2269

MDC - TRA, MASS.

FORM A - AREA

DEC 05 1989

MASSACHUSETTS HISTORICAL COMMISSION
80 BOYLSTON STREET, BOSTON, MA 02116

Area Letter	Form numbers in this Area
G	G9-2, 9-3, 9-4, 9-5, 9-6, 9-7

Town Clinton

Name of Area (if any) Wachusett Dam Historic District

Present Use Water supply

General Date or Period 1897-1915

period of significance 1897-1926

General Condition good

Acreage c. 54 acres

Recorded by Martha Bowers

Organization Louis Berger & Ass., Inc.

Date 1984; revised 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 maps

UTM REFERENCE A 19/278500/4698000
B 19278810/4697760
C 19279060/4698130
D 19278780/4698230

USGS QUADRANGLE Clinton, Mass

SCALE 1:25,000

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

The Wachusett Dam Historic District consists of a dam, waste weir and spillway, two bridges, a gate chamber/powerhouse and a lightening arrestor chamber, all sited in the narrow gorge that forms the mouth of the massive Wachusett Reservoir. Constructed as part of the third phase expansion of the metropolitan water supply, this district is the most accessible and easily comprehended component. Additional significance is derived from the fact that the first known instance of hydropower generation from a domestic water source occurred here in August, 1911. The district is also a noteworthy illustration of the quality of landscape and architectural design that characterizes the system. The district was developed as a single project, and as such reflects a unified design approach that may be credited in large part of Arthur Shurcliff, then a partner in the landscape firm of Olmsted & Olmsted (see Sec. 7; designers). The unity of concept is demonstrated in the extensive use of quarry faced granite on the major structures of the (CONT)

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

This district is located at Lancaster Millpond on the Nashua River in Clinton. It includes Wachusett Dam (G9-2), Lower Gatehouse (G9-5), lightning arrester chamber (G9-6), and two bridges (G9-3,4) all arranged functionally within a landscaped setting. Two maintenance (NC) buildings (G9-7) are also included within the boundaries of the district.

The focal point of the district is Wachusett Dam (G9-2). The main, gravity-type spillway extends 850 feet, with a 450-foot waste weir extended in a northwesterly direction off the north end. The spillway and waste weir are of rubble stone, with cut stone facing on exposed areas. A four-gate upper chamber is built into the body of the dam, from which water is conveyed to the base of the structure. At each end of the spillway is a terminal structure, one a simple abutment, the other an enclosure for storage of flashboards. The waste weir is topped by flashboard stanchions and a bridge from which the flashboards can be installed or removed. Water flowing over this weir falls into a curved channel, excavated in bedrock, that empties into Lancaster Millpond below the dam. Crossing this channel are two concrete arch bridges, each faced with granite. The upper bridge (G9-3) is 170 feet long with an (see continuation sheet)

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

The Wachusett Dam Historic District, along with the related Wachusett Aqueduct Linear Historic District (Area C), represents the third stage in the evolution of the metropolitan Boston water supply system (1895-1926; please refer to Overview, Section 8, pp.2 and 7-10 for additional information.). This phase involved expansion of the system northwestward from the Sudbury Reservoir (Sudbury Dam H.D. Area F; 1890s) to the Nashua River in Clinton. This phase began with creation of the Metropolitan Water District, and issuance of a report by the Boston Board of Health that became a blueprint for development of the system. The report centered on the issue of pure water, continuing the themes developed in an earlier report on a metropolitan sewerage system. After considering a wide range of possible solutions, the report recommended procurement of a new clean water source from the south branch of the Nashua River in Clinton. That reservoir would be connected to the Sudbury Reservoir (see ARea F) by a twelve mile aqueduct (Area C). The Sudbury Aqueduct (Area B) would then carry the water to Chestnut Hill Reservoir (Area E). Wachusett DAm was begun in 1900 and completed in 1906; the reservoir was raised to full level by May 1908. The Wachusett project was designed by the engineering staff of the Metropolitan Water Board under Frederic P. Stearns, Chief Engineer. Architects for the powerhouse were Shepley, Rutan & Coolidge of Boston. General landscape designs were provided by Arthur Shurcliff of Olmsted & Olmsted. The contractor was McArthur Brothers of Chicago.

