

FORM A - AREA

DEC 05 1989

Area Letter Form numbers in this Area

D	12-1, 12-2, 12-3, 12-4, 12-5
	12-6, 12-7, 12-8, 12-9, 12-10

Southborough, Framingham, Wayland
Weston

Town _____

Name of Area (if any) _____

Weston Aqueduct Linear District

Present Use water supplyGeneral Date or Period 1901-03period of significance 1901-1926General Condition goodAcreage c. 300 acresRecorded by Martha BowersOrganization Louis Berger Ass., Inc.Date 1984; rev. 1989 (C. Jenkins)

Photos (3"x3" or 3"x5" black & white). Indicate on back of each photo street addresses for buildings shown. Staple to left side of form.

Sketch Map. Draw a general map of the area indicating properties within it. Number each property for which individual inventory forms have been completed. Label streets including route numbers, if any. Indicate north. (Attach a separate sheet if space here is not sufficient).

see attached map

UTM REFERENCE

A-D Framingham Quad

E-J Natick Quad

USGS QUADRANGLE
SCALE

1:25,000

A 19294250/4686790	east end
B 19294980/4686860	Metering Chamber #1
C 19300520/4689250	Metering Chamber #2
D 19302900/4689800	Sudbury River Siphon
E 19304680/4690000	Happy Hollow Siphon
F 19307200/4691990	arbitrary
G 19310300/4691340	Channel Chamber
H 19311050/4690720	Reservoir
I 19311700/4690760	Screen Chamber
J 19313240/4690480	Terminal Chamber

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

The Weston Aqueduct Linear District consists of 13.5 miles of aqueduct punctuated by bridges and chambers along its course to the Weston Reservoir. It is significant as an outstanding and well preserved example of engineering and architectural design for a gravity aqueduct system in metropolitan Boston's water system. Dating to 1901-1903, it is representative of the third phase of the system's development. Like other components of this phase, its designers include engineer Frederick P. Stearns, architects Shepley, Rutan & Coolidge, and landscape architects Olmsted & Olmsted. The notable variety of conduit and chamber types of the Weston Aqueduct presents an excellent illustration of the ways in which gravity aqueducts were designed and built to meet hydraulic grade requirements in a variety of topographical circumstances. In addition, the chambers above the conduit display noteworthy coherence and continuity of design as expressed in their simplified Renaissance Revival forms, attractive polychrome granite exteriors, and measured incorporation of decorative detail. Subtle variations within the overall design theme

ARCHITECTURAL SIGNIFICANCE Describe important architectural features and evaluate in terms of other areas within the community.

(CONT)

The Weston Aqueduct Linear District is 13.5 miles long, extending from Sudbury Dam (Area F) in Southborough eastward through Framingham and Wayland to Weston. This linear resource is comprised of 2.3 miles of tunnel, 9.14 miles of brick and concrete masonry conduit, two lengths of inverted steel pipe siphon, a 1500-foot open channel and a sixty acre reservoir, plus nine Renaissance Revival-style chambers and a vehicular bridge. These elements are described below:

The aqueduct (12-1) averages about thirteen feet high and twelve feet wide, with a horseshoe-shaped cross section or profile. The masonry sections have natural concrete bases, side walls lined with a single ring of brick, and unlined Portland cement concrete arches. Flow of water in the aqueduct is measured at two points in Framingham at Metering Chamber #1 (12-9) and Metering Chamber #2 (12-10). These identical 14' x 14' structures have concrete substructures, red clay tile hipped roofs, exterior walls of orange-tan random ashlar granite, and pink granite quoins, window trim and entry surrounds. The Sudbury River Siphon (12-5), extending across the Sudbury River valley from Framingham to Wayland consists of 3605 feet of extending across the Sudbury

(CONT)

HISTORICAL SIGNIFICANCE Explain historical importance of area and how the area relates to the development of other areas of the community.

The Weston Aqueduct Linear District was constructed as part of the third stage in the evolution of the metropolitan Boston water system (1895-1926; please refer to Overview, Section 8, pp. 2, and 7-8 for additional information). This phase, directed by the newly created Metropolitan Water Board (1895), involved completion of the Sudbury Reservoir, and expansion of the system northwestward to the Nashua River in Clinton. The major products of this phase were the Wachusett Dam (Area G) and Reservoir, and the Wachusett Aqueduct (Area C). The Weston Aqueduct was a subsidiary project designed to serve the rising demand for water in the communities northwest of Boston. The Weston Aqueduct was created as a thirteen-mile conduit between the Sudbury Reservoir on the west and the Weston Reservoir (D12-2) on the east. From there the water passed to distribution through Spot Pond Reservoir in Stoneham (Area H) or the main Chestnut Hill Reservoir in Boston (Area E). Built in 1901-1903, the aqueduct was designed by the Metropolitan Water Board's engineering staff under Chief Engineer Frederic P. Stearns. The superstructures for the aqueduct's chambers were designed by the Boston firm of Shepley, Rutan & Coolidge; the open channel and reservoir segments were landscaped under direction of the landscape firm of Olmsted & Olmsted of Brookline. This is the same team who created the other elements of this third phase referenced above.

