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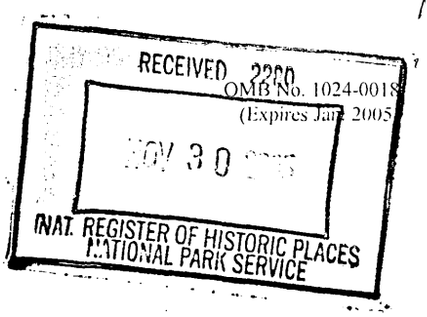
NPS Form 10-900
(Rev. Aug. 2002)



OMB No. 1024-0018
(Expires Jan. 2005)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name: Spaulding Bridge

other names/site number: Bridge No. 12

2. Location

street & number: Mill Street (Town Highway 4) not for publication N/A

city or town: Cavendish vicinity: N/A

state: Vermont code: VT county: Windsor code: 027 zip code: 05412

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this X nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ____ nationally X statewide X locally. (See continuation sheet for additional comments.)

Suzanne C. Jamele, National Register Specialist 11-29-05
Signature of certifying official Date

Vermont State Historic Preservation Office
State or Federal Agency or Tribal government

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of commenting official or other official and title Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

	Signature of the Keeper	Date of Action
✓ entered in the National Register		
___ See continuation sheet.		
___ determined eligible for the National Register	Edson H. Beall	1.11.06
___ See continuation sheet.		
___ determined not eligible for the National Register		
___ removed from the National Register		
___ other (explain): ___		

5. Classification

Ownership of Property: (Check as many boxes as apply)

- ___ private
- _x_ public-local
- ___ public-state
- ___ public-Federal

Category of Property: (Check only one box)

- ___ building(s)
- ___ district
- ___ site(s)
- _x_ structure(s)
- ___ object(s)

Number of Resources Within Property:

	Contributing	Noncontributing
buildings:	___	___
districts:	___	___
sites:	___	___
structures:	1	___
objects:	___	___
total:	1	___

Number of Contributing Resources Previously Listed in the National Register: 0

Name of Related Multiple Property Listing: Metal Truss, Masonry, and Concrete Bridges in Vermont
(Enter "N/A" if property is not part of a multiple property listing.)

6. Function or Use

Historic Functions: (Enter categories and subcategories from instructions)

Category:	Subcategory:
Transportation	Road Related

Current Functions: (Enter categories and subcategories from instructions)

Category:	Subcategory:
Transportation	Road Related

7. Description

Architectural Classification: (Enter categories from instructions)

other: Parker pony truss

Materials: (Enter categories from instructions)

foundation: stone abutments
roof:
walls:
other: structural steel

Narrative Description: (Describe the historic and current condition of the property on one or more continuation sheets.)
See continuation sheet.

8. Statement of Significance

Applicable National Register Criteria:
(Mark "X" in one or more boxes for the criteria qualifying the property for National Register listing)

x A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
_____ B. Property is associated with the lives of persons significant in our past.
x C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
_____ D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations:
(Mark "X" in all the boxes that apply.)

_____ A. Owned by a religious institution or used for religious purposes.
_____ B. Removed from its original location.
_____ C. A birthplace or a grave.
_____ D. A cemetery.
_____ E. A reconstructed building, object, or structure.
_____ F. A commemorative property.
_____ G. Less than 50 years of age or achieved significance with the past 50 years.

Areas of Significance: (Enter categories from instructions)	**Period of Significance:**
Transportation	1905-1955
Engineering	

Significant Person: (Complete if Criterion B is marked above)	**Significant Dates:**
N/A	1905

Cultural Affiliation:
N/A

Architect / Builder:
Norton, Henry (contractor)

Narrative Statement of Significance:
(Explain the significance of the property on one or more continuation sheets.) See continuation sheet.

9. Major Bibliographical References

Bibliography:
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.) See continuation sheet.

Previous Documentation on File (NPS):
_____ Preliminary determination of individual listing (36 CFR 67) has been requested.
_____ Previously listed in the National Register.
_____ Previously determined eligible for the National Register.
_____ Designated a National Historic Landmark.
_____ Recorded by Historic American Buildings Survey No. _____
_____ Recorded by Historic American Engineering Record No. _____

Primary Location of Additional Data:
__x__ State Historic Preservation Office.
__x__ Other state agency: Vermont Agency of Transportation
_____ Federal agency.
__x__ Local government.
_____ University.
_____ Other. Name of repository: _____

10. Geographical Data

Acreage of Property: Less than one

UTM References (Place additional UTM references on a continuation sheet). ____ See continuation sheet

	Zone	Easting	Northing		Zone	Easting	Northing
1.	18	693711	4805850	2.	____	_____	_____
3.	____	_____	_____	4.	____	_____	_____

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.) See continuation sheet.