The Wachusett Dam Historic District is also important for its associations with transmission of hydropower. Authorized to exploit hydropower at any of their facilities, the Metropolitan Water Board installed equipment at both Sudbury and Wachusett Dams. Transmission of electricity from Wachusett in August 1911 was the first known instance of hydropower generation from a domestic water supply (Thayer, Allardice; 1914). Both the lightening arrestor chamber and lower gatehouse were involved in the process--see description.

BIBLIOGRAPHY and/or REFERENCES

Mass. Board of Health, "Report...Upon a Metropolitan Water Supply," Wright & Potter, Boston, 1895.

Metropolitan Water Board, Annual Reports 1899, 1900.

Thayer, B.C. and E.R.B. Allarice, "The Hydro-Electric Power Plant at Wachusett Dam," in Journal of the Boston Society of Civil Engineers 1 (1914): 523-548.

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community:	Form No:
Clinton	G
Property Name: Wachusett Dam Historic District	

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

NATIONAL REGISTER CRITERIA STATEMENT (Cont)

district. The Olmsted emphasis on naturalistic treatment is conveyed in the "rusticity" of the two bridges and of the waste channel, which was cut in a sweeping curve through bedrock with its floor and edges left unfinished as natural stone outcrops and projections. In contrast, the lower gatehouse/powerhouse, designed by Shepley, Rutan & Coolidge, presents a severe, formal element in its symmetrical neoclassism. This formality is emhasized by the circular pool below the dam, the regular placement of mulberry trees around the pool, and the neat line of conifers along the north side of the access road to the complex. The district possesses integrity of location, design, setting, materials, workmanship, feeling and association; it meets criteria A and C of the NRHP. The boundaries are shown in red on the two attached maps. Map #1 from 1908 shows the land taking with previous owners' parcels. Map #2 from 1917 shows the area as developed by the Metropolitan Water Board. The boundaries encompass the structures cited above and the immediately adjacent land.

ARCHITECTURAL SIGNIFICANCE:

arch span of 58 feet. An attractive feature of this bridge is a small arch over the roadway that runs beside the waste channel toward the pool and gatehouse. This bridge was constructed in association with the relocation of the Central Massachusetts Railroad line during development of Wachusett Reservoir. The relocated line was extended from West Berlin, through a rock tunnel on the south side of the millpond, and over the millpont on a plate-girder viaduct (no longer extant). From the viaduct, the line passed over the arched channel bridge to a connection with a Boston & Maine RR line. The lower bridge, on the other hand, carries atto traffic on Grove Street, which passes between two concrete maintentance structures and then onto the grounds below the dam. The Grove Street Bridge (G9-4) has a span of about 35 feet and a 20-foot roadway. The bridge is slightly curved in plan, with the radius of the curve about 275°. The bridge is faced with coursed granite, articulated along the parapet with slightly projecting square stones at regular intervals. A curved stone wall extends downstream from the bridge on one side of the waste channel.

The lightning arrester chamber (G9-6) is located on the south side of the waste channel, just below the railroad bridge. It is a one-room building of poured concrete with a hipped roof originally clad in red clay tile (now asphalt shingling). This structure was originally built to house apparatus to protect the hydroelectric power generating plant, which was installed in the lower gatehouse in 1910-11. The gatehouse (G9-5), measures approximately 104'x74' and is situated at the foot of Wachusett Dam. The superstructure presents a symmetrical five-part facade with three tall round-arched windows flanked by slightly projecting, quoined end pavilions. A standing-seam metal hipped roof rises above a plain cornice. The exterior is clad in gray granite complementing the rising wall of the dam behind it. Inside are four 1200 hp. spiral case horizontal turbines and four 1000 kw generators, plus a pair of exciters. When the powerhouse was operational, water passing through the turbines was discharged either into Wachusett aqueduct (of which the gatehouse technically functions as the head chamber) or into the stone-lined circular pool in front of the gatehouse. The pool is edged with mulberry trees, and empties into Lancaster Millpond.

Also associated with the district are two maintenance buildings (G9-7) situated on Grove Street uphill from the waste channel. These buildings, consisting of garage and storage structure, are constructed of concrete, stuccoed on the exterior, and have hipped roofs. The garage retains its original clay tile roofing and cupola.

The Olmsted & Olmsted designed landscape contributes to the historic setting and feeling. However, the integrity and significance of the landscape have not been sufficiently investigated at this time to justify significance under landscape architecture. Refer to the section on Designers in Sec. 8 of the Overview.

Staple to Inventory form at bottom

MDC TRA MASS

INVENTORY FORM CONTINUATION SHEET 2 of 2

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community:	Form No:
Clinton	6
Property Name: Wachusett Dam Historic District	

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

Staple to Inventory form at bottom

NPS Form 10-900-a
(8-86)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number _____ Page _____

Water Supply System of Metropolitan Boston MPS MASSACHUSETTS

		DATE LISTED
Rst	20. Quinepoxet River Bridge Substantive Review	Beth L. Savage 04-06-90
	21. Wachusett Aqueduct Linear District Substantive Review	Beth L. Savage 01-18-90
	22. Wachusett Dam Historic District	Melanie Byrne 1-18-90

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Wachusett Dam Historic District

MULTIPLE NAME: Water Supply System of Metropolitan Boston MPS

STATE & COUNTY: MASSACHUSETTS, Worcester

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: 89002269

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

_____ Phone _____

Signed _____ Date _____

MDC - TRA, MASS.

~~Central Mass Railroad Bridge, Clinton, Mass~~

Jane Carolan / Martha Bowers 1984

Louis Berger & Ass.

Grove Street Bridge, Clinton, Mass 9-4

AREA G, ~~SUBDIST~~ WACHUSETT DAM HISTORIC DISTRICT

Water Supply System of Metropolitan Boston MPS

facing NW

MDC - TRA, MASS.

Wachusett Dam, Clinton, MA 9-2

Jane Carolan / Martha Bowers 1984

Louis Berger & Ass.

AREA G: WACHUSETT DAM HISTORIC DISTRICT

Water Supply System of Metropolitan Boston MPS

MDC - TRA, MASS.

9-5

Wachusett Lower Gate Chamber Powerhouse, Clinton, Ma.

Jane Carolan / Martha Bowers 1984

Louis Berger & Ass.

AREA G, WACHUSETT DAM HISTORIC DISTRICT

looking SW at powerhouse, spillway & dam

Water Supply System of Metropolitan Boston MPS

MDC - TRA, MASS.

Wachusett Dam Complex, Clinton, MA

Jane Carolan / Martha Bowers 1984

Louis Berger + Ass.