The structures that make up the district, and are described in the architecture section, combine to perform the basic function of carrying water from its source to distribution points. The open and closed sections of the aqueduct define and channel the course of water; the chambers provide for access and monitoring, ventilation and diversion; and the bridges and siphons carry the aqueduct over impediments like rivers and roads. Refer to Overview, Section 7: Aqueducts

(CONT)

BIBLIOGRAPHY and/or REFERENCES

Metropolitan Water and Sewerage Board, Annual Reports 1902, 1903, 1904.

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community: Southborough, Framingham, Wayland, Weston	Form No: D
Property Name: Weston Aqueduct Historic District	

Indicate each item on inventory form which is being continued below.

NATIONAL REGISER CRITERIA STATEMENT

were developed for each chamber type, thereby reinforcing the feeling of care and creativity exhibited in the work of a major Boston architectural firm. The district possesses integrity of location, design, setting, materials, workmanship, feeling and associations; it meets criteria A and C of the NRHP. The boundaries are shown in red on the attached map entitled "Metropolitan Water Works; Weston Aqueduct" scale 1" = 800'. The boundaries encompass the aqueduct structure, its associated chambers, bridges and siphons, and the Weston reservoir as it travels from the Sudbury Dam H.D. (Area F) on the west to the Weston Aqueduct Terminal Chamber (12-6) on the east.

ARCHITECTURAL SIGNIFICANCE

River Valley from Framingham to Wayland consists of 3605 feet of seven and one-half foot steel pipe, with the section over the river itself arched, to form a pipe bridge with stone abutments. At each end of the siphon is a 21' x 21' chamber, the concrete sub-structures of which contain gates for controlling flow. The floor stands by which the gates are raised and lowered are sheltered within identical square hipped roofed structures, with red-orange random-ashlar granite walls and light pink granite trim (for water tables, quoins, window surrounds and Gibbs-style architraves). The Happy Hollow Siphon (D12-3), which passes beneath Route 126 in Wayland, is very similar, although only about 1100 feet long and lacking a pipe arch segment. Also like the Sudbury River siphon, the Happy Hollow siphon has chambers at both ends, each about 21' x 21' square with red tiled hipped roofs and simplified Renaissance Revival detailing in pink granite.

In Weston, one of the aqueduct's tunnel sections terminates at an open channel leading to a holding and equalizing reservoir. At the end of the tunnel is the Weston Channel Chamber (D12-8), a 17' x 24' hipped-roofed structure which contains stoplogs used to regulate flow of water into the channel. The 2x3 bay superstructure is clad in red-orange granite, with pink granite quoins, water table, window surrounds and Gibbs-style entrance. The open channel section of the aqueduct, 1500 feet long and about 20 feet wide, is lined with stone riprap and ornamented with rows of arborvitae and conifers. At Ash Street Bridge (D12-4), an arched concrete span faced with quarryfaced granite, the channel empties into Weston Reservoir (D12-2). Weston Reservoir covers about 60 acres with a maximum depth of 28 feet. The approximately 150 acres surrounding the reservoir present a naturalistic setting of rocky promontories and tree-lined shores. This naturalistic planning is carried through in the dam at the east end, a 900-foot curved earth embankment with concrete core wall. On the dam is the Weston Screen Chamber (D12-7), which contains wood and metal screens to catch debris. The hipped-roofed superstructure is about 33' square. Red-orange granite walls articulated with pink granite trim express the Renaissance Revival design theme characteristic of the Weston system. The aqueduct ends at the Weston Terminal Chamber (D12-6), which is basically a concrete well from which pipes extend to distribution through Spot Pond in Stoneham (see Middlesex Fells Reservoirs Historic District). Largest of the chambers on the Weston, the Terminal Chamber, hipped-roofed and granite-clad like the others, features a rusticated foundation, clerestory with ornamental metal grilles, dentil frieze, and large blind medallions set in molded panels between clerestory openings.

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community:	Form No:
Southborough, Framingham Wayland, Weston	D
Property Name: Weston Aqueduct Linear District	

Indicate each item on inventory form which is being continued below.

HISTORICAL SIGNIFICANCE (Cont)

and Chambers.

The Olmsted & Olmsted designed landscape contributes to the historic setting and feeling of the district. However, the integrity and significance of the landscape have not been sufficiently investigated at this time to justify significance under landscape architecture. Refer to Overview, Section 8: Designers, for additional information.

