NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

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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 **Indiana State Highway Bridge 42-11-3101**

other names/site number Poland Bridge 021-519-25010

2. Location

street & number State Road 42 over Eel River N/A ☐ not for publication

city or town Poland ☒ vicinity

state Indiana code IN county Clay code 021 zip code 47868

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 36CFR 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.)

Signature of certifying official/Title — Date 1/25/00

Indiana Department of Natural Resources
State or 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:) _____

Signature of the Keeper — Date of Action

for Edson H. Beall — 3/15/00

Indiana State Highway Bridge 42-11-3101 | Clay | IN
Name of Property | County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☐ private
- ☐ public-local
- ☒ public-State
- ☐ public-Federal

Category of Property
(Check only one box)

- ☐ building
- ☐ district
- ☐ site
- ☒ structure
- ☐ object

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

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	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)

TRANSPORTATION: Road-Related (vehicular)

Current Functions
(Enter categories from instructions)

TRANSPORTATION: Road-Related (vehicular)

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: Parker through truss

Materials
(Enter categories from instructions)

foundation

walls

roof

other METAL
CONCRETE

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

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 contriibution 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)

TRANSPORTATION

Period of Significance

1939-1949

Significant Dates

1939

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

Architect/Builder

Vincennes Bridge Company
R. McCalman, Inc.

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

9. Major Bibliographic 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:

Indiana State Highway Bridge 42-11-3101
Name of Property

Clay IN
County and State

10. Geographical Data

Acreage of Property Less than 1 acre

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

	Zone	Easting	Northing
1	16	500560	4365880
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 John Warner

organization _____ date 6-1-99

street & number 5018 Broadway Street telephone (317) 283-5450

city or town Indianapolis state IN zip code 46205

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 State of Indiana Dept. of Transportation- Operations Division #W478

street & number 402 W. Washington St. telephone 317-232-3150

city or town Indianapolis state IN zip code 46204

National Register of Historic Places Continuation Sheet - State Bridge # 42-11-3101

Section 7 Description

State bridge 42-11-3101 in oriented east to west and carries State Road 42 over the Eel River 2.2 miles west of Poland, Indiana. Positioned on a concrete abutment on the east end and a concrete pier on the west, the 175' single span, riveted, Parker through truss has 10 panels per truss, each 17' 6" wide, and a 24' roadway (photo 1). The upper chord is fabricated from a pair of 15" channels and each member of the chord is differently sloped (not parallel) from the horizontal plane of the lower chord (photo 1). Between the trusses at the upper chord location, substantial latticed strut bracing provides protection against stress induced by sway from either high winds or vehicle passage. The verticals, except the hip (lateral most) posts at each end, consist of a pair of laced 10" channels; the hip verticals are 10" I-beams. Diagonal sets are composed of 6"X4" angles (L-shaped steel members) reinforced and fastened together with battens in the outer panels and 3.5" X 3" angles with battens in the central panels. A pair of 3" X 3" angles forms the counter sets in the central panels.

The 33" floor I-beams are riveted to the verticals above a lower chord fabricated from two pair of 6"X 4" angles joined by riveted battens and reinforced along the sides with riveted plates (photos 1and 4).

The west end of the bridge consists of two approach spans of continuous pre-stressed concrete beams (replaces in 1978) seated on reinforced concrete piers (photo 2). The expansion ends of the bridge and the approach spans are on the west end of each element. The fixed end is bolted at the bridge seat directly to the top of the east abutment (photo 3).

Heavy I-stringers, eight in all, combined with the floor beams carry the concrete deck. Crossed angles provide lower sway bracing members (photo 4).

Section 8 Significance

State bridge 42-11-3101 is significant under Criterion A for its association with events that contributed to the settlement and economic development of Clay County, Indiana. The bridge is an example of a disappearing, much-used, third-generation, Indiana State Highway Commission bridge that substituted for many of the late 19th century wooden structures inherited from county commissioners in the late 1910s. The bridge trusses retain significant integrity, although the original deck and handrails have been replaced. In addition, the bridge, erected on the site of one of the first bridges to span the Eel River, is a historic touchstone that recalls from local memory those days when crossing the river to "get to town" was often a matter of luck, not an everyday convenience.

Clay County, Indiana, named for the noted statesman Henry Clay, was originally a part of a land cession from the Delaware, Potawatomie, and Miami Indians in 1809. This elevated portion of the Wabash Valley was heavily forested with burr oak, ash, beech, elm, black walnut, and gum trees when the General William H. Harrison marched

through the area in 1812 on his way to Fort Harrison on the Wabash from Vincennes, Indiana, on the lower Wabash River. With Harrison's command was a private soldier by the name of Samuel Rizley, who liked the land around Bowling Green so much he later returned to become one of the county's earliest white settlers.

The topography of the Eel River Basin proved to be one major factor in developing the transportation and industrial history of the county. At the time of settlement, the county contained as many as thirty streams, large and small, and the Eel River that traverses the county from Cass Township in the northeast, meanders through Washington, Sugar Ridge, Harrison, Perry, and Lewis Townships and exits the county in the southeast corner. With a very small change of elevation throughout its length, the river tended to flood at regular intervals and created an obstacle to travel even at its lowest depth in the dry months of the year. The Eel River, along with its major tributary, Birch Creek that drains much of the center of the county, often confounded personal travel and transportation of goods by early settlers. Birch Creek gained early historic significance in the county as a feeder stream to the Wabash and Erie Canal. On a positive note, streams like Jordan Creek, situated in some places in rugged terrain, provided enough fall to power mills, both saw and flouring. Another topographical factor in county development was the presence of a number of sloughs and marshy areas that once drained and controlled made accessible fertile land suitable for farming.

After 1816 and Indiana's statehood was a fact, the General Assembly and other private citizens sought ways to make Indiana a place attractive to settlers and entrepreneurs searching for opportunities. Indiana, like the other states carved from the Northwest Territory, lacked even a rudimentary infrastructure that would spur the influx of settlement. More importantly, an infrastructure to serve as the means to import goods these new citizens would need to live and export excess production that would result from the burgeoning economy. Debate on a solution continued until in 1827, the US Congress offered Indiana a substantial land grant to build a canal, the Wabash and Erie Canal, that when completed would connect Lake Erie with the Ohio River via the Wabash River. The canal would impact the history of Indiana and Clay County.

In 1832, construction on the canal began at Fort Wayne, Indiana, and progressed fitfully through the next two decades and reached Evansville, Indiana, in the early 1850s. Part of the canal system was the Cross-cut Canal that was to connect the Wabash and Erie with the never-constructed Central Canal in the vicinity of Worthington in Greene County. The Cross-cut Canal traversed the south west quadrant of Clay County and accounts for the names of well-known county historic assets/ events such as Feeder Dam Bridge, Aqueduct or Towpath Bridge, Towpath Road, and the Reservoir War of 1855. The Wabash and Erie Canal only operated over its full length of 459 miles for approximately a decade, but its short existence belies its importance in the growