



**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: Bridge No. 27

other names/site number: Lover's Lane Bridge

2. Location

street & number: Town Highway 61 (Lover's Lane) not for publication N/A

city or town: Berlin vicinity: N/A

state: Vermont code: VT county: Washington code: 023 zip code: 05602

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this 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 meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally statewide locally. (See continuation sheet for additional comments.)

Suzanne C. Jamieson, 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: <input type="checkbox"/> entered in the National Register ___ See continuation sheet. <input type="checkbox"/> determined eligible for the National Register ___ See continuation sheet. <input type="checkbox"/> determined not eligible for the National Register <input type="checkbox"/> removed from the National Register <input type="checkbox"/> other (explain): _____	Signature of the Keeper _____ _____ _____ _____	Date of Action _____ _____ _____ _____
---	--	---

5. Classification

Ownership of Property: (Check as many boxes as apply) <input type="checkbox"/> private <input checked="" type="checkbox"/> public-local <input type="checkbox"/> public-state <input type="checkbox"/> public-Federal	Number of Resources Within Property: <table border="0" style="margin-left: 20px;"> <tr> <td></td> <td style="text-align: center;"><u>Contributing</u></td> <td style="text-align: center;"><u>Noncontributing</u></td> </tr> <tr> <td>buildings:</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>districts:</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>sites:</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>structures:</td> <td style="text-align: center;"><u> 1 </u></td> <td style="text-align: center;">_____</td> </tr> <tr> <td>objects:</td> <td style="text-align: center;">_____</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>total:</td> <td style="text-align: center;"><u> 1 </u></td> <td style="text-align: center;"><u> 0 </u></td> </tr> </table>		<u>Contributing</u>	<u>Noncontributing</u>	buildings:	_____	_____	districts:	_____	_____	sites:	_____	_____	structures:	<u> 1 </u>	_____	objects:	_____	_____	total:	<u> 1 </u>	<u> 0 </u>
	<u>Contributing</u>	<u>Noncontributing</u>																				
buildings:	_____	_____																				
districts:	_____	_____																				
sites:	_____	_____																				
structures:	<u> 1 </u>	_____																				
objects:	_____	_____																				
total:	<u> 1 </u>	<u> 0 </u>																				
Category of Property: (Check only one box) <input type="checkbox"/> building(s) <input type="checkbox"/> district <input type="checkbox"/> site(s) <input checked="" type="checkbox"/> structure(s) <input type="checkbox"/> object(s)																						

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: _____
<u> Transportation </u>	<u> Road-Related </u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Current Functions: (Enter categories and subcategories from instructions)

Category: _____	Subcategory: _____
<u> Transportation </u>	<u> Road-Related </u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. Description

Architectural Classification: (Enter categories from instructions)

other: Warren pony truss

Materials: (Enter categories from instructions)

foundation: reinforced concrete
roof: _____
walls: _____
other: 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)

- 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.
- 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)

Transportation
Engineering

Period of Significance:

1918-1955

Significant Person: (Complete if Criterion B is marked above)

N/A

Significant Dates:

1918

Cultural Affiliation:

N/A.

Architect / Builder:

unknown

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:

- State Historic Preservation Office.
- Other state agency: Vermont Agency of Transportation
- Federal agency.
- Local government.
- University.
- Other. Name of repository: _____

10. Geographical Data

Acreege 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. <u>18</u>	<u>688552</u>	<u>4895412</u>	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 L. McCullough

Organization: Vermont Agency of Transportation, Historic Bridge Program Date: August, 2000; Revised 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 Berlin

Organization: _____ Date: _____

Street & Number: Rural Route Number 4 Telephone: 802-229-9298

City or Town: Berlin State: VT Zip Code: 05602

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.

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 7 Page 1

Bridge 27
Name of Property
Berlin, Washington County, Vermont
County and State

Narrative Description

Bridge No. 27 is a single span, steel Warren pony truss bridge carrying Town Highway 61 (Lover's Lane) across the Dog River in Berlin. Built in 1918, the structure spans 85 feet (center to center of the bearings) with five panels, for a clear span of 82.5 feet. The bridge width is 17 feet 6 inches (center to center of trusses). Recently rehabilitated, Bridge 27 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.

The truss top chord and inclined end posts are box-shaped sections, made up of paired channel beams with a top flange cover plate. The vertical and diagonal web members consist of rolled sections framed with gusset plates. The bottom chord consists of paired angles with a top cover plate. Fabricators used bolts and rivets to assemble structural components. The floor system uses rolled wide-flange floor beams spaced at approximately 17 feet, supporting a timber laminated deck assembled in panels and covered with a bituminous surface. Guard rails are steel box beams, and abutments and wing-walls are reinforced concrete.

Bridge 27 was rehabilitated in 1995 with only minor modifications and new materials to the trusses, including chord cover plates, splice plates, repair plates, chord connection angles, thread bars, and thread bar anchorages. Rivets at panel junctures were also replaced with bolts. A new floor system was installed to replace the vulnerable original deck system, which had deteriorated beyond the point of repair. Changes included the use of wide-flange floor beams and wide-flange stringers, modifying the original connection design for stringers and floor beams. A new timber laminated deck was also installed and the original railing removed and replaced with steel box beams.

