

PH0005886 HB NO 171m

Form 10-300
(Rev. 6-72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATE:
Massachusetts

COUNTY:
Berkshire

FOR NPS USE ONLY

ENTRY DATE
NOV 2 1973

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY - NOMINATION FORM

(Type all entries - complete applicable sections)



1. NAME

COMMON:
Hoosac Tunnel

AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER:
From North Adams on the W to the Deerfield

CITY OR TOWN:
Florida and North Adams

CONGRESSIONAL DISTRICT:
One

STATE: Massachusetts CODE: 025 COUNTY: Berkshire CODE: 003

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP	STATUS	ACCESSIBLE TO THE PUBLIC
<input type="checkbox"/> District <input type="checkbox"/> Site <input type="checkbox"/> Object	<input type="checkbox"/> Building <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Both	Public Acquisition: <input type="checkbox"/> In Process <input type="checkbox"/> Being Considered	<input checked="" type="checkbox"/> Occupied <input type="checkbox"/> Unoccupied <input type="checkbox"/> Preservation work in progress
PRESENT USE (Check One or More as Appropriate)			
<input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Educational <input type="checkbox"/> Entertainment	<input type="checkbox"/> Government <input type="checkbox"/> Industrial <input type="checkbox"/> Military <input type="checkbox"/> Museum	<input type="checkbox"/> Park <input type="checkbox"/> Private Residence <input type="checkbox"/> Religious <input type="checkbox"/> Scientific	<input checked="" type="checkbox"/> Transportation <input type="checkbox"/> Other (Specify)

4. OWNER OF PROPERTY

OWNER'S NAME:
Boston and Maine Railroad Corporation

STREET AND NUMBER:
150 Causeway Street

CITY OR TOWN:
Boston

STATE:
Massachusetts

CODE:
025

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.:
Berkshire County Registry of Deeds, North District

STREET AND NUMBER:

CITY OR TOWN:
North Adams

STATE:
Massachusetts

CODE:
025

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY:
Inventory of Historic Assets of the Commonwealth

DATE OF SURVEY: 1971 Federal State County Local

DEPOSITORY FOR SURVEY RECORDS:
Massachusetts Historical Commission

STREET AND NUMBER:
40 Beacon Street

CITY OR TOWN:
Boston

STATE:
Massachusetts

CODE:
025

SEE INSTRUCTIONS

STATE: Mass.

COUNTY: Berkshire

ENTRY NUMBER: NOV 2 1973

FOR NPS USE ONLY

DATE:

7 DESCRIPTION

CONDITION	(Check One)					
	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Deteriorated	<input type="checkbox"/> Ruins	<input type="checkbox"/> Unexposed
	(Check One)			(Check One)		
	<input checked="" type="checkbox"/> Altered	<input type="checkbox"/> Unaltered	<input type="checkbox"/> Moved	<input checked="" type="checkbox"/> Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE

Hoosac Mountain, situated in the towns of Florida and North Adams, Massachusetts, is part of the Hoosac or eastern range of the Berkshire Hills. The latter are a continuation of the Vermont Green Mountains and consist of a number of ranges and small valleys, the easternmost of which is the Hoosac Range. Hoosac Mountain represents a saddle configuration with two crests and an intermediate valley. The eastern crest overlooks the Deerfield River Valley and is 2216 feet above sea level. The western crest is 2508 feet above sea level and overlooks the Hoosac River. It is through this mountain that the Hoosac Tunnel was built--a distance of 25,081 feet and 766 feet above sea level at its portals.

Cut through rock, largely mica slate, the dimensions of the tunnel averaged 24 feet wide and 20 feet high. Engineers approached its construction from three points. Drilling commenced at both the east and west portals and through a central shaft, sunk midway between the portals. The central shaft, elliptical in shape, descended 1028 feet from the surface of the mountain to the tunnel grade. Once the shaft was completed, headings were run from it to meet the work begun from the portals. The central shaft was later used for ventilation purposes. A second shaft, located just east of the west portal and 310 feet to grade, was also completed and later partially filled. Over one-third of the tunnel's interior was surfaced with brick; the remainder is bare rock. A single set of tracks was originally laid through the tunnel; by 1882, a second set was laid, allowing simultaneous east and west traffic.

The Boston and Maine Railroad made the first major alterations to the tunnel in 1925, increasing its height to accommodate larger freight and passenger cars. This was accomplished by lowering the tunnel floor through the removal of ballast and some blasting of the side walls and roof. In August, 1972, a section of the brick roof of the tunnel caved in about 1,000 feet inside the western portal, temporarily closing the structure. That section of the tunnel has now been reinforced and re-roofed with steel plates. Additional improvements are currently being made in the tunnel, including the installation of one-piece welded track and lowering of the roadbed to accommodate still larger freight loads.

