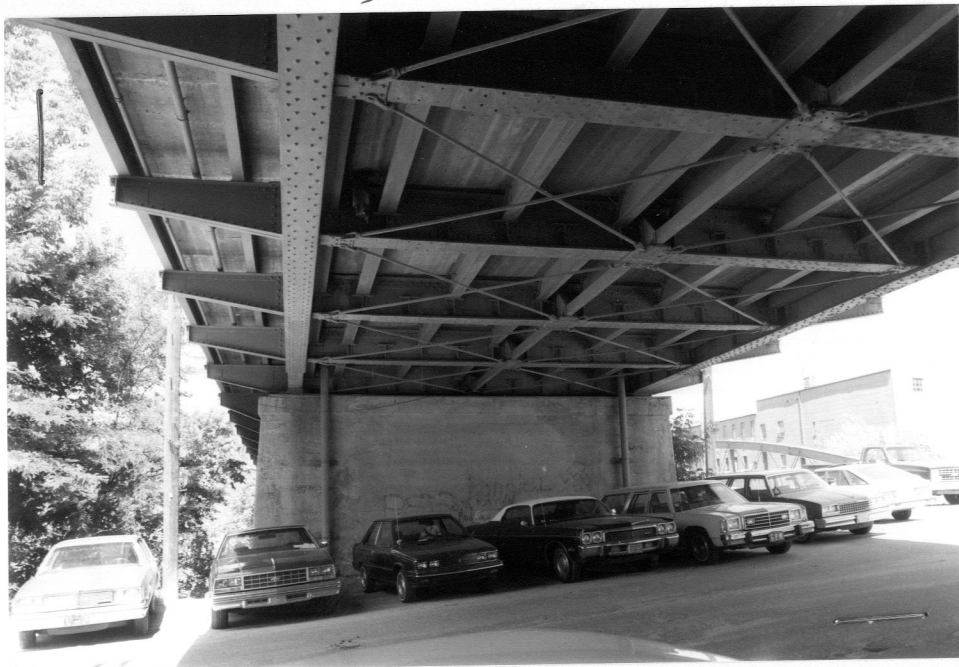




DECK TRUSS SPANS FROM NW (W/ F-4-13' IN BACKGROUND)



