Form No. 10-300 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

DATA SHEET

FOR NPS USE ONLY
RECEIVED DEC 1 6 1975
DATE ENTERED APR 22 1976

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC (also) Enfield Canal

AND/OR COMMON
Windsor Locks Canal

2 LOCATION

STREET & NUMBER
along Conn. River from Windsor Locks N to Thompsonville
__NOT FOR PUBLICATION

CITY, TOWN
Windsor Locks/ ~~Suffield~~ and more.
X VICINITY OF

CONGRESSIONAL DISTRICT
6th - Toby Moffett

STATE	CODE	COUNTY	CODE
Connecticut	09	Hartford	003

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	__PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	X YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Windsor Locks Canal Company
Subsidiary, Connecticut Light and Power Company

STREET & NUMBER
107 Selden Street

CITY, TOWN
Berlin __ VICINITY OF

STATE
CT

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Windsor Town Clerk

STREET & NUMBER
Windsor Town Hall

CITY, TOWN
Windsor

STATE
CT

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
Connecticut Statewide Inventory of Historic Resources

DATE
1975 __FEDERAL X STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
Connecticut Historical Commission

CITY, TOWN
Hartford

STATE
CT

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
X EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Designed to circumvent the Enfield Falls, the most serious obstacle to navigation in the Connecticut River, the Enfield Canal is 5.5 miles long and runs generally parallel to the western bank of the river in the towns of Suffield and Windsor Locks, Connecticut. For most of its length the canal is 80 feet wide and 4.5 feet deep, although it narrows as it passes through the industrialized area of Windsor Locks. Today, the canal is maintained at 37' 2" above the level of the river at Hartford; the levels at the northern (upriver) and southern ends are 40' 0" and 7' 0". These values may be slightly different from the historical levels, since the dam across the river at the head of the canal was originally only a wing from the west bank. In 1849 a wall was built out from the east bank and in 1881 the two sections were joined, raising the height of the river. The water supply is regulated through several sluice gates at the northern end which admit water from the river; excess water can be drained at several points along the canal. Besides the lock at the northern entrance which compensates for the difference between the levels of the canal and the river (28"), there are three locks at the southern entrance, 18' wide and 90' long, having a lift of 10' each.

An engineering feature of note is the aquaduct which carries the canal across Stony Brook. Four piers and the abutments carry five spans a total length of 104 feet. The trough is 102' wide and consists of a series of large timbers parallel to the direction of the canal and lined with two layers of tongue-and-grooved planks set at right angles. The sides slope inward at an angle of 45 degrees. The piers and abutments of the aquaduct, as well as the locks and the sluice gate, are constructed of irregularly sized native sandstone. The entire canal has sides of similar stone set in water cement. Other features of the canal are the towpath on the eastern bank, preserved for almost its entire length as a bicycle trail, and a two story frame shed, probably of nineteenth-century construction, near the locks at the southern end.

The canal was constructed from June 1827 to November 1829 under the supervision of Canvass White, engineer for the Connecticut River Company. This company, and the associated Connecticut River Banking Company, was principally a group of Hartford merchants eagar to improve upriver navigation and their trade with the agricultural areas of Massachusetts, Vermont and New Hampshire. The plans of New Haven businessmen to build the Farmington Canal through to Northhampton, Massachusetts, thus diverting the river trade, provided added impetus to the building of the canal. For 15 years the canal operated profitably, until the railroads became the dominant form of tranportation. The canal was also used for power by the mills at Windsor Locks, since at that point it provided about a 30 foot head. Today it is used by pleasure boats and as a source of processing water by industry.

Because of its masonry sides, the Enfield Canal could accomodate both the traditional flatboats, of about 18 ton capacity and towed by teams of horses, and the new steamboats. The latter were quite small, an early one being 75 feet long, with a 14¼ foot beam and drawing only 22" when empty. In 1842 a noted

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED DEC 1 6 1975
DATE ENTERED APR 22 1976

Because the property has not been traded since the canal was built, the land records of Windsor and Suffield constitute the only legal description.

Suffield Town Clerk
Town Hall
Mountain Road
Suffield, CT

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED DEC 16 1975
DATE ENTERED APR 22 1976

The canal is also listed, somewhat misleadingly, as "Enfield Locks, Enfield, CT" in:

Historic American Engineering Record
New England: An Inventory of Historic Engineering and Industrial Sites

Federal 1974
Library of Congress
Washington DC

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED DEC 18 1975
DATE ENTERED APR 22 1976

English visitor found quarters cramped on these steamboats: "I am afraid to tell how many feet short this vessel was, or how many feet narrow: to apply the words length and width to such measurements would be a contradiction in terms."[1] Passage time was typically 1 - 1¼ hours, including locks.

Alterations to the canal have in no way compromised the historical integrity of the structure. Modernization has chiefly been confined to repointing masonry, a little concrete reinforcement, and supplementing timbers, such as those bearing the sluice gate racks, with steel members. Although some of the locks have steel gates, others still are of heavy timbers and planks. The most serious intrusion is the use of steel and concrete counterweights on the locks. Considerable mechanical feel is provided even in the case of modern apparatus, however, since valves, gates and footbridges are operated by hand winches and levers. The setting of the canal has changed little, if one may judge from old views. For most of its length the canal is bordered by woods and fields on one side, and the towpath on the other, while in Windsor Locks it runs past the manufacturing structures of Windsor Locks, recalling its importance in the location of industry.