Since the tunnel is still in use, all appurtenances necessary to the daily operation of the railroad are excluded from this submission. Included are the exteriors of the tunnel and central shaft walls as well as the portal facings. To insure adequate protection for this structure, the north and south boundaries of the submission have been set 500 feet from the center line of the tunnel.



SEE INSTRUCTIONS

8. SIGNIFICANCE

PERIOD (Check One or More as Appropriate)

- | | | | |
|--|---------------------------------------|--|---------------------------------------|
| <input type="checkbox"/> Pre-Columbian | <input type="checkbox"/> 16th Century | <input type="checkbox"/> 18th Century | <input type="checkbox"/> 20th Century |
| <input type="checkbox"/> 15th Century | <input type="checkbox"/> 17th Century | <input checked="" type="checkbox"/> 19th Century | |

SPECIFIC DATE(S) (If Applicable and Known) **1875**

AREAS OF SIGNIFICANCE (Check One or More as Appropriate)

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> Aboriginal | <input type="checkbox"/> Education | <input type="checkbox"/> Political | <input type="checkbox"/> Urban Planning |
| <input type="checkbox"/> Prehistoric | <input checked="" type="checkbox"/> Engineering | <input type="checkbox"/> Religion/Philosophy | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Historic | <input type="checkbox"/> Industry | <input type="checkbox"/> Science | _____ |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Invention | <input type="checkbox"/> Sculpture | _____ |
| <input type="checkbox"/> Architecture | <input type="checkbox"/> Landscape Architecture | <input type="checkbox"/> Social/Humanitarian | _____ |
| <input type="checkbox"/> Art | <input type="checkbox"/> Literature | <input type="checkbox"/> Theater | _____ |
| <input checked="" type="checkbox"/> Commerce | <input type="checkbox"/> Military | <input checked="" type="checkbox"/> Transportation | _____ |
| <input type="checkbox"/> Communications | <input type="checkbox"/> Music | | |
| <input type="checkbox"/> Conservation | | | |

STATEMENT OF SIGNIFICANCE

Called by its detractors "the road to ruin" and by its enthusiasts "the gateway to the west," the Hoosac Tunnel, whether burden or blessing, is an extraordinary engineering accomplishment, symbolizing the concomitant forces of industrialization and commercial growth in nineteenth century Massachusetts.

Massachusetts quickly felt the economic effects of the Erie Canal, completed in 1825, and sought a means of offsetting the diversion of commerce down the Hudson River. Canal routes were surveyed from Boston to New York and from Northampton on the Connecticut River to the St. Lawrence River. Massachusetts was slow to abandon her natural predilection for canals in favor of the railroads; it was not until 1841 that Boston was linked by the Western Railroad to New York and the markets of the Ohio Valley.

The Western Railroad, however, followed a route through the southern portion of the state and crossed over the Berkshire Hills, creating difficult grades for freight trains. The promoters of a more northerly route argued convincingly that a line through the northwest portion of the state, from Greenfield, Massachusetts, to Troy, New York, would cover a shorter distance with better grades. In 1848, despite the protests of its southern competitor, the Troy and Greenfield Railroad was incorporated to build such a road.

The proposed route of the Troy and Greenfield went straight through Hoosac Mountain, a double-ridged mountain over four miles wide. In 1854, after much heated debate, the Commonwealth of Massachusetts loaned the Troy and Greenfield two million dollars in script, conditioned on progress on the tunnel. The cost of the tunnel had been woefully underestimated while experience on such a project was lacking; as a result, progress in construction was slow.

In 1862, The Commonwealth took over complete control of the project and designated a new contractor. Recent engineering advances made possible more rapid progress on the tunnel. Hand drilling and black powder were replaced with power drills and nitro-glycerin. Power drills had been introduced in 1856 on the Mount Cenis Tunnel in the French Alps. A local chemist, George H. Mowbray, refined the use of nitro-glycerin and electric igniting devices. The Deerfield River was dammed to provide water power to operate the drills and a work force of over nine hundred men labored round-the-clock to complete the tunnel.

On October 13, 1875, the first commercial passenger train rolled through the tunnel. The privilege of doing so had cost over one hundred lives and a total expenditure by the Commonwealth of over twenty-eight million dollars. After (see continuation sheet)

SEE INSTRUCTIONS

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Kirkland, Edward Chase. Men, Cities and Transportation, A Study in New England History, 1820-1900. Cambridge: Harvard University Press, 1948.
 Mass. General Court Documents: legislative and miscellaneous relating to the Hoosac Tunnel, 1828-1888, 13 volumes.
 Mowbray, George M. Nitro-Glycerin. New York: D Van Nostrand, 1874.

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY			O R	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES		
CORNER	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	
	Degrees Minutes Seconds	Degrees Minutes Seconds		Degrees Minutes Seconds	Degrees Minutes Seconds	
NW	42 ° 40 ' 35½"	73 ° 05 ' 32 "				
NE	42 ° 40 ' 35½"	72 ° 59 ' 54 "				
SE	42 ° 40 ' 25½"	72 ° 59 ' 54 "				
SW	42 ° 40 ' 25½"	73 ° 05 ' 54 "				

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: c. 575 acres

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE



SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE:
J. Michael Franceschi, Consultant

ORGANIZATION: Massachusetts Historical Commission (617-727-8470) DATE: September 17, 1973

STREET AND NUMBER:
40 Beacon Street

CITY OR TOWN: Boston STATE: Massachusetts CODE: 025

12. STATE LIAISON OFFICER CERTIFICATION **NATIONAL REGISTER VERIFICATION**

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National State Local

Name John F. X. Davoren
 Title Secretary of the Commonwealth, Chairman, Massachusetts Historical Commission
 Date September 18, 1973

I hereby certify that this property is included in the National Register.

Ernest A. Connolly
 Director, Office of Archeology and Historic Preservation
 Associate Director, Professional Services
 Date NOV 2 1973

ATTEST:
[Signature]
 Keeper of the National Register
 Date 10-30-73

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM**

(Continuation Sheet)

STATE Massachusetts	
COUNTY Berkshire	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE
	NOV 2 1973

(Number all entries)

8. Significance (continued)

1875, the Commonwealth operated the tunnel on a toll system. When this proved both inefficient and unprofitable, it was decided, reflecting the philosophy of the time, that government really had no role in the private sector and the tunnel was sold in 1885 to the Fitchburg Railroad. The present owner, the Boston and Maine Railroad, purchased the Fitchburg Railroad and the tunnel in 1919

From its completion, the Hoosac Tunnel has remained a vital link with the west. In 1895, sixty percent of Boston's export trade arrived via the tunnel. Today, freight trains still thunder through the tunnel carrying goods throughout New England, exonerating its early champions and tempering critics who dubbed it "the folly of Massachusetts."



PROPERTY Hoosac Tunnel STATE Mass

Berkshire

WORKING NUMBER 9. 28. 73. 3690

TECH REVIEW
PHOTOS 2
MAPS 1

CONTROL REVIEW
OK

cm
9-28-73

HISTORIAN
Could this actually need 575 acres?

Accept
10-10-73
c.shul

ARCHITECTURAL HISTORIAN

ARCHEOLOGIST
Inventoried by AMER
The statement of significance for the write up should include the fact that this was the 1st major tunneling work in the US. pioneering modern tunneling techniques using pneumatic rock drills and nitroglycerine explosives.

Accept
10/18/73
Eub

REVIEW UNIT CHIEF

BRANCH CHIEF

accept
10/30/73
csh

KEEPER

Ubr
10/20

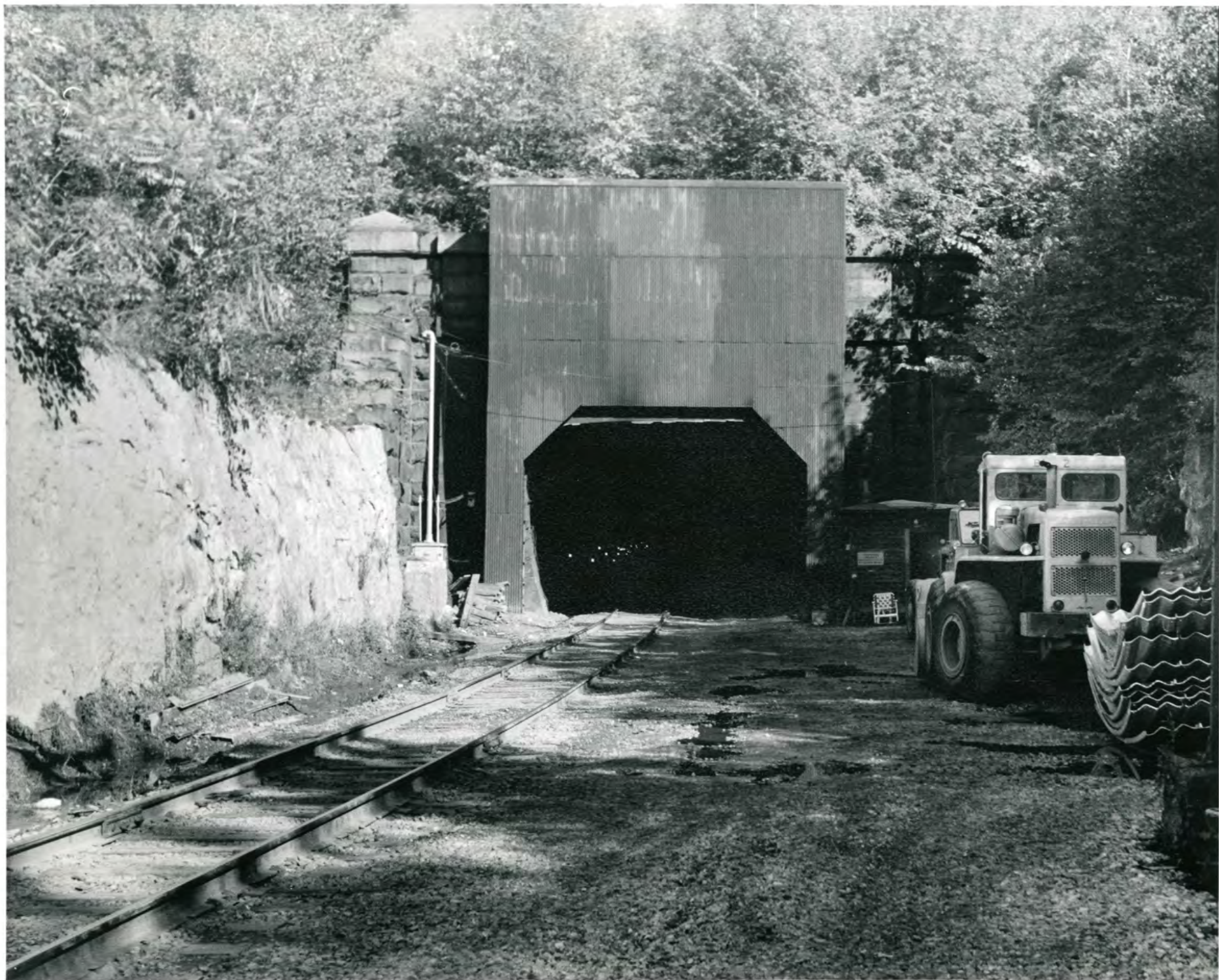
National Register Write-up _____

Send-back _____

Federal Register entry 12-4-73

Re-submit _____

Entered NOV 2 1973



NPS Number _____

Title: _____

FORM 10-301 A
(6/72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

1. NAME		
COMMON	AND/OR HISTORIC	NUMERIC CODE <i>(Assigned by NPS)</i>
Hoosac Tunnel		NOV 2, 1973
2. LOCATION		
STATE	COUNTY	TOWN
Massachusetts	Berkshire	Florida and North Adams
STREET AND NUMBER		
3. PHOTO REFERENCE		
PHOTO CREDIT	DATE	NEGATIVE FILED AT
Berkshire County Historical Society	June, 1973	Berkshire County Historical Soc. 113 East Housatonic Street Pittsfield, Ma. 01201
4. IDENTIFICATION		
DESCRIBE VIEW, DIRECTION, ETC.		

Western portal of tunnel



1877



NPS Number _____

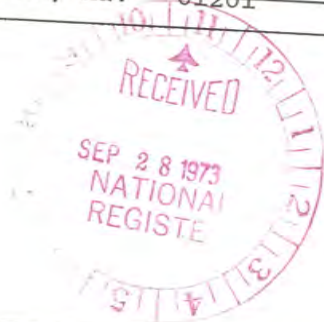
FORM 10-301 A
(6/72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

1. NAME COMMON Hoosac Tunnel		AND/OR HISTORIC	NUMERIC CODE <i>(Assigned by NPS)</i> NOV 2 1973
2. LOCATION STATE Massachusetts		COUNTY Berkshire	TOWN Florida and North Adams
3. PHOTO REFERENCE PHOTO CREDIT Berkshire County Historical Society		DATE June, 1973	NEGATIVE FILED AT Berkshire County Historical Soc. 113 East Housatonic Street Pittsfield, Ma. 01201
4. IDENTIFICATION DESCRIBE VIEW, DIRECTION, ETC. Eastern portal of tunnel			



**NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY MAP FORM**

(Type all entries - attach to or enclose with map)

1. NAME

COMMON

Hoosac Tunnel

AND/OR HISTORIC

same

NUMERIC CODE *(Assigned by NPS)*

NOV 2 1973

2. LOCATION

STATE

Massachusetts

COUNTY

Berkshire

TOWN

Florida, North Adams

STREET AND NUMBER

3. MAP REFERENCE

SOURCE

U.S.G.S. Rowe Quadrangle

DATE

1960

SCALE

1:24,000

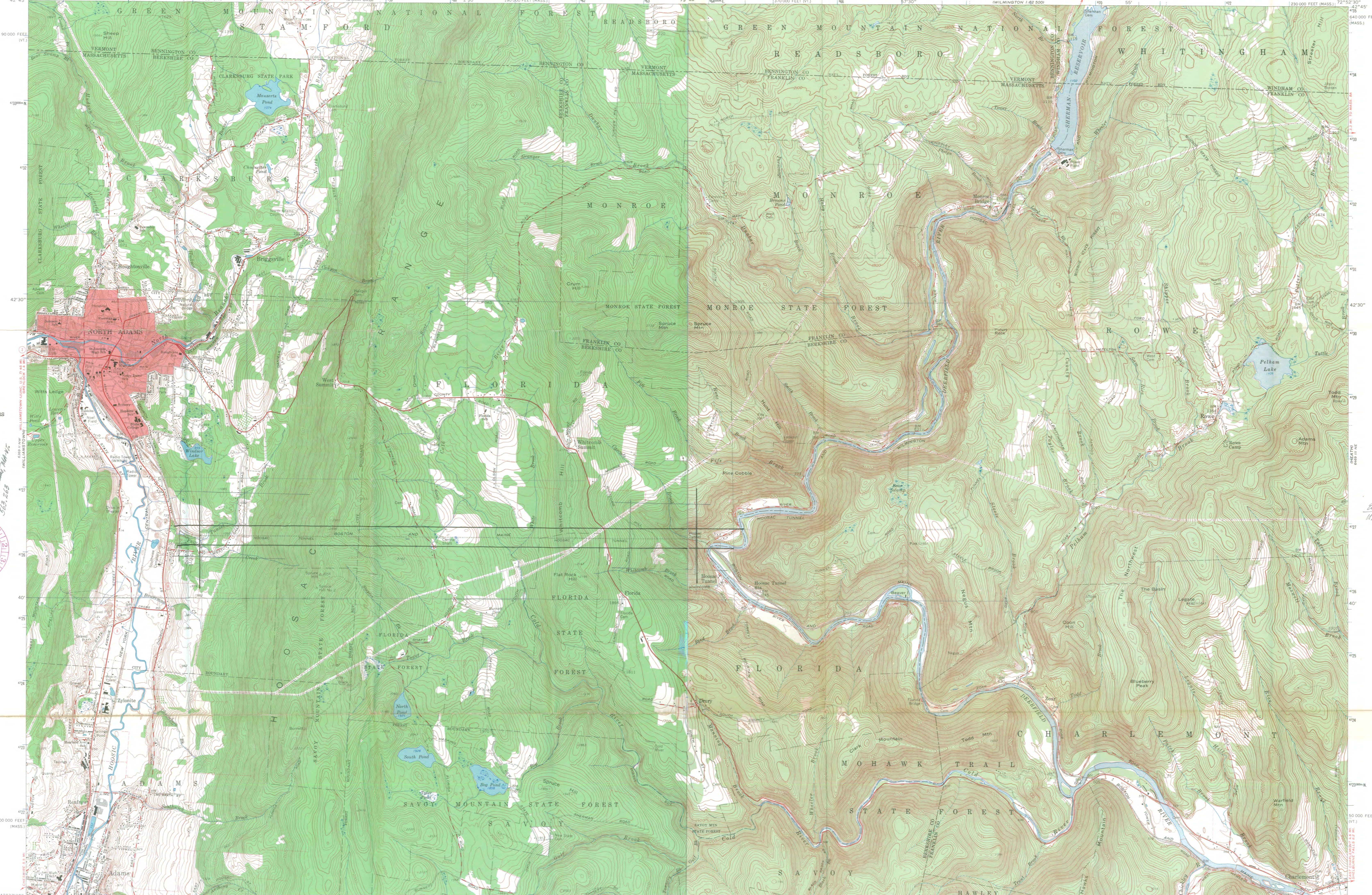
U.S.G.S. North Adams Quad.

1960

1:24,000

REQUIREMENTS: PROPERTY BOUNDARIES, WHERE REQUIRED, AND NORTH ARROW.