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Section number _____ Page _____

Water Supply System of Metropolitan Boston MPS
Middlesex, Norfolk, Suffolk and Worcester Counties, MASSACHUSETTS

DATE LISTED

COVER

Substantive Review

1. Ashland Dam and Spillway

2. Framingham Reservoir No. 3 Dam and Gatehouse
Substantive Review

3. Framingham Reservoir No. 2 Dam and Gatehouse

4. Framingham Reservoir No. 1 Dam and Gatehouse

5. Hopkinton Dam and Spillway

6. Lake Cochituate Dam

7. Medford Pipe Bridge

8. Middlesex Fells Reservoirs Historic District
Substantive Review

9. Mystic Dam

10. Mystic Gatehouse **Substantive Review**

11. Mystic Pumping Station

12. Sudbury Aqueduct Linear District

13. Sudbury Dam Historic District

14. Weston Aqueduct Linear District

15. Fisher Hill Reservoir and Gatehouse

16. Forbes Hill Standpipe

17. Bellevue Standpipe

18. Chestnut Hill Reservoir Historic District

19. Marlborough Brook Filter Beds **Substantive Review**Beth L. Savage 01-18-90Helene Byers 1-18-90Beth L. Savage 01-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Beth L. Savage 01-18-90Helene Byers 1-18-90Beth L. Savage 01-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Helene Byers 1-18-90Beth L. Savage 01-18-90

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Weston Aqueduct Linear District

MULTIPLE NAME: Water Supply System of Metropolitan Boston MPS

STATE & COUNTY: MASSACHUSETTS, Middlesex

DATE RECEIVED: 12/05/89 DATE OF PENDING LIST: 12/19/89
DATE OF 16TH DAY: 1/04/90 DATE OF 45TH DAY: 1/19/90
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 89002274

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

☒ ACCEPT ☐ RETURN ☐ REJECT 1/18/90 DATE Entered in the
National Register

ABSTRACT/SUMMARY COMMENTS:

RECOM./CRITERIA _____
REVIEWER _____
DISCIPLINE _____
DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

CLASSIFICATION

☐ count ☐ resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

☐ historic ☐ current

DESCRIPTION

☐ architectural classification
☐ materials
☐ descriptive text

SIGNIFICANCE

Period Areas of Significance--Check and justify below

Specific dates Builder/Architect
Statement of Significance (in one paragraph)

☐ summary paragraph
☐ completeness
☐ clarity
☐ applicable criteria
☐ justification of areas checked
☐ relating significance to the resource
☐ context
☐ relationship of integrity to significance
☐ justification of exception
☐ other

BIBLIOGRAPHY

GEOGRAPHICAL DATA

☐ acreage ☐ verbal boundary description
☐ UTMs ☐ boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

☐ sketch maps ☐ USGS maps ☐ photographs ☐ presentation

OTHER COMMENTS

Questions concerning this nomination may be directed to

Signed _____ Phone _____

Date _____



MDC - TRA, MASS.

WESTON AQUEDUCT CHANNEL CHAMBER, WESTON, MA.

Jane Carolan / Martha Bowers 1984

12-8

Louis Berger & Ass.

AREA D, WESTON AQUEDUCT HISTORIC DISTRICT

Water Supply System of Metropolitan Boston MAs



MDC - TRA, MASS.

WESTON METERING CHAMBER #2, FRAMINGHAM, MA

Jane Carolan / Martha Bowers 1984

12-10

Louis Burger & Ass.

AREA D, WESTON AQUEDUCT HISTORIC DISTRICT

Water Supply System of Metropolitan Boston MPS



MDC - TRA, MASS.

Weston Aqueduct Terminal Chamber, Weston, MA

Jane Carolan / Martha Bowers 1984

12-6

Louis Berger + Ass.

Area D, Weston Aqueduct Historic District

Water Supply System of Metropolitan Boston MPS



MDC - TRA, MASS.

WESTON RESERVOIR, WESTON, MA 12-2

Jane Carolan / Martha Bowles 1984

Louis Beyer & Ass.

AREA D, WESTON AQUEDUCT HISTORIC DISTRICT

Water Supply System of Metropolitan Boston APS



WESTON AQUEDUCT
LINEAR DISTRICT
MDC - TRA, MASS.

COMMONWEALTH OF MASSACHUSETTS
METROPOLITAN WATER WORKS
WESTON AQUEDUCT
INDEX PLAN

SCALE 800 FT. TO AN IN.

APRIL 1917.

MDC - TRA, MASS.

Weston Aqueduct
Southborough, Framingham, Wayland,
Weston, Massachusetts
"Weston Aqueduct Index Plan," April 1917
Scale 800' = 1"

Weston

Please refer to the map in the
Multiple Property Cover Sheet
for this property

Multiple Property Cover Sheet Reference Number: 64500254