BROAD ST. (PLATE GIRDER) SPAN, FROM W

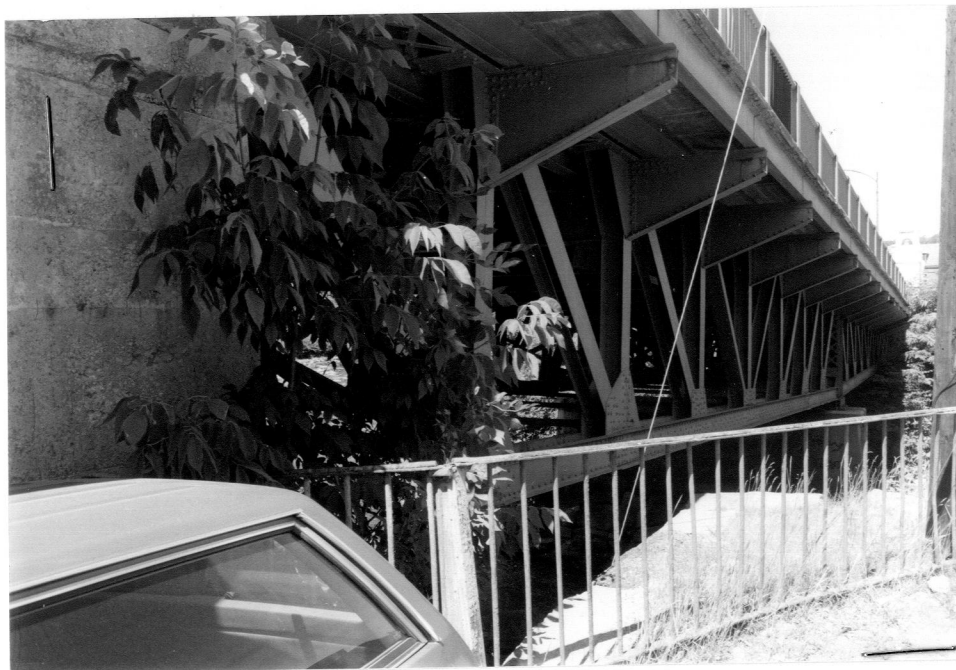


FROM SW ABUTMENT LOOKING NE, SHOWING
UNDERSIDE PLATE GIRDER SPAN, AND SW PIER

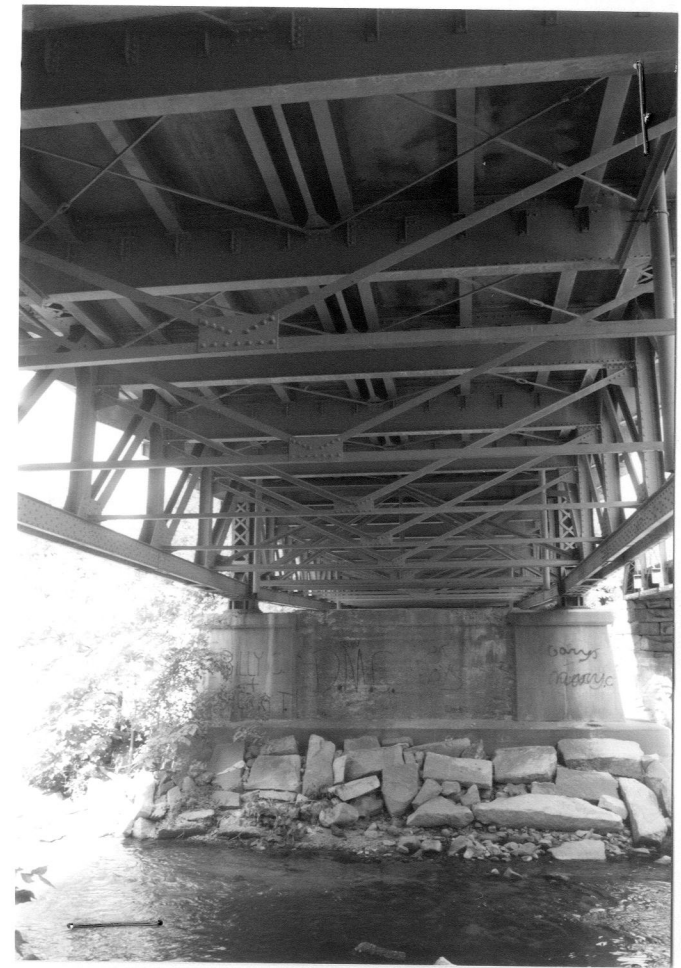


FROM NE

7-24-85



FROM SW



FROM SWERN DECK TRUSS PIER,
LOOKING NE

7-24-85



FROM NE



FROM SW

7-24-85

TO: BETSY FRIEDBERG

RETURN TO REVIEWER BY _____

(DATE)

FROM: WM. SMITHDATE: 12/10/90TOWN: FitchburgPROPERTY: F-4-12 st. 31/rollstone st. over N. NASHUA RIVER/
(NAME AND ADDRESS)
upper Rollstone Bridge " BROAD ST.

1. Does this property meet the criteria for NR eligibility?

☐ YES☒ NO - Located adjacent to Lower Rollstone Bridge.
(F-4-13) 1870 parker pony truss

A. Criteria

- a. events
- b. lives
- c. characteristics
- d. information

B. Local _____ State _____ National _____

2. Statement of Significance: OR Why not eligible?

1909 3 SPAN riveted Pratt deck truss with
plate girder approach span

Altered example of an uncommon Bridge type.
plate girder approach span lost integrity due
to alteration.

☐ DOE LETTER WRITTEN _____

FILED IN ER FILE _____

(DATE)

Not individually eligible
may be adjacent to a
potentially eligible
district. Need more survey
on area.

Amended 2/6/91

The following bridge does not appear to meet National Register criteria at present. However, as this bridge reaches 50 years of age, its National Register eligibility should be reassessed.

Fit. 936

Boston/Chelsea B-16-17/C-9-6 United States Route 1 over Mystic River

1950 Three span cantilever Warren type web through truss. Double deck bridge is a Boston landmark.

Montgomery/Russell M-30-8/R-13-18 I90 over U.S. Route 20, Westfield River

1957 Eight span, two continuous span riveted steel Pratt deck truss. A landmark bridge and the only Pratt deck truss to be designed with continuous deck truss spans.

The following bridges did not appear to meet National Register criteria for individual listing. However, the bridges are within, or adjacent to an historic district or potentially eligible historic district, and plans for replacement should take into consideration potential impact to adjacent properties.

→ Fitchburg F-4-12 State Rte. 31/Rollstone Street over North Nashua River, Broad Street

This bridge is located adjacent to lower Rollstone Bridge (1870 Parker pony truss).

Greenfield/Montague G-12-20/M-28-1 Montague City Road over Connecticut River

This bridge stands between East Greenfield and Montague city. Though inventory is incomplete, significant historic resources are in both areas. There is a group of turn of the century cottages on Montague City Road that may be eligible for listing in the National Register.

Lawrence L-4-24 Salem Street over B & M Railroad

This bridge is adjacent to mill building and Victorian Gothic church; however, the level of information on this area is not well documented at this time.

The MHC concurs with the preliminary findings of MDPW that the following bridges do not appear to meet criteria for listing in the National Register of Historic Places.

Amesbury/Newburyport A-7-16/N-11-17 I-95 over Merrimack River

Lowell

L-15-19

Bridge Street over Merrimack River

1937 Three span cantilever Warren type through truss. This visual landmark is a rare example of a major structural type in Massachusetts. Adjacent to the Locks and Canals Historic District (NR, NHL).

Lowell

L-15-21

Textile Avenue over Northern Canal, Merrimack River

1896 Three span pinned steel Pratt deck truss. Oldest example of an uncommon highway bridge type in Massachusetts. It spans over the Northern Canal and Great River Wall of the Locks and Canals National Register Historic District.

Montague

M-28-18

Bridge Street over B & M Railroad/
C.V. Railroad

1897 Latticed type through truss designed by Edge Moor Bridge Company of Delaware. It is the only known example of this unique bridge type..

Northfield

N-22-2

East Northfield Road over
Connecticut River

1901-1903 Three span steel Pennsylvania through truss. Unique variation of an uncommon bridge type. Gracefully designed bridge in an outstanding natural setting. The bridge is designed to function as a continuous truss under live loads and a simple truss with cantilevered ends under dead load.

Stockbridge

S-26-3

Butler Road over Housatonic River

1881 Pin connected wrought iron half through Pratt pony truss with Borneman type stone pedestals rising above abutments. A rare and unique bridge design by a world famous bridge designer - George Morison. Bridge has national significance.

Waltham

W-4-9

B & M Railroad over State Rte. 60,
Linden Street

1894 Steel lattice through truss with quad web system. Intact example of an uncommon bridge type severely skewed. Reviewed and entered in the National Register of Historic Places 9/28/89.

Windsor

W-41-11

Windsor Bush Road over Phelps Brook

1893 One span iron and steel Ball Queen post. One of only two surviving examples of Charles Ball unique pipe truss bridge.

1891 Six span steel Pennsylvania through truss. Oldest of the five known Pennsylvania through trusses and is one of the earliest known steel bridges in Massachusetts. Designed by Edward Shaw and built by the R.F. Hawkins iron works.

Dalton D-1-11 Holiday Road over Wahconah Brook

1894 One span Ball Queenpost pony truss. One of only two surviving examples of Charles Ball unique patented pipe truss bridge. Previously reviewed by the Massachusetts Historical Commission and determined eligible 10/6/81.