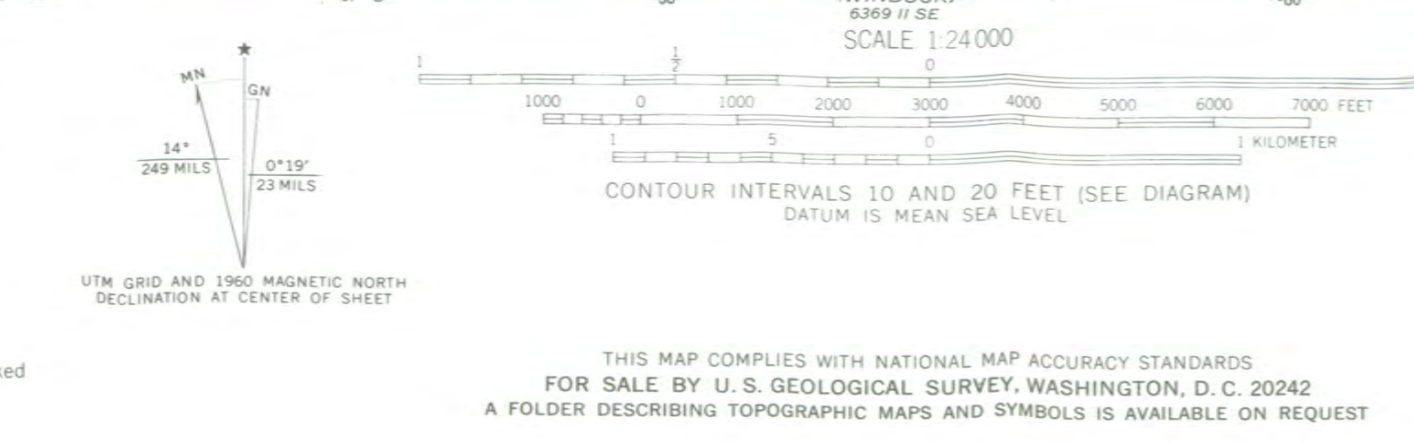


HOOSAC TUNNEL
FLORIDA, NORTH ADAMS
Long.
NW 73 05' 32"
NE 72 59' 54"
SE 72 59' 54"
SW 73 05' 32"
lat.
NK 42 40' 35"
NE 42 40' 35"
SE 42 40' 25"
SW 42 40' 25"



Eastern Hotel
177A N. Main, MA-17
640.764

Maped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Topography from aerial photographs by photogrammetric methods
and by plane-table surveys 1944. Aerial photographs taken 1942
Revised 1960
Polyconic projection, 1927 North American datum
10,000-foot grids based on Massachusetts coordinate system,
mainland zone, and Vermont coordinate system,
1000-meter Universal Transverse Mercator grid ticks,
zone 18, shown in blue
Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked
Red tint indicates area in which only landmark buildings are shown



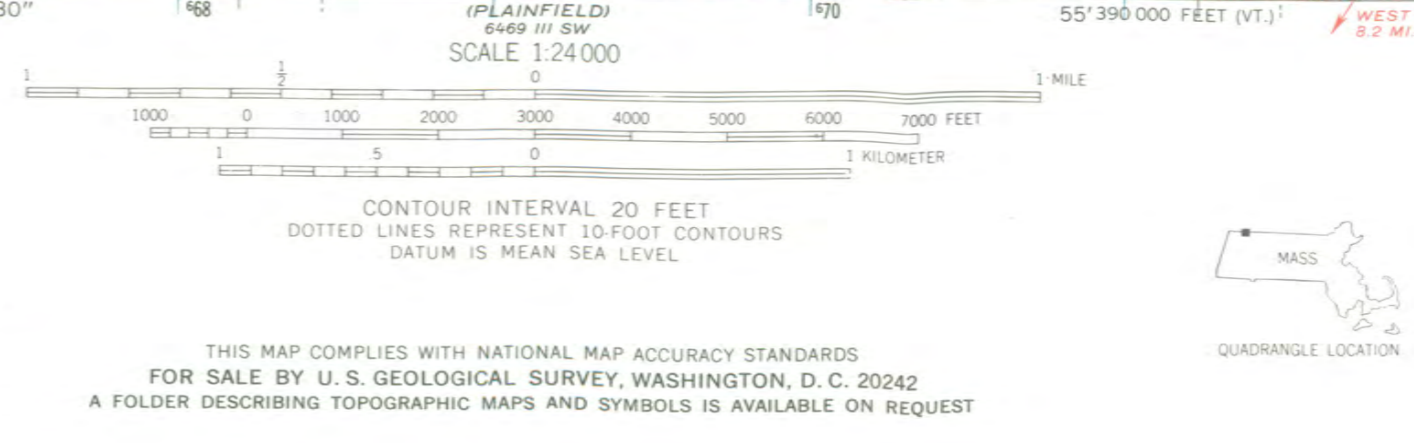
ROAD CLASSIFICATION
Heavy-duty ——— Light-duty ———
Medium-duty ——— Unimproved dirt ———
State Route ———

Maped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Topography by plane-table surveys 1944. Revised 1960
Polyconic projection, 1927 North American datum
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NORTH ADAMS, MASS.—VT
N4237.5—W7300/7.5
1960
AMS 6469 III NE—SERIES V714

Maped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Topography by plane-table surveys 1944. Revised 1960
Polyconic projection, 1927 North American datum
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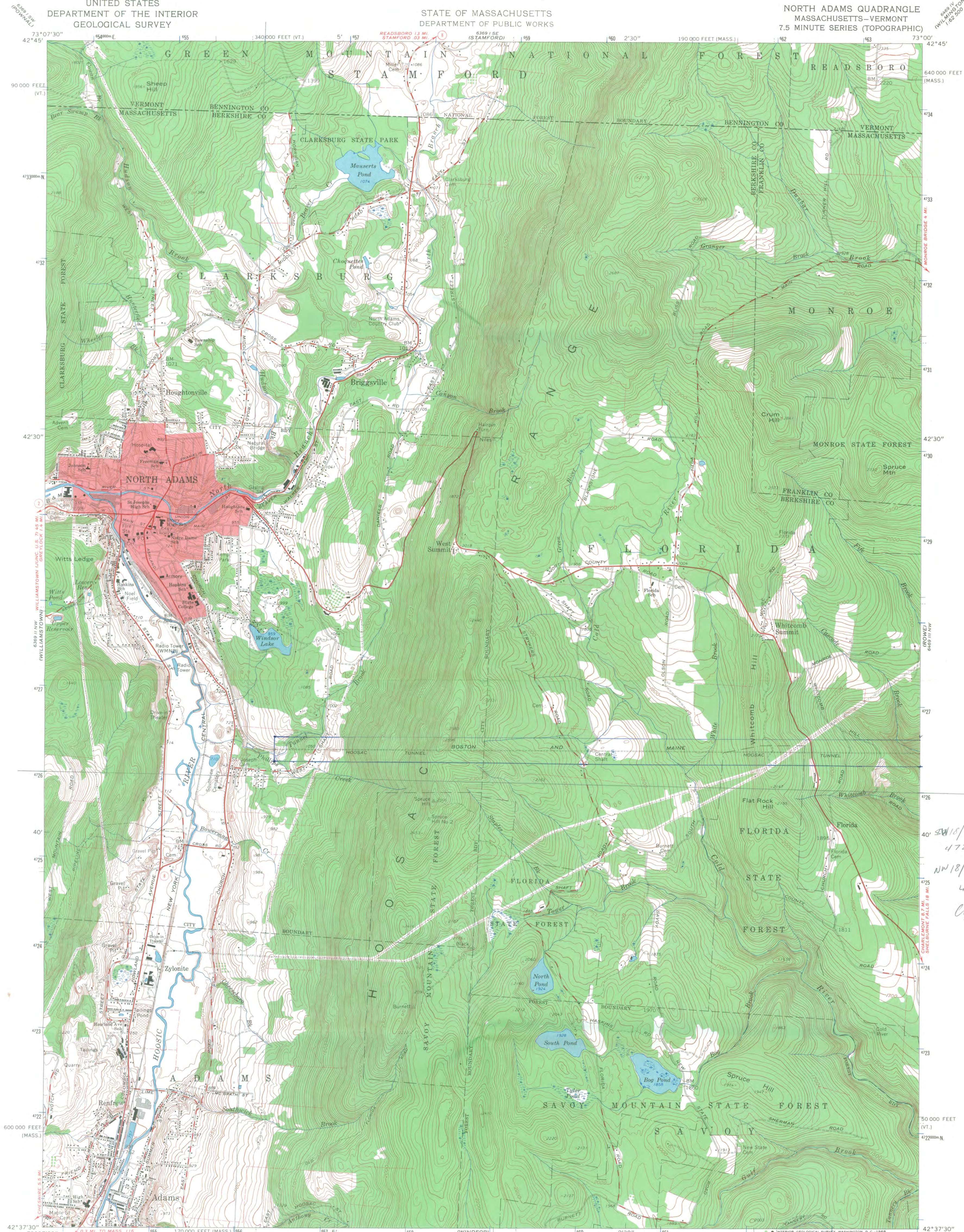
ROWE, MASS.—VT
N4237.5—W7252.5/7.5
1960
AMS 6469 III NW—SERIES V814



