

AUG 31 1991

INTERAGENCY RESOURCES DIVISION
NATIONAL PARK SERVICE

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

1. Name of Property

historic name Parshallburg Bridge

other names/site number Ditch Road Bridge

2. Location

street & number Ditch Road at the Shiawassee River N/A not for publication

city or town Chesaning Township N/A vicinity

state Michigan code MI county Saginaw code 145 zip code 48616

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.)

Kathryn B. Webster 8-22-94
Signature of certifying official/Title Date
MI SHPO
State of Federal agency and bureau

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

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- 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): _____

Patrick Andrews 10/12/94
Signature of the Keeper Date of Action

Parshallburg Bridge
Name of Property

Saginaw Co., MI
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

Category of Property
(Check only one box)

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

- private
- public-local
- public-State
- public-Federal

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

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
1	0	Total

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

N/A

Number of contributing resources previously listed
in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Current Functions
(Enter categories from instructions)

Transportation/road-related

Vacant/not in use

7. Description

Architectural Classification
(Enter categories from instructions)

Materials
(Enter categories from instructions)

Other: Thacher through truss

foundation Stone
walls N/A
roof N/A
other truss: wrought iron

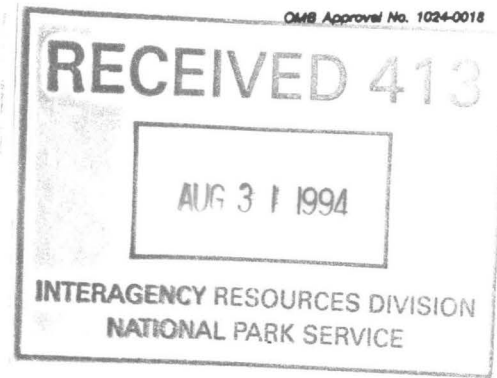
Narrative Description

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

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Description

The Parshallburg or Ditch Road Bridge is a single-span, Thacher metal through truss bridge. Engineers who have evaluated the structure's condition believe the metal is wrought and cast iron because of the structure's relatively good overall condition. The eight-panel structure has a length of 140 feet and an overall deck width of 17.8 feet. The bridge stands on extensive abutments of rubble fieldstone. Now closed to traffic, it carries Ditch Road across the Shiawassee River at the unincorporated hamlet of Parshallburg, three and one-half miles south of Chesaning. Each portal displays a cast-iron plaque containing the legend "WROUGHT IRON BRIDGE CO., BUILDERS, CANTON, OHIO."

The bridge's inclined end chords and upper chords are formed from parallel channels rivetted to cover plates above and to lattice bars beneath. The center pair of inclined struts on each side that form the inverted V forms characteristic of the Thacher truss are constructed in the same fashion. The vertical posts and portal and intermediate struts are constructed of pairs of rivetted angles connected by lattice bars. The center ties and inclined suspenders of the web as well as the lower chords are of eyebars. Tie rods with turnbuckles serve as top lateral bracing. No sway bracing is present. The bridge's present deck is relatively modern, consisting of asphalt pavement over corrugated metal decking. The only railing is a standard modern steel guardrail.

The bridge stands on rubble fieldstone abutments that elevate the truss's underside about ten feet above the Shiawassee River's average surface level. Rubble fieldstone wingwalls extend back from the abutments approximately twenty feet on either side of the river. Metal sheeting now covers some of the lower portion of the south-side wingwall at the bridge's west end to retard scour -- a problem which developed in recent years with the removal of part of the dam directly upstream.

Parshallburg is a former milling center which now contains only a few houses on either side of the north-flowing Shiawassee River. The nineteenth-century grist mill and dam which formed the hamlet's focal point stood a short distance to the south of the bridge. Foundations and the washed-out remnants of the dam are all that remain. The location is a beautiful one, with low, wooded hills flanking the fast-flowing river.

Significance

The Parshallburg or Ditch Road Bridge is the only Thacher truss highway bridge in

Parshallburg Bridge
Name of Property

Saginaw Co., MI
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.)

- 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.)

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)

Engineering

Period of Significance

1889

Significant Dates

N/A

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Wrought Iron Bridge Company

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:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: _____

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Michigan and the older of only two known surviving examples of this truss type in the United States. The bridge is one of only a very small number of surviving examples in Michigan of the work of the Wrought Iron Bridge Company, one of the most important nineteenth-century, Midwestern bridge-fabricating concerns.