Area G, Wachusett Dam Historic District

Looking SW at Power House, Spillway + Dam 9-2 9-5

Water Supply System of metropolitan Boston MPS

9-6

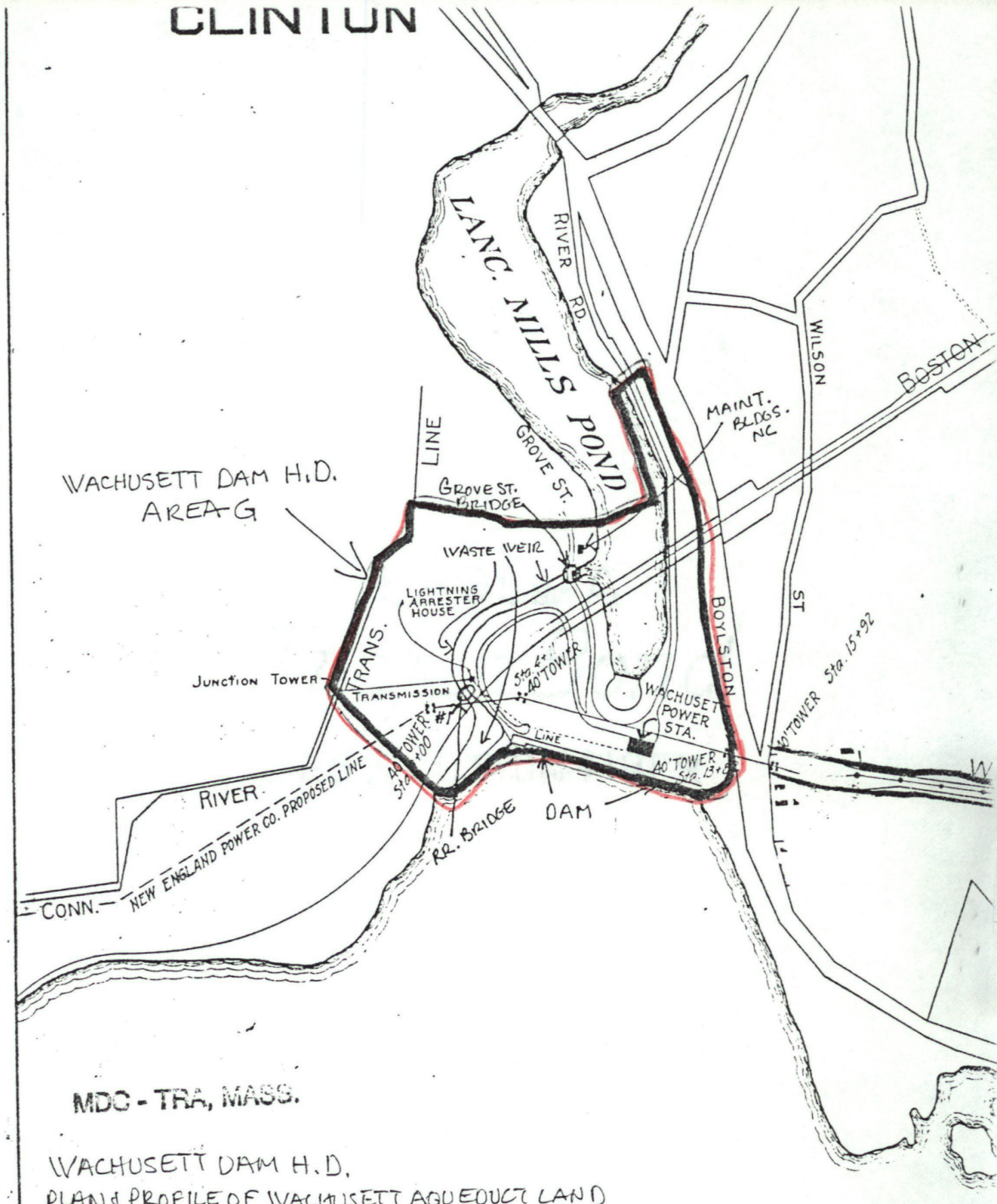
Lightening Arrestor Chamber, Clinton, MA

Jane Carolan / Martha Bowers 1984

Louis Berger & Ass.

AREA G: WACHUSETT DAM HISTORIC DISTRICT

Water Supply System of Metropolitan Boston MPS



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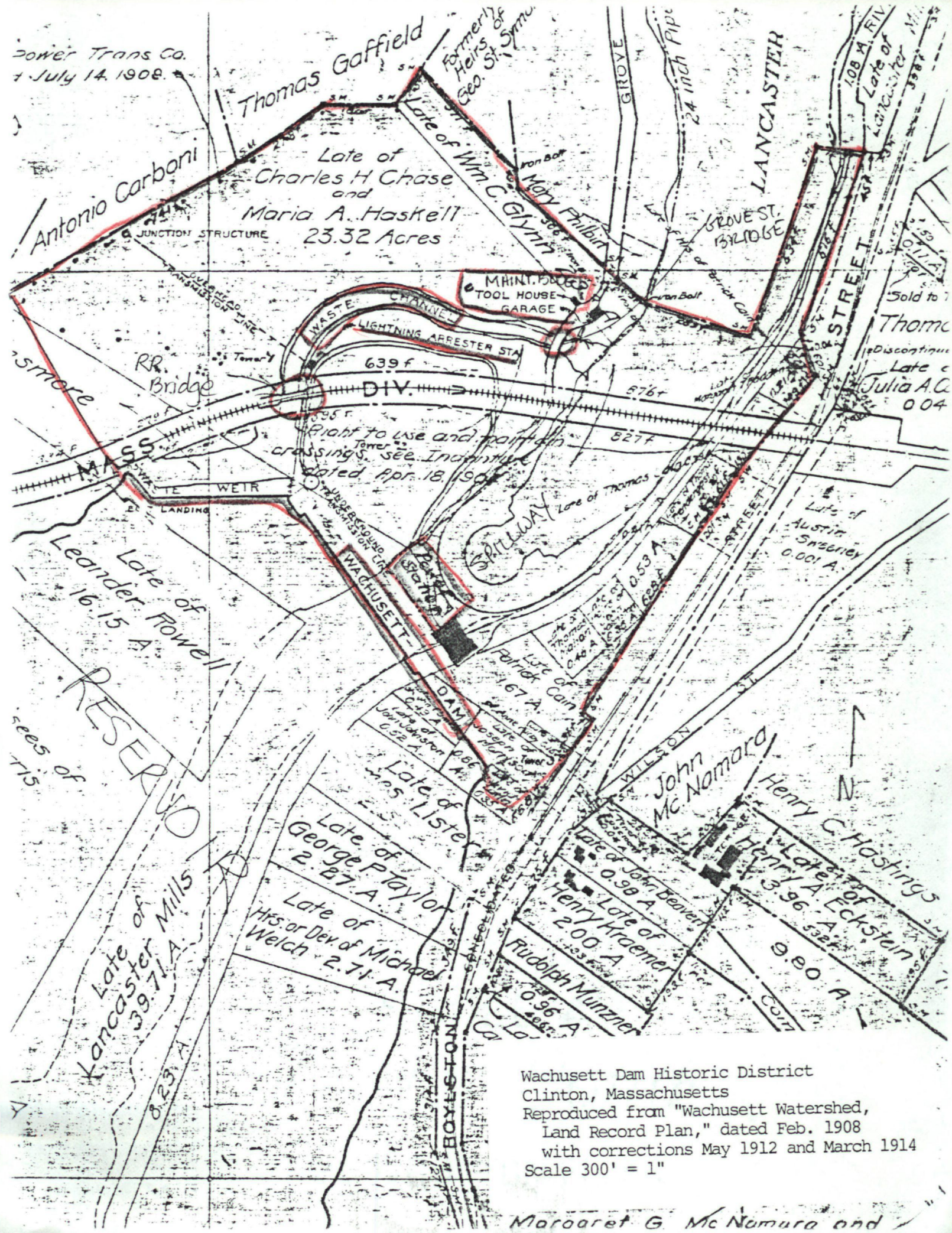
WACHUSETT DAM H.D.
PLAN & PROFILE OF WACHUSETT AQUEDUCT LAND
600' = 1' May 1917
COMMONWEALTH OF MASS., METROPOLITAN WATER WORKS

WACHUSETT RESERVOIR



Wachusett Dam Historic District
Clinton, Massachusetts
Reproduced from "Wachusett Watershed, Land Record Plan," dated Feb. 1908 with corrections May 1912 and March 1914
Scale 300' = 1"

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

Multiple Property Cover Sheet Reference Number: 64500254