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 8 Page 1

Bridge 27
Name of Property

Berlin, Washington County, Vermont
County and State

Statement of Significance

Bridge 27 in Berlin is being nominated pursuant to the existing multiple property submission titled "Metal Truss, Masonry, and Concrete Bridges in Vermont," under the property type, "metal truss bridges," and the crossing clearly meets the registration requirements for this property type. The bridge was erected c. 1918 during a time of pivotal developments in bridge and highway design in this state made possible by federal funding. The structure is an excellent example of an important, well-tested truss type that remained serviceable among a growing variety of bridge types in common use after World War I. This era is especially notable for the growing influence of professional engineers employed by Vermont's state highway department. In addition, emerging standardized designs prepared in response to increasingly widespread automobile travel represent similarly important developments during this period. Finally, the bridge's moderate width (17 feet six inches) reveals a transitional design employed during the years just prior to the onslaught of automobiles in this state.

In 1916, federal legislation appropriated funding for postal routes charted as part of the country's Rural Free Delivery mail service, and Vermont's lawmakers sanctioned the law a year later. The highway commissioner began hiring a staff of bridge engineers, many of whom were associated with the Vermont Society of Engineers, chartered in 1912 as the state's first organization of professional engineers. Strong ties soon developed between the two bodies, and many of the engineers who served yearly terms as society presidents, among them Herbert M. McIntosh, George A. Reed, Arthur D. Bishop, Alfred J. Runnals, and Hubert E. Sargent, eventually filled important government jobs. By the summer of 1918, the Vermont State Highway Department had attained de facto composition within state government, and although its genesis cannot be determined with precision, the Vermont State Engineering Department probably began to take shape at about this time, as well.

Although by 1917, professional consulting engineers had already begun to influence the design of local, town-owned bridges, a steady quota of plans prepared for bridges built in Vermont after that date can be credited to the newly-hired government engineers, including Reed and McIntosh. Designs for a variety of bridge types were developed, among them reinforced concrete arches, slabs, and T-beams. In fact, these T-beam bridges became a dominant type for roughly two decades after 1917, and efforts to develop standardized designs also began after 1917 in Vermont.

Yet despite a growing preference for reinforced concrete among these government bridge engineers, steel truss bridges continued to be used as part of a comprehensive strategy for bridge construction aimed at addressing a variety of factors such as cost and availability of materials, span length, structural capacity, and concern about hydraulics. The Dog River crossing on Town Highway 61, 85 feet, made it too long for reinforced concrete T-beam design without intermediate support, and the utility of this strategy thus becomes evident. Although Bridge 27, a Warren truss, represents a type that had become common by 1900, its continued use two decades later illustrates the versatility of the design. Equally important, bridges of all types from this era have endured more than eight decades of use and are rapidly dwindling

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 8 Page 2
Sections 9 & 10

Bridge 27
Name of Property
Berlin, Washington County, Vermont
County and State

in number. Thus, despite its common heritage, Bridge 27 represents a bridge type that has become increasingly scarce.

Town Highway 61, locally known as Lover's Lane, is a short, quarter-mile section of unpaved road that connects Town Highway 53 with Vermont Route 12 in southern Berlin, roughly equidistant between the village of West Berlin to the north and the village of Northfield Falls to south. Town Highway 53 and Route 12 run roughly parallel on a north-south course, connecting both villages, and Lover's Lane provides a convenient passage or shortcut between the two roads. The site is very rural with few landmarks in the vicinity, although the original lines of the Vermont Central Railroad are immediately adjacent to Route 12, within view of Bridge 27. Not surprisingly, local records of previous bridges at this site are scarce, but a crossing at this location does appear on the 1869 Beer's Atlas of Washington County, and the bridge was likely a small timber framed structure. Records regarding construction of Bridge 27 are similarly scant, but biennial reports by the Vermont State Highway Commissioner for 1917-1918 and 1919-1920 show that bridges were constructed in Berlin during those years, and Bridge 27 was likely one of them.

The rehabilitation of Bridge 27 in 1995 is also noteworthy and has served as a model for other projects developed under the auspices of the Vermont Historic Bridge Program. After the deck system had been removed, the trusses were hoisted from the abutment walls with a specially designed sling that distributed stresses throughout the trusses. Contractors then transported the trusses by truck to a nearby gravel pit where the work took place, a more efficient and less costly method for containing lead paint and undertaking repairs. The trusses were then returned to the site and placed on new concrete abutments with new bearings and bearing pads. Reassembly of the new deck system followed.

Section 9: Major Bibliographic References

Bibliography.

"Rehabilitation of the Lover's Lane Bridge, Route: TH 61, Bridge No. 27," Project TH3-9266, prepared by DuBois and King for the Vermont Agency of Transportation, 1995.
Vermont State Highway Commission, Biennial Reports (1917-1918), and (1919-1920), 36-37.

Section 10: Geographical Data

Verbal Boundary Description.

The boundary of the property is the bridge and its abutments. The bridge carries Town Highway 61 (Lovers Lane) across the Dog River in Berlin.

Boundary Justification.

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

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 12 Page 1

Bridge 27
Name of Property
Berlin, Washington County, Vermont
County and State

Section 12: Photograph Labels

The following information is the same for all photographs:

Name of Property: Bridge No. 27
Location: Berlin, Washington County, Vermont
Credit: Robert McCullough
Date: July, 2005
Negatives: Filed at the Vermont Division for Historic Preservation

Photograph No. 1: View from Lover's Lane looking northeasterly

Photograph No. 2: View from the river bed of Dog River looking northwesterly