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.) See continuation sheet

11. Form Prepared By

Name / Title: William J. Thrane, Intern, and Robert McCullough, Vermont Historic Bridge Program

Organization: Vermont Agency of Transportation Date: August, 2000; revised September, 2004

Street & Number: National Life Building, Drawer 33 Telephone: 802-828-3615

City or Town: Montpelier State: VT Zip Code: 05633-5001

12. Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps
A USGS map (7.5 or 15 minute series) indicating the property's location.
A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs
Representative black and white photographs of the property.

Additional Items (Check with the SHPO or FPO for any additional items)

13. Property Owner

(Complete this item at the request of the SHPO or FPO.)

Name / Title: Town of Cavendish

Organization: _____ Date: _____

Street & Number: P.O. Box 126 Telephone: 802-226-7292

City or Town: Cavendish State: VT Zip Code: _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.). A federal agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to Keeper, National Register of Historic Places, 1849 "C" Street NW, Washington, DC 20240.

Narrative Description

The Spaulding Bridge in Cavendish is a single span, pin connected, Parker pony truss that carries Town Highway 4 (Mill Street) across the Black River. The structure spans 98 feet, 6 inches (center to center of the bearings) with six panels, and the bridge width is 16 feet 4 inches (center to center of trusses). Contractor Henry L. Norton built the structure in 1905. The bridge remains in highway use, its originally intended purpose, and the structure retains substantial integrity in terms of location, design, setting, materials, workmanship, feeling and association.

Pin connections join verticals and diagonals to top and bottom chords at each panel juncture, but the remaining structural components are assembled with rivets. The top chords are formed by channels, a top cover plate, and bottom batten plates. The bottom chords are double eye-bar chains, and diagonals are single eye-bars. Verticals are assembled from four angle bars with lattice bars connecting pairs of the back-to-back angles.

Floor beams are I-beams assembled from back-to-back angles at the flanges and a steel plate web. Large connecting webs of steel plate are attached to the ends of each floor beam and join verticals to those floor beams. In its original form, the bridge probably employed seven stringers per panel, and diagonal bracing rods crossed beneath these stringers, connecting floor beams at panel junctures. In 1974, those stringers were replaced by 24 foot rolled-beam stringers, and most of the diagonal rods were removed. The deck, also added in 1974, consisted of 2 x 6 inch laminated planks set transversely. A bituminous surface was added some time after that date.

A sidewalk, 4 feet, 11 inches in width, extends along the westerly side of the bridge, supported by outrigger extensions of the floor beams. These extensions are tapered and are assembled with paired angles and lattice webs. Sidewalk stringers were replaced in 1955. Single angle bars connected to these outriggers extend beyond the sidewalk to support lateral braces for the sidewalk railing. Similar lateral braces support the railing on the bridge's easterly elevation.

The dry-laid, stone block abutments are capped with concrete, added initially in 1955 and replaced in 1974 to accommodate an increase in grade of 7 and ¾ inches at that latter date.

A builder's plate was installed on the bridge bearing the date 1905 and identifying Cavendish selectmen William Maloney, D. J. Stimets, and W. M. Richardson. The plate also identifies the builder, Henry L. Norton of Springfield, Massachusetts. A dedication plate establishes that the bridge was erected in memory of Gilbert J. Spaulding and Olive M. Spaulding.

Rehabilitation of the Spaulding Bridge was completed in 2005. Work included replacement of the floor system (to be expected in the normal course of wear), replacement in kind of the bottom chord, and cleaning and painting of both trusses. Existing concrete backwalls and portions of the bridge seats were removed and replaced, and new deck end joints were added. The sidewalk floor system was also replaced, and new railings for both the sidewalk and bridge were installed, replacing the existing (and probably original) lattice railings.

Statement of Significance

The Spaulding Bridge in Cavendish is being nominated pursuant to the existing multiple property submission titled "Metal Truss, Masonry, and Concrete Bridges in Vermont," and under the property type, "metal truss bridges." The crossing was erected in 1905 during an important period of highway and bridge improvements in Vermont beginning in 1892 with the appointment of the Vermont Highway Commission and formation of the Vermont League of Good Roads. The structure is an outstanding example of an ever-smaller category of metal truss bridges purchased and erected by towns before Vermont's legislature authorized state aid for local bridge projects in 1912, and before state engineers began influencing the design of local bridges after federal aid became available in 1916. Within that important category, the Spaulding Bridge is also a rare example of a pin-connected design, and the crossing clearly meets the registration requirements for this property type.

