NPS Form 10-900
(Oct. 1990)

OMB No. 1024-0018

239

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 an 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 (Form 10-900-a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

Historic name: Fairview Lift Bridge

Other names/site number: Great Northern Railway Bridge 3.2; 32MZ820

2. Location

Street & number: abandoned railroad, south of ND highway 200 ☐ not for publication

City or town: Cartwright ☒ vicinity

State: North Dakota Code: ND County: McKenzie Code: 053 Zip code: 58838

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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 ____ locally. (____ See continuation sheet for additional comments.)

James E. Sperry 2/5/97
Signature and title of certifying official James E. Sperry Date
State Historic Preservation Officer (North Dakota)

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

Signature of the Keeper Date of Action

4. National Park Service Certification

I hereby certify that the property is:

Signature of the Keeper Date of Action

Edson H. Beall 3/14/97

- ✓ entered in the National Register
  - ____ See continuation sheet.
- ____ determined eligible for the National Register
  - ____ See continuation sheet.
- ____ determined not eligible for the National Register.
- ____ removed from the National Register.
- ____ other, (explain:) _____

Fairview Lift Bridge
Name of Property

McKenzie, North Dakota
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- [xx] private
- [ ] public - local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only one box)

- [ ] building(s)
- [ ] district
- [ ] site
- [xx] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		objects
1		Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

Historic Roadway Bridges of N.D.

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION: Rail-related
TRANSPORTATION: Road-related

Current Functions
(Enter categories from instructions.)

VACANT/NOT IN USE

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: railroad lift bridge

Materials
(Enter categories from instructions.)

foundation steel
walls
roof
other steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Fairview Lift Bridge
Name of Property

McKenzie, North Dakota
County and State

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.)

- [xx] **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.
- [xx] **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.)

Property is:

- [ ] **A** owned by a religious institution or used for religious purposes.
- [ ] **B** removed from its original location.
- [ ] **C** a birthplace or 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 within the past 50 years.

Areas of Significance
(Enter categories from instructions)

TRANSPORTATION
ENGINEERING

Period of Significance

1912-1946

Significant Dates

1913

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Builder: Gerrick & Gerrick

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

9. Major Bibliographical References

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

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 by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey # _____
- [ ] recorded by Historic American Engineering Record # _____

Primary location of additional data:

- [xx] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Name of repository: _____

Fairview Lift Bridge
Name of Property

McKenzie, North Dakota
County and State

10. Geographical Data

Acreage of Property Approximately six acres.

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

	Zone	Easting	Northing		Zone	Easting	Northing
1	13	572920	5308700	2			
3				4			

☐ See continuation sheet

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

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

11. Form Prepared by

Name/Title: Mark Hufstetler / Historian
Organization: Renewable Technologies, Incorporated Date: December 10, 1996
Street & Number: 511 Metals Bank Building Telephone: (406) 782-0494
City or Town: Butte State: Montana Zip code: 59701

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.)

Property Owner

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

Name: Burlington Northern Santa Fe Railway Company
Street & Number: 3800 Continental Plaza Telephone: (817) 878-3173
City or Town: Fort Worth State: Texas Zip code: 76102

FAIRVIEW LIFT BRIDGE
McKENZIE COUNTY, NORTH DAKOTA

Narrative Description:

The Fairview Lift Bridge is located on the former Fairview (Montana) to Watford City (North Dakota) branch line of the Great Northern Railway. (The Great Northern became part of the Burlington Northern Railroad in 1970; Burlington Northern, in turn, was merged into the Burlington Northern Santa Fe Railway in 1996.) The railroad line was last used in the mid-1980s, and the trackage itself was removed in approximately 1994. The bridge, constructed on an east-west axis, spans the Yellowstone River in northwestern McKenzie County, North Dakota, just east of the Montana state line. Cartwright, North Dakota is approximately two miles east of the bridge, and Fairview, Montana is approximately 3.5 miles west. The Yellowstone River is a major watercourse in the area; here, its channel is at the east edge of a broad and relatively deep valley. The valley floor to the west consists of irrigated farmland, with scattered groups of farmstead buildings. A steep, arid ridge at the bridge's eastern abutment marks the end of the valley; these hills see some grazing use.

There is a small riverfront park just north of the bridge's west approach. North Dakota State Highway 200 parallels the bridge several hundred feet to the north, crossing the river on a deck truss bridge constructed in 1955. (This bridge is in the process of being replaced in 1996.) Approximately 300 feet east of the bridge is the timber-lined Cartwright tunnel, also formerly used by the Great Northern. This is the only completed railroad tunnel in North Dakota.

The bridge itself is a rigid-connected (riveted) Parker through truss, with a steel superstructure. The Parker design, an improved later variant of the ubiquitous Pratt truss, saw significant use during the early twentieth century for long-span, heavy bridge structures. The Parker design is distinguished from the Pratt primarily by the presence of a polygonal upper chord on the Parker; this increased load capacity while providing economy of material. The Fairview bridge contains four Parker spans; three of the spans display a nine-panel design and are 271 feet long, while the fourth (at the west end) has seven panels and is 213 feet long. The bridge also includes a four-span deck girder approach to the west of the trusses, and a short three-span timber trestle approach west of the deck girders. (This timber approach once extended almost a mile farther west, before being replaced by a fill in the 1940s and 1960s.) Overall, the bridge is approximately 1,320 feet long.

One of the four Parker spans (the second span from the east) features a vertical lift mechanism, designed to raise the span to allow river traffic to pass underneath. The lift mechanism has not been used since shortly after the bridge's completion, but much of the lift machinery appears to remain in place. The lift machinery and a wooden control house (no longer extant) were located on the top of the lift span, which is supported by 108-foot-high steel towers at

either end. Machinery includes a kerosene engine, two-inch-thick cables, and concrete counterweights. A steep flight of steel stairs leads from the deck to the site of the control house, and a steel catwalk traverses the top of the lift span. The lift span reportedly weighs 1.14 million pounds.

A gas pipeline (operated by Montana-Dakota Utilities) crosses the Yellowstone River by means of this bridge. The pipeline, which is not original to the structure, is cantilevered slightly outward from the north side of the bridge deck. Steel crossarms which formerly supported railroad telegraph wires are also cantilevered outward from the north side of the bridge.

Design details of the bridge's substructure and superstructure are outlined below:

substructure: concrete abutments; solid concrete piers encased in riveted sheet steel, with concrete caps. Cutwaters on south end of piers.
upper chords: two channel sections with continuous cover plate along upper flanges and lattice bracing along lower flanges
lower chords: two built-up channel girders joined with V-lacing along the upper and lower flanges
major verticals: two channel sections joined with V-lacing along upper and lower flanges
minor verticals: two pairs of riveted back-to-back angles joined with V-lacing along lower flanges
diagonals: two channel sections joined with V-lacing along upper and lower flanges
counters: none
bracing: sway: two pairs of back-to-back angles joined with V-lacing along lower flanges
moveable ends: rollers
floor system: plate girder stringers and floor beams; two heavy, continuous plate girders located below original rail locations
decking: open, with creosoted railroad ties
railing: none

A steel plaque mounted on an end chord of the bridge's west portal displays the following lettering: "AMERICAN BRIDGE / COMPANY / OF NEW YORK / USA 1913." A similar plaque was formerly on the east portal, as well.

The bridge retains a very high level of integrity; it remains in its original location, and all major structural components appear to retain their as-built appearance.

The Fairview Lift Bridge is owned by the Burlington Northern Santa Fe Railway, corporate successor to the Great Northern. When in use, it carried the numerical designation Bridge 3.2 (the distance in miles from the beginning of the

branch line in Fairview).

A bridge nearly identical in design and construction to the Fairview Lift Bridge exists several miles away at Snowden, Montana. Both bridges were constructed simultaneously. The Snowden Bridge remains in active use by the Burlington Northern Santa Fe Railway.

FAIRVIEW LIFT BRIDGE
McKENZIE COUNTY, NORTH DAKOTA

Narrative Statement of Significance:

In accordance with the guidelines established in the Multiple Property Documentation form for "Historic Roadway Bridges in North Dakota," the Fairview Lift Bridge is eligible for listing in the National Register of Historic Places with local significance under Criteria "A" and "C." The bridge is significant under Criterion A for its association with the development and expansion of the Great Northern Railway (GN) in North Dakota. The GN played an extremely strong role in the initial settlement of northern North Dakota, and for decades thereafter remained a dominant economic force in the region. This bridge was initially constructed by the GN as part of its ambitious "Montana Eastern Railway" project, a plan to build a second GN transcontinental line through North Dakota. The bridge is the most significant remaining visual reminder of the Montana Eastern project. Despite the ultimate failure of the Montana Eastern, the bridge remained in use for over seventy years of the railroad's Watford City branch, an important transportation route in McKenzie County.

In addition to the bridge's significance as a railway structure, it is significant under Criterion A for its unique role in automobile transportation in the region. Between the time of its construction and 1955, the bridge was also used by motor vehicles, with planking placed between the bridge rails to facilitate automobile travel. This arrangement is not known to have existed elsewhere in North Dakota. It provided an important transportation outlet for the residents of this isolated region.

The bridge is eligible under Criterion C as a well-preserved example of early twentieth-century railroad bridge engineering, and of period moveable bridge design. This is the only vertical lift bridge in North Dakota, and is one of the largest such structures in existence.

Historical information: The frenetic period of railway expansion which characterized North Dakota's transportation history during the late nineteenth century began to abate after 1910, in part because most of the state was by then well-served by rail lines. Many railroads continued, however, to seek out new possible routes and markets, and to make improvements to existing trackage. The GN, the strongest of North Dakota's rail lines, made particular efforts in this regard until the advent of World War I. In addition to constructing a variety of branch lines, the GN improved its main line route and constructed the "New Rockford Cutoff" to shorten its route across North Dakota.

In the early 1910s the GN launched its most ambitious plan in this regard: the construction of an entirely new second main line across North Dakota and Montana. The proposed line, which may have been intended as the railroad's future primary transcontinental route, began in New Rockford, North Dakota, and

headed west to the Missouri River. It then followed the Missouri and Little Missouri Rivers upstream before continuing west to Watford City, North Dakota and Fairview, Montana. The planned line then ran through desolate central Montana and over the Judith Mountain range to connect with existing GN track in Lewistown, Montana. The GN began work on the project by 1912, using a "paper" subsidiary company named Montana Eastern Railway.

Among the most dramatic and expensive components of the Montana Eastern project to be built were two large vertical lift bridges, one at Snowden, Montana and one just across the North Dakota line from Fairview, Montana. The two structures were erected simultaneously. Design work was performed by Worrall & Harrington of Kansas City, Missouri, and the structures were fabricated by the American Bridge Company of Gary, Indiana. Actual erection work on the Fairview Bridge was contracted to the firm of Gerrick & Gerrick of Steele, North Dakota. Work on the Fairview bridge began in early 1913, and the bridge was finished by the middle of the following year. The completed bridge contained more than 4.5 million pounds of steel. The Fairview Bridge was soon open to traffic, on a completed segment of the Montana Eastern between Fairview and Watford City.

Although commercial river traffic on the Yellowstone River had virtually ceased well before the construction of the Fairfield Bridge, the river was still considered a navigable waterway; consequently, federal regulators required the inclusion of a lift span in the structure. Reportedly, the lift span operated only once, as a test, and was never used for commercial river traffic. (Similar circumstances surrounded the lift span on the nearby Snowden Bridge, across the Missouri River.)

Work on the Montana Eastern project continued sporadically until World War I, but when construction halted only the Fairview-Watford City portion of the route had been finished in North Dakota. Additional segments of track existed in Montana, and long stretches of railroad grade in both states were also evident. Construction of the project did not resume after the war; the bridge, designed to serve a major transcontinental route, remained on an isolated, little-used branchline. (At its peak, the line probably saw no more than one passenger and one freight train each way per day.) As automobile and truck traffic increased in the area, the importance of the Watford City branch decreased. Passenger service on the line ended in the late 1950s, and the last freight trains used the line in approximately 1986. The branch was formerly abandoned by the railroad in 1992, and the rails and other structures removed in about 1994. Only the Fairview Bridge and the adjacent tunnel were retained, because of the historic significance of the two structures.

Until 1955, the Fairview Lift Bridge was the only crossing of the Yellowstone River in the area. As automobile traffic increased in the region, a North Dakota highway was constructed to the river in 1926. Because funds were

not available for a highway bridge at the site, the railroad bridge was modified to accommodate both modes of transportation. Planking was added to bridge deck, and automobile access routes were constructed at both ends of the span. A watchman was employed at the bridge to reduce the hazard of a train-automobile collision on the structure. Vehicular access to the bridge was controlled by the GN (which charged a toll) until 1937 when the North Dakota State Highway Department assumed responsibility for the operation. This unusual arrangement continued until an all-highway bridge was finally constructed just north of the lift bridge in 1955. The nearby Snowden Bridge in Montana also saw automobile traffic under a similar arrangement, although the Snowden bridge continued as an automobile route until the mid 1980s.

FAIRVIEW LIFT BRIDGE
McKENZIE COUNTY, NORTH DAKOTA

Bibliography:

Fairview Lift Bridge vertical file, State Historical Society of North Dakota, Bismarck.

Goodman, Lowell R., and Leo M. Reinbold. "Relic of Project Derailed by War: North Dakota's Only Railroad Tunnel." *North Dakota REC/RTC Magazine,* June 1993, pp. 30-36.

Johnson, Lon, et.al. "Historic Bridges in North Dakota." Bismarck: North Dakota Department of Transportation, 1992.

"McKenzie Bridge Thrilled Drivers." *Bismarck Tribune,* February 25, 1978, p. 3.

NDCRS Site Form: SITS # 32MZ820. On file, State Historical Society of NOrth Dakota, Bismarck.

Quivik, Fredric L. *Historic Bridges in Montana.* Washington: National Park Service, Historic American Engineering Record, 1982.

Scofield, Chuck. "North Dakota's Fabled Bridges." *Horizons,* pp. 12-13.

FAIRVIEW LIFT BRIDGE
McKENZIE COUNTY, NORTH DAKOTA

Verbal Boundary Description:

The bridge is located in the Northeast quarter of Section 34 and the Northwest quarter of Section 35, Township 151 North, Range 104 West. The boundary consists of a rectangle, measuring 3,100 feet east-west and 80 feet north-south, and centered on the bridge superstructure.

Boundary Justification:

The boundary is constructed to include the area occupied by the bridge superstructure and substructure, as well as an approximate 25-foot buffer of land immediately surrounding the structure.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number Photographs Page 9

FAIRVIEW LIFT BRIDGE
McKENZIE COUNTY, NORTH DAKOTA

Index to Photographs

Photographer: Mark Hufstetler
Date: April 1996
Location of original negatives: State Historical Society of North Dakota, Bismarck.

Photograph Number	Description	Direction of View
1	north elevation	S
2	north elevation	SSE
3	north elevation	SE
4	north elevation and west portal	SE
5	north elevation and west portal	ESE
6	approach spans, north elevation	SE
7	west portal	E