

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No:	NWT.904
Historic Name:	Echo Bridge
Common Name:	
Address:	Charles River South of Boylston St
City/Town:	Newton
Village/Neighborhood:	Upper Falls
Local No:	236
Year Constructed:	1875
Architect(s):	Fteley, Alphonse; Phelps, George; Phelps, George W.
Architectural Style(s):	Arch Barrel Solid
Use(s):	Other Transportation
Significance:	Community Planning; Engineering; Landscape Architecture; Transportation
Area(s):	NWT.A: Newton Upper Falls Historic District NWT.Y: Newton Multiple Resource Area - 1636-1907 NWT.AQ: Sudbury Aqueduct Linear District NWT.AR: Water Supply System of Metropolitan Boston
Designation(s):	Nat'l Register Individual Property (04/09/1980); Nat'l Register District (09/04/1986); Nat'l Register MRA (09/04/1986); Nat'l Register TRA (01/18/1990); Nat'l Register District (01/18/1990)
Building Materials(s):	



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

FORM F - STRUCTURE

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, State House, Boston

In Area no.	Form no.
	5-3

NEEDHAM

1. Town Wellesley (Newton Upper Falls)
Address south of Route 9, west of
Chestnut Street, over Charles R.
Name Charles River (Echo) Bridge
Present use aqueduct bridge
Present owner MDC-Boston

3. Type of structure (check one)

bridge	<u>xx</u>	pound	_____
canal	_____	powder house	_____
dam	_____	street	_____
fort	_____	tower	_____
gate	_____	tunnel	_____
kiln	_____	wall	_____
lighthouse	_____	windmill	_____

other _____

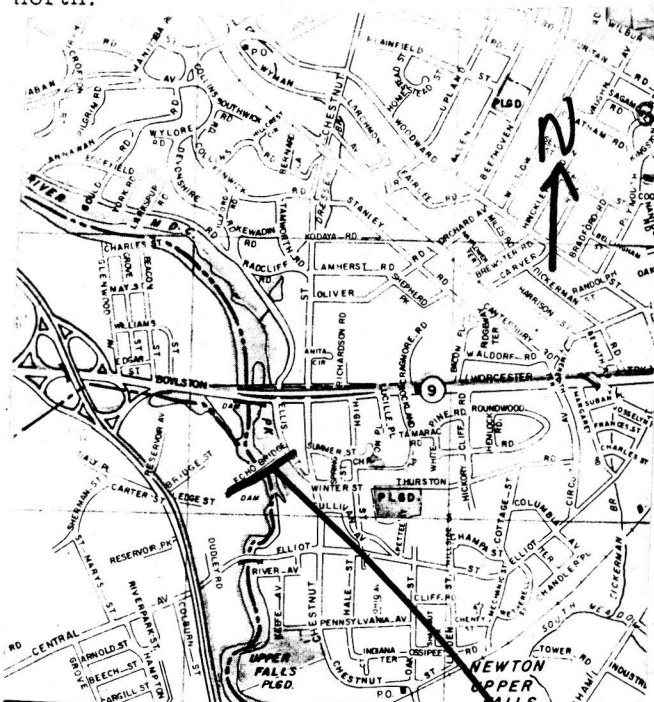
5. Description

Date 1875-76
Source Internal Report (MWB) 1898;
original drawings, MDC vault case 19
drawer 60.
Construction material brick, granite, con-
crete
Dimensions 536' long, 40' high, 18' wide
Setting suburban, across Charles River
Condition good

6. Recorded by Jane Carolan
Organization Louis Berger & Assoc.
Date February 1984



Map. Draw sketch of structure located in relation to nearest cross streets, buildings, other structures, natural features. Indicate north.



DO NOT WRITE IN THIS SPACE
USGS Quadrant _____

MHC Photo no. _____

Echo bridge

(over)

7. Original owner (if known) City of BostonOriginal use Carried Sudbury Aqueduct across River Valley

Subsequent uses (if any) and dates _____

8. Historical significance

Built by the City of Boston, this bridge was considered by Desmond Fitzgerald, one of the system's most distinguished engineers, as "the principal structure to be seen on the line of the aqueduct" (Internal Report, 1898). The bridge was originally named the Charles River Bridge but because of its unusual acoustical properties was quickly dubbed Echo Bridge. The structure has seven arches; from west to east, the first arch, on the western river bank, is segmental with an 18' radius; the next arch is segmental with a radius of 69' and spans the river with an opening of 130 feet. The next four arches, each with a radius of 36' 8", are semi-circular and are on the eastern river bank. The seventh arch, over Ellis Street, is a flat segmental arch with a 26' 6" radius and a 28' span.

The bridge has a concrete core with a granite rubble exterior faced with ashlar. The conduit, lined with cement, crosses the bridge in a channel with a flagstone bottom and brick sidewalls which are topped with a decorative iron fence. The conduit section of the bridge is identical to that of Waban Bridge.

Alphone Fteley was Chief Engineer for this bridge; it was constructed by George W. Phelps, of Springfield, Mass.

This structure is on the National Register of Historic Places.

9. Bibliography and/or references such as local histories, deeds, assessor's records, early maps, etc.

Internal Report, 1898.

Additonal Supply from the Sudbury River, Description of the Work, Rockwell & Churchill, 1882, Boston.

Original Drawings, Sections and Elevations, MDC Vault Drawer 60.

In Area no.

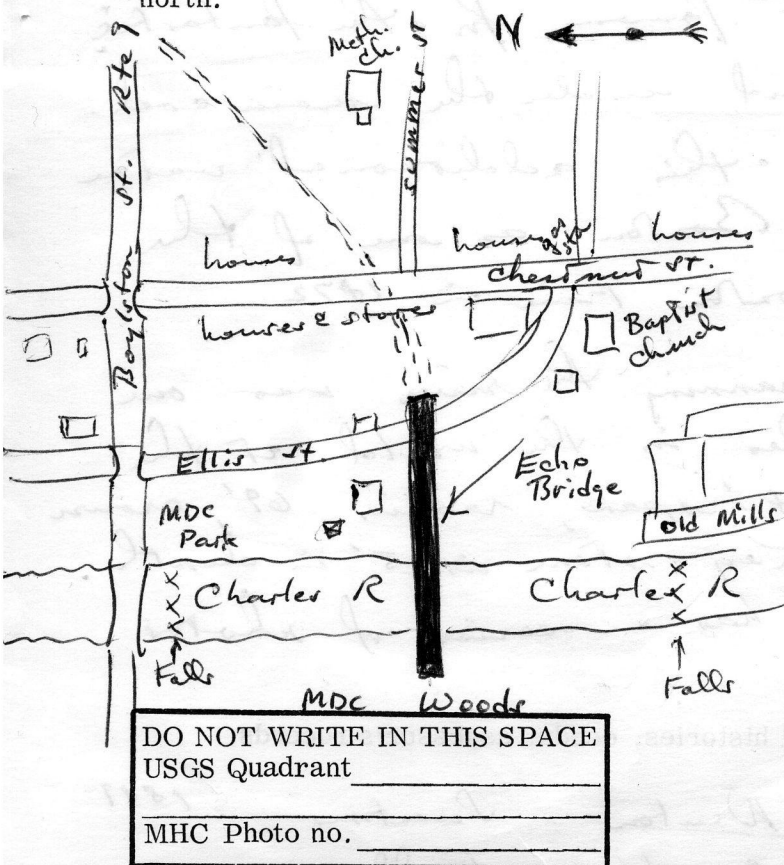
Y, A

Form no.

236
904SSION
ston

LOOKING NORTH - SHOWS RAMP AT RIGHT
UNDER ARCH WHERE ECHOS CAN
BE HEARD - - - MARCH 1976

4. Map. Draw sketch of structure location in relation to nearest cross streets, buildings, other structures, natural features. Indicate north.



DO NOT WRITE IN THIS SPACE
USGS Quadrant _____

MHC Photo no. _____

1. Town Newton Upper Falls
Address crosses Charles R. to the south of Boylston St (Rte 9)
Name Echo Bridge
Present use walking bridge
Present owner Mass District Comm

3. Type of structure (check one)

bridge	<input checked="" type="checkbox"/>	pound	_____
canal	_____	powder house	_____
dam	_____	street	_____
fort	_____	tower	_____
gate	_____	tunnel	_____
kiln	_____	wall	_____
lighthouse	_____	windmill	_____

other a part of the Sudbury Aqueduct

5. Description

Date 1876 - 1877
Source King's Handbook of Newton Jackson Homestead archives
Construction material granite
Dimensions 500', 7 arches, highest arch 51' light
crosses Hemlock gorge - just
Setting below old mills. MDC park
land on both sides of river
Condition needs repair - of railings, stairs, etc.

6. Recorded by E. M. Husher
Organization Jackson Homestead Newton
Date August 2, 1973

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MASS. HIST. COMM.

7. Original owner (if known) City of Boston - Boston Water Works
 Original use aqueduct to carry water from Sudbury R. to Boston
 Subsequent uses (if any) and dates aqueduct - walking bridge
8. Historical significance.

It is a most beautiful bridge in a lovely setting. It once was a favorite outing spot, but the whole area has been allowed to deteriorate. The stairs from Ellis St. to the top of the bridge are impassable & the railing along the top needs repair. (Stairs repaired 11/2/74)

For its day, the bridge & the whole aqueduct system was a considerable engineering feat. Today - and for as many years as it has been built - it is most famous for the fantastic * echo that may be heard under the main arch.

I believe that this additional water supply was created for Boston as one of the results of the Great Boston Fire in 1872

The largest arch spanning the river was one of the largest stone arches in the world at the time it was built - 138' span, radius 69', crown 51' above the water. Key-stone is 5' in depth.

Jackson Homestead has a series of photos showing its construction.

9. Bibliography and/or references such as local histories, deeds, assessor's records, early maps, etc.

King's Handbook of Newton Sweetser 1887
Newtons Elder Houses - Newton Upper Falls
 Jackson Homestead pub 1872
Smith History of Newton 1880