The years between 1892 and 1916 mark a vigorous but transitional period of road and bridge construction in Vermont. Town governments continued to exercise control over the design and cost of highway improvements, often purchasing iron (and later steel) bridges directly from manufacturing firms. Such is the case for the Spaulding Bridge. That practice had begun in Vermont as early as 1860 in isolated locations but did not become commonplace until the mid-1880s. After 1892, increasing emphasis on the improvement of rural roads, spurred by programs such as Rural Free Delivery and, during the first decade of the twentieth century, by the prospects for automobile travel, encouraged communities to devote greater attention to methods of road construction and to bridge design. Professional engineers assisted towns in this process and were represented by the Vermont Society of Engineers, which organized in 1912. Yet more traditional methods of bridge construction also persisted, and timber bridges continued to be built during this period as well.

By 1900, the multitude of designs for metal truss bridges had synthesized into two principal types, Warren and Pratt trusses. The Spaulding Bridge represents a variant of the Pratt design, distinguished by its polygonal upper chords. This design proved desirable because, although more cumbersome to fabricate, it added depth to the truss at mid span where stresses are greatest. Such polygonal chords were economical for pony trusses when bridges were heavily loaded or when moderate increases in span length were required.

The pin-connections also distinguish the structure as a holdover from earlier periods of truss design before field-riveting had become prevalent. Pin-connections offered a simple method of assembly but provided no technological advantages. Fewer than six examples of pin-connected bridges remain standing in Vermont. In addition, the bridge's plates, angles, and webs are comparatively light when measured against steel bridges erected during the 1920s, and the resulting overall appearance of the structure also places it in this transitional period.

The Spaulding Bridge is named for Gilbert and Olive Spaulding, who lived on a farm in Proctorsville, one of several villages in Cavendish. Gilbert died in 1897 and his wife later bequeathed their farm to long-time friend Allen Fletcher, who became governor of Vermont. Fletcher donated money to the town to construct a bridge and requested that the crossing be named for his friends. When erected in 1905, the

Statement of Significance (continued)

crossing replaced a covered bridge on Depot Street, which connected the village center to the community's railroad station. The town hired Henry L. Norton, a resident of Springfield, Massachusetts, to build the structure, and contractors F. A. Demond & Son probably painted the bridge the following year.

Norton learned the bridge manufacturing trade during the 1890s while employed by the R.H. Hawkins Iron Works. That company also owned Vermont's only bridge fabrication business, the Vermont Construction Company, which Hawkins formed in 1886 in St. Albans. By the early 1900s, Norton had joined with Harry Collins to form a competing firm in Springfield, the Norton and Collins Company, but their firm proved to be short-lived. Norton continued the business long enough to erect at least one bridge in Vermont, that in Cavendish, but then established a bronze foundry. Collins subsequently managed the Springfield sales office of Berlin Construction Company, successor to the Berlin Iron Bridge Company of Berlin, Connecticut.

Section 9: Major Bibliographic References

Bibliography.

"Proposed Repairs to Depot Bridge, Town of Cavendish," Project S.A. 10-1955, files of the Vermont Agency of Transportation, Project Development Division.

"Proposed Repairs to Depot Bridge, Town of Cavendish," Project T.H. 2501 (July, 1974), files of the Vermont Agency of Transportation, Project Development Division.

Town of Cavendish, Annual Report (1907): 7.

"Town of Cavendish, Bridge No. 12. Truss Rehabilitation Key and Details," (January, 2004), files of the Vermont Agency of Transportation, Project Development Division.

Welch, Linda Margaret Farr, Families of Cavendish: The Early Settlers of the Black River Valley in Windsor County, Vermont. A Social and Genealogical History, Vol. 2 (Cavendish, Vermont: Cavendish Historical Society, 1995), 363, 376.

Section 10: Geographical Data

Verbal Boundary Description.

The boundary of the property is the bridge and its abutments. The bridge carries Town Highway 4 (Mill Street) across the Black River in Cavendish.

Boundary Justification.

The boundary includes all the land historically associated with the bridge.

Section 12: Photograph Labels

The following information is the same for all photographs

Name of Property:	Spaulding Bridge
Location:	Cavendish, Windsor County, Vermont
Credit:	Robert McCullough
Date:	July, 2005
Negatives:	Filed at the Vermont Division for Historic Preservation

Photograph No. 1: View from Mill Street looking northerly