Erving/Montague E-10-3/M-28-0 Central Vermont Railroad
over Millers River,
Newton Street

1905 Five span pin-connected Pratt deck truss. Impressive example of a pin-connected long span deck truss which was favored by American railroads in the 19th century. Bridge is eligible individually and as a contributing element to a potential National Register District.

Framingham F-7-5 Main Street over Sudbury River

1878 Rare wrought iron bowstring arch pony truss. It is the only known surviving bowstring metal arch in the Massachusetts Department of Public Works database. It is one of six surviving metal truss bridges in the MDPW database built prior to 1880.

Holyoke/South Hadley H-21-1/S-18-4 State 116/Bridge Street
over Connecticut River

1889 Ten spans wrought iron lattice through truss. A landmark bridge, which is the oldest metal lattice through truss in Massachusetts. It is the only known truss bridge to have ten spans. Bridge was determined to be eligible for the National Register 1/9/79.

Lancaster L-2-4 Bolton Road over Nashua River

1870 Pinned and bolted wrought iron and cast iron Post's type pony truss. Very early and unique metal truss bridge with national significance entered in the National Register of Historic Places 9/10/79.

Lancaster L-2-8 Ponakin Road over Nashua River

1871 Post truss. This bridge is the only known surviving Post truss in the United States. This nationally significant bridge is located near a potential historic district.

Lowell L-15-8 Hale Street over B & M Railroad

1892 One span pin-connected wrought iron Pennsylvania through truss. Early example of an uncommon bridge type in Massachusetts. Only one of the five Pennsylvania trusses to be pin-connected, virtually unaltered. This bridge is also located near the South Common National Register Historic District.



March 6, 1991

Mr. Anthony J. Fusco
Division Administrator
Federal Highway Administration
Transportation Systems Center
55 Broadway - 10th Floor
Cambridge, MA 02142

ATTN: Mr. H. Pearlman

RE: Massachusetts Bridges, National Register Eligibility

Dear Mr. Fusco:

The Massachusetts Historical Commission has reviewed the historic bridge inventory forms prepared by the Massachusetts Department of Public Works. The Massachusetts Historical Commission concurs with the preliminary findings of Massachusetts Department of Public Works that the following bridges meet criteria for listing in the National Register of Historic Places.

<u>Bourne</u> (Bourne Bridge)	B-17-4	State 28 over Cape Cod Canal
1934	Three span continuous truss with deck/through riveted steel truss, Warren type truss web. Central span is arched, and highway deck is suspended from its lower chords. Two single intersection Warren deck truss approach spans at each end of the main structure. A landmark, award winning bridge, known internationally for its design and setting.	

<u>Bourne</u> (Sagamore Bridge)	B-17-5	U.S. 6 over Cape Cod Canal
1935	Three span continuous truss. It is virtually identical to the Bourne Bridge, without the approach spans. The bridge won Honorable Mention in 1935 for its graceful design. Both bridges are elements in a much larger engineering project of significance in its own right, the Cape Cod Canal, a potential National Register Historic District.	

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<u>Boston/Quincy</u>	B-16-368/Q-1-50	Long Island Bridge over Quincy Bay
<u>Conway</u>	C-20-7	Hickory Ridge Road over South River
<u>Erving/Montague</u>	E-10-5/M-28-5	Paper Mill Road over Millers River
<u>Montague</u>	M-28-20	C.V.R.R. over North Leverett Road/ Sawmill River
<u>Northfield</u>	N-22-26	B & M Railroad over Caldwell Road/ Connecticut River
<u>Westfield</u>	W-25-4	United States Route 20 over Westfield River

If you have any questions, please feel free to contact William Smith of this office.

Sincerely,

Judith B. McDonough

Judith B. McDonough
Executive Director
State Historic Preservation Officer
Massachusetts Historical Commission

JBM/WS/kab

cc: Frank Bracaglia, MDPW