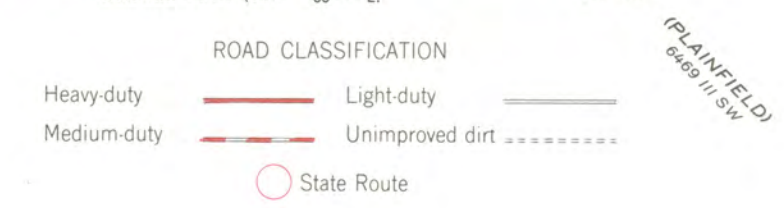
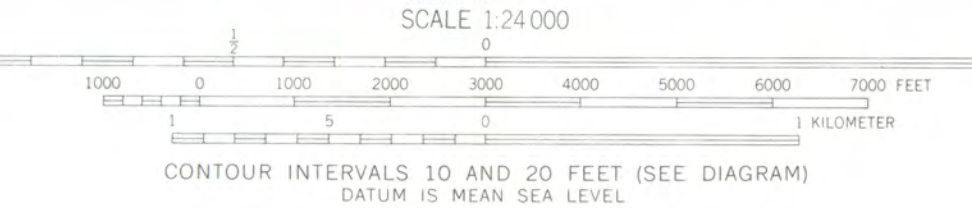
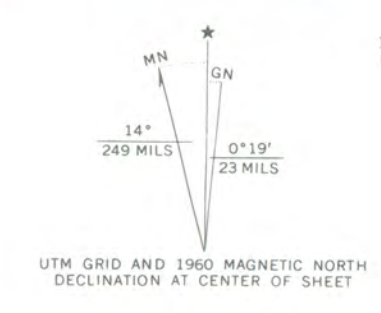
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ROWE, MASS.—VT
N4237.5—W7252.5/7.5
1960
AMS 6469 III NW—SERIES V814



Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Topography from aerial photographs by photogrammetric methods
and by planetable surveys 1944. Aerial photographs taken 1942
Revised 1960
Polyconic projection, 1927 North American datum
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Red tint indicates area in which only landmark buildings are shown



NORTH ADAMS, MASS.-VT.
N4237.5-W7300/7.5

1960
AMS 6369 II NE-SERIES V714

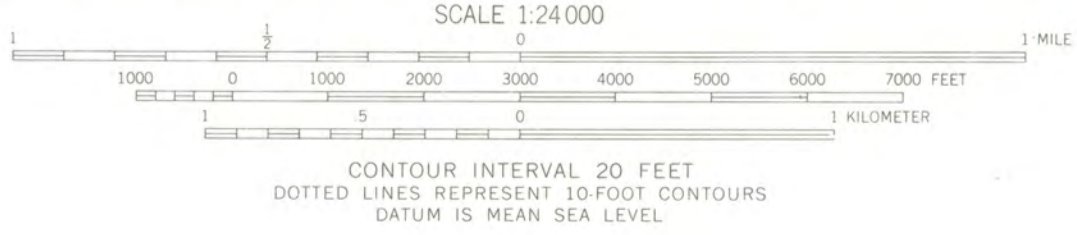
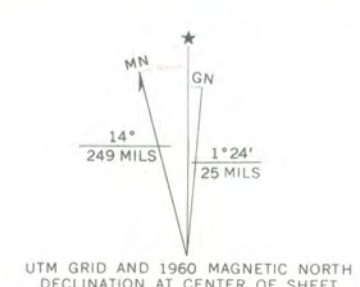
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

SW 18/656 320
4725 180
NW 18/656 320
4725 470
61



NE18/044030
4726 630
SE18/044030
4726 340
C3

Mapped, edited, and published by the Geological Survey
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FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROWE, MASS.-VT.
N4237.5-W7252.5/7.5
1960
AMS 6469 III NW-SERIES V814

ENTRIES IN THE NATIONAL REGISTER

STATE MASSACHUSETTS

Date Entered NOV 2 1973

<u>Name</u>	<u>Location</u>
Hoosac Tunnel	Florida and North Adams Berkshire County

Also Notified

Hon. Edward M. Kennedy
Hon. Edward W. Brooke
Hon. Silvio O. Conte
Director, Northeast Region

PHR MMott 10/31/73

State Historic Preservation Officer
Hon. John F. X. Davoren
Secretary of the Commonwealth
Chairman, Massachusetts Historical
Commission
40 Beacon Street
Boston, Massachusetts 02108