---

[1] Charles Dickens, American Notes (2nd ed., 2 vols., London: Chapman and Hall, 1842), I, 173.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION	
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE	
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE	
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	X SOCIAL/HUMANITARIAN	
__1700-1799	__ART	X ENGINEERING	__MUSIC	__THEATER	
X 1800-1899	X COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION	
__1900-	__COMMUNICATIONS	X INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)	
		__INVENTION			

SPECIFIC DATES 1829 - opened BUILDER/ARCHITECT Canvass White, engineer

STATEMENT OF SIGNIFICANCE

The age of canals was represented in Connecticut by only two undertakings. While less ambitious than its rival, the Farmington Canal, the Enfield Canal was ultimately the more successful, partly because it was completed first, and partly because its proponents showed greater foresight in linking the project to industrial and technological developments. Both the canal and its towpath are fully accessible to the public, and because it is still in use, it is an artifact whose historical significance can be appreciated at first hand. As Connecticut's only extant canal, this property symbolizes the many social changes which occurred in the 1820's: the beginnings of the transportation revolution, commercial and industrial growth, technological innovation, and ethnic diversity.

The Connecticut River in the 1820's was a major transportation facility for central New England. Merchants in Hartford and other riverports did a substantial business exchanging dry goods and manufactures for agricultural and extractive products, such as tobacco and timber. The river also served industries in the Connecticut Valley, such as Hazardville's powder works, whose products were shipped downriver on barges. Navigation of the Connecticut was not easy, and prior to 1820 numerous improvements, including dredging and short canals, were made. The most significant obstacle remained, however. The falls or rapids near Enfield, Connecticut, dropped a total of 30 feet, and could be overcome by barges only with the greatest difficulty. The Enfield Canal eliminated this impediment, and was thus the key link in providing transportation and commercial growth for the Connecticut Valley.

Canals are such massive undertakings that all are significant in the history of engineering, yet the Enfield Canal is important because it was designed specifically for steam navigation. Soon after its incorporation in 1824, the Connecticut River Company began sponsoring competitions for the design of steam-powered riverboats, and in 1826, the feasability of steam navigation was dramatized by the voyage upriver of the Barnet, a small sternwheeler. At the same time, plans for the canal called for stone sides which could resist the turbulence of the self-propelled boats. The Hartford merchants regarded steam navigation as the wave of the future (having first studied and then dismissed England's railroads), and their prescience was rewarded: the Enfield Canal carried a heavy traffic of steam and conventional vessels for fifteen years, whereas its Farmington rival, even without steamboats, was plagued by collapsing banks.

The chief engineer for the Enfield Canal was Canvass White, "the genius of the Erie engineers." [1] White not only had the practical apprenticeship of the

9 MAJOR BIBLIOGRAPHICAL REFERENCES

"A Brief History of the Windsor Locks Canal and the Connecticut River," typescript, Windsor Locks Town Engineer, 1963.

Drago, Harry S. Canal Days in America. New York: Clarkson N. Potter, Inc., 1972.

Erving, Henry W. The Connecticut River Banking Company. Hartford: The Connecticut River Banking Company, 1925.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY c. 55

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	18	698,680	4651,090
B	18	696,980 (950)	46 43 4204,0
C	18	695,910	~~4642040~~
D	18	698,080	4651,220

VERBAL BOUNDARY DESCRIPTION 4643-020

The property includes the canal and its banks, the associated rights of way, and related facilities: the sluice gates, aqueduct and service buildings.

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

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Bruce Clouette, Consultant

ORGANIZATION — DATE

Connecticut Historical Commission — July 3, 1975

STREET & NUMBER — TELEPHONE

59 S. Prospect St. — (203) 566-3005

CITY OR TOWN — STATE

Hartford — Connecticut

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE X LOCAL ___

As the designated State Historic Preservation 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.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE John W. Shumway

TITLE STATE HISTORIC PRESERVATION OFFICER DATE 12/12/75

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Acting DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION DATE 4/22/76

ATTEST: KEEPER OF THE NATIONAL REGISTER DATE 4.21.76

GPO 888-445

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED DEC 16 1975
DATE ENTERED APR 22 1976

Enfield Canal

Erie project, but also had a more theoretical background, having studied canal construction in England in 1818. White was the principal exponent of using stone rather than wooden locks and building with hydraulic cement. Although his ideas were not fully accepted in the building of the Erie canal, the proponents of the Enfield canal turned his methods to advantage, not only for the locks, but for the entire length of the canal.

The industrial possibilities of the canal were not overlooked. As early as 1825 the Connecticut River Company appointed a committee to consider the manufacturing potential of the canal. In the years following its completion in 1829 numerous mills were established to whom the company rented land and water. Even as river transportation was declining, the growth and diversification of Windsor Locks' industry accelerated. It is significant that this function was among the original purposes of the project.

On a local level, the impact of the canal was decisive in creating the town of Windsor Locks. The locks afforded boatmen, passengers, log drivers and others a brief chance to debark. A substantial basis for growth was created by the manufacturies which located near the canal for its water power, and in 1854 the town was formally set off from Windsor.

No discussion of a canal's significance can ignore the social reality of digging such an excavation entirely by hand. The work was done using only pick and shovel, and the earth was carried off with wheelbarrows. A crew of 400 laborers, mostly Irish-born, were recruited for the effort, and this marked the beginning of a substantial ethnic presence in Connecticut.[2] The Enfield canal is a forceful reminder that the transportation revolution in America depended, not only on shrewd Yankee entrepeneurs, but on poorly paid immigrant laborers as well.

---

[1] Harry S. Drago, Canal Days in America (New York: Clarkson N. Potter, 1972), 174.

[2] Carroll J. Noonan, Nativism in Connecticut, 1829-1860 Washington: Catholic University Press, 1938), 83.

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED DEC 16 1975
DATE ENTERED APR 22 1976

CONTINUATION SHEET	ITEM NUMBER	PAGE
Enfield Canal	9	one

Harte, Charles. "Connecticut's Canals," Annual Report, Connecticut Society of Civil Engineers, LIV (1938), 118-179.