In 1855, Israel Parshall (1815-65) dammed the Shiawassee River and built saw- and grist mills at opposite ends of the dam, thereby founding the hamlet of Havana (also spelled Havanna) or Parshallville. By the late 1880s, if not before, the area was also being called by its current name, Parshallburg. A post office existed at Havana from 1860 to 1868, when it was moved to nearby Oakley. The Parshall sawmill shows in the 1877 Beers atlas map of Havanna, but, according to the 1903 Chesaning Illustrated, "it was abandoned and in time the water undermined it and it fell down." The grist mill, labelled Havana Mills in Chesaning Illustrated, was originally a two-story, gable-roof building. Enlarged with a three-story ell after 1903, it remained in operation until "about 1968," according to an article on the mill in the November 3, 1979, Saginaw News. The deteriorating structure was demolished in 1982. The seven- or eight-foot high dam partially collapsed in the 1970s and only remnants now survive.

The first bridge at the present location was probably built soon after Parshall established his mills. The bridge the present structure replaced was probably the second bridge at the site. This second bridge was, according to the August 10, 1889, Chesaning Argus, an "iron bridge put up on piles only a few years ago...." The Argus explained that this bridge had grown dangerous.

The Argus followed progress on the new bridge in its "Local News" column in the late summer and fall of 1889. On August 3, it noted that "Highway commissioner Nason reports the completion of the abutments for the new iron bridge at Havana. It is said to be a fine job." The August 10 Argus reported that the old bridge "has been traded to the Smith Bridge Co. of Toledo, Ohio for a new and larger one to take its place." Despite this news, it is clear that the Smith Bridge Company did not fabricate the new bridge. What happened is not clear. Perhaps Smith Bridge was not able to fulfill the contract for some reason. The new structure was actually fabricated by the Wrought Iron Bridge Company of Canton, Ohio, as plaques above the bridge's portals indicate.

The Argus reported on August 24 that "The plank for the Havana bridge has arrived from Saginaw and is being hauled to the place of use" and on October 12 that "The iron bridge for Parshallburg has arrived and been taken to the site. Work of erecting it will begin

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immediately." No further notes in the Argus were located, but the bridge was likely completed by the end of the year.

The bridge is the only Michigan example and the older of the two known surviving examples in the United States of the Thacher truss type. This type was invented by Edwin Thacher and first described by him in a paper read to the American Society of Civil Engineers in 1883 and published in the society's 1884 Transactions. Thacher (1840-1920) was then chief engineer of the Keystone Bridge Company of Pittsburgh. Bridge-engineering historian Donald C. Jackson in "The Thacher Truss" explains that

In its basic form, the truss combines features of the multiple-intersection Pratt and Warren trusses, and utilizes certain design principles employed in the Bollman and Fink trusses. Thacher referred to it as a "combination of the triangular [Pratt/Warren] and suspension [Bollman/Fink] systems" and indicated that the members were arranged and connected with one another in a manner "free to change figure from the effect of temperature." Thacher believed temperature stresses to be very significant within many truss bridges he had inspected and his truss was designed so that "the inclined suspenders are connected with each other at [the] bottom [of the vertical compression members] but have no fixed connection with the bottom chord." Thacher stated that this insured that there was only one route for the load at any panel point to take to the abutments, eliminating temperature stresses within the truss.

Thacher claimed that his truss design also possessed as advantages over other commonly used forms such as the Pratt and Warren trusses less "distortion or rattling and abrasion of parts" and thus "fewer repairs" and "a longer life," and a greater economy in workmanship and material and thus a lower first cost.

The desire for controlling costs in the competitive bridge-building industry may have been an important factor in the Wrought Iron Bridge Company's adoption of Thacher's truss design for this and several other bridges. Founded in 1871, the Wrought Iron Bridge Company was one of the leading metal-truss bridge-fabricating firms in the late nineteenth century. Charles K. Hyde in Michigan's Highway Bridges: History and Assessment, the final report for a statewide historic highway bridge inventory project carried out in the early 1980s, reported that he had identified fifty examples of this firm's work built in Michigan. The report listed only seven surviving examples. Since the mid-1980s three of these seven have been demolished.

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Wrought Iron Bridge fabricated both of the known surviving examples of the Thacher truss in the United States. The other example is in Colorado. The company's 1885 and c. 1893 promotional booklet together illustrate five iron Thacher truss bridges in Michigan that the firm fabricated, including the Parshallburg Bridge and additional (now demolished) examples at Evart, Osceola County; near Jeddo, St. Clair County; at Wahjamega, near Caro in Tuscola County; and near Cascade, Kent County.

Thacher's accomplishments as a designer of metal truss bridges included the huge six-span camelback truss Walnut Street Bridge in Chattanooga, Tennessee, which, built in 1891, "is the oldest surviving truss bridge of its size in the South originally built as a highway structure...." Thacher was an anomaly among bridge engineers in his day in that his interests and expertise were not confined to a single structural medium as were those of most engineers of the day. In addition to his metal bridge engineering, Thacher also pioneered in the design of bridges of reinforced concrete. His 1897 Melan arch bridge in Topeka, Kansas, is considered by Donald Jackson as "the first major reinforced-concrete bridge in the United States."

Federal critical bridge funds for replacement of the Parshallburg Bridge were awarded to Saginaw County in 1986. Construction of the bridge on a new alignment downstream or north of the historic bridge was proposed. There were no specific plans for the existing bridge. Lack of funds for acquisition of the additional right-of-way needed to accommodate the new alignment resulted in the project being placed on hold for more than five years. Following the closing of the bridge to traffic on October 15, 1992, the project was revived. Reviewing the effect of the federally assisted bridge-replacement project, the Michigan State Historic Preservation Office determined that the project would have an adverse effect on the historic bridge unless the county found some means of providing for the future of the old bridge. The county road commission then sought other parties to assume responsibility for the bridge. In early 1994, the Chesaning Riverfront Improvement Coalition, an organization which included the chamber of commerce and other civic groups whose focus was the Chesaning riverfront, proposed moving the structure several miles to Chesaning, where it would be placed in a park environment. This group planned an application for federal Intermodal Surface Transportation Enhancement Act funds to help pay for this undertaking. As these plans were being developed, a group of Chesaning Township residents was being organized to preserve the bridge in place. The coalition has deferred its plans for moving the bridge pending the outcome of the efforts to preserve the bridge at the Parshallburg location. This nomination is intended to support preservation of the structure -- at its present site or some other appropriate location.

Parshallburg Bridge
Name of Property

Saginaw Co., MI
County and State

10. Geographical Data

Acreage of Property Less than one acre

UTM References

(Place additional UTM references on a continuation sheet.)

1

16	732970	4780580
Zone	Easting	Northing

2

Zone	Easting	Northing

3

Zone	Easting	Northing

4

Zone	Easting	Northing

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 Robert O. Christensen, National Register Coordinator

organization MI SHPO date May, 1994

street & number 717 W. Allegan St. telephone 517/335-2719

city or town Lansing state MI zip code 48917

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 Saginaw County Road Commission

street & number P. O. Box 1867 telephone 517/752-6140

city or town Saginaw state MI zip code 48605-1867

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.*).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including 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 the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127, and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20503.

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Bibliography

Beers, F. W., & Co. Atlas of Saginaw Co., Michigan. NY, 1877.

Chapman, C. C., & Co. History of Saginaw County, Michigan. Chicago, 1881.

Chesaning Argus, Chesaning, MI. Aug. 3, 1889; Aug. 10, 1889; Aug. 24, 1889; Oct. 12, 1889.

Hyde, Charles K. Michigan's Highway Bridges: History and Assessment. Lansing, MI:

Bureau of History, Michigan Department of State, and Michigan Department of Transportation, 1985.

Ische & Ingalls, Publishers, The News. Chesaning Illustrated. Chesaning, MI, 1903.

Jackson, Donald C. Great American Bridges and Dams. Washington, D. C.: The Preservation Press, National Trust for Historic Preservation, 1988.

Jackson, Donald C. "The Thacher Truss." Society for Industrial Archaeology Newsletter (Jan./March, 1979), 9.

McCauley, Alice Niver. "The Founding of Parshallburg, Saginaw County, Michigan." Chesaning, MI, n.d. Copy in Parshallburg Mill working file, MI SHPO, Bureau of Michigan History.

Romig, Walter. Michigan Place Names. Grosse Pointe, MI, 1973.

Thacher, Edwin. "Description of a Combined Triangular and Suspension Bridge Truss, and Comparison of Its Cost with that of the Warren, Pratt, Whipple and Howe Trusses." American Society of Civil Engineers Transactions, XIII (1884), 123-158.

Wrought Iron Bridge Co. Illustrated Pamphlet of Wrought Iron Bridges Built By Wrought Iron Bridge Co., Canton, Ohio. Canton, OH, 1885. Photocopy, collection of R. O. Christensen.

Wrought Iron Bridge Co. Iron and Steel Bridges, Buildings and Roofs, Girders and Turn Tables. Canton, OH, c. 1893. Collection of R. O. Christensen.

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Newspaper articles:

"Historic mill falls to wrecker's ball," Saginaw News, Saginaw, MI, Nov. 3, 1979.

"Historic Parshallburg Mill Nears End." Owosso Argus Press, Owosso, MI, March 12, 1982.

Verbal Boundary Description and Justification

Rectangular area centered on the bridge span's midpoint and with long sides parallel with sides of the truss span -- 200 ft. in length and 40 in width. UTM reference marks the midpoint. This includes the truss structure itself and the stone abutments and wingwalls.

Photos

Photographer: Robert O. Christensen

Date: April, 1994

Negatives: MI SHPO

1. West and south facades
2. West and south facades
3. West and south facades
4. South and east facades
5. South and east facades
6. Looking east

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Parshallburg Bridge

MULTIPLE NAME:

STATE & COUNTY: MICHIGAN, Saginaw

DATE RECEIVED: 8/31/94 DATE OF PENDING LIST: 9/13/94
DATE OF 16TH DAY: 9/29/94 DATE OF 45TH DAY: 10/15/94
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 94001168

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: Y

COMMENT WAIVER: N

ACCEPT RETURN REJECT 10.12.94 DATE

ABSTRACT/SUMMARY COMMENTS:

Rare surviving example of 19th century bridge technology

RECOM. / CRITERIA accept
REVIEWER Patrick Adams
DISCIPLINE Historian
DATE 10/12/94

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

CLASSIFICATION

count resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

historic current

DESCRIPTION

architectural classification
 materials
 descriptive text

SIGNIFICANCE

Period Areas of Significance--Check and justify below

Specific dates Builder/Architect
Statement of Significance (in one paragraph)

summary paragraph
 completeness
 clarity
 applicable criteria
 justification of areas checked
 relating significance to the resource
 context
 relationship of integrity to significance
 justification of exception
 other

BIBLIOGRAPHY

GEOGRAPHICAL DATA

acreage verbal boundary description
 UTM's boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

sketch maps USGS maps photographs presentation

OTHER COMMENTS

Questions concerning this nomination may be directed to

Signed _____ Phone _____

Date _____



Parshallburg Br.
Saginaw Co., MI
#1



DONT MOVE ME
FROM MY
HISTORICAL HOME!!
♥ PARSHALLBURG BRIDGE ♥

BRIDGE
OUT
KEEP

WEIGHT
LIMIT
5
TONS

Parshallburg Br.
Saginaw Co., MI
#2



DONT MOVE ME
FROM MY
HISTORICAL HOME!!
♥ PARSHALLBURG BRIDGE ♥

WEIGHT
LIMIT
5
TONS

Parshallburg Gr.
Saginaw Co., MI
#3



Parshallburg Br.
Saginaw Co., MI
#4



Parshallburg Br.
Saginaw Co., MI
#5



Paeshallburg Br.
Saginaw Co., MI
#6

Missing Core Documentation

Property Name	County, State	Reference Number
Parshallburg Bridge	Saginaw, Michigan	94001168

The following Core Documentation is missing from this entry:

Nomination Form

Photographs

USGS Map



Bureau of Michigan History
State Historic Preservation Office
Michigan Library and Historical Center
717 West Allegan Street
Lansing, Michigan 48918-1800

August 22, 1994


Ms. Carol D. Shull, Chief of Registration
National Register of Historic Places
National Park Service
U. S. Department of the Interior
P. O. Box 37127
Washington, D. C. 20013-7127

Dear Ms. Shull:

Enclosed are National Register nomination materials for the Parshallburg Bridge in Saginaw County, Michigan. This property is being submitted for listing in the National Register. No letters of objection or other written comments concerning this nomination were submitted to us prior to the submission of this nomination to you.

Questions concerning this nomination may be directed to Robert O. Christensen, National Register Coordinator (517/335-2719).

Sincerely,


Kathryn B. Eckert
State Historic Preservation Officer

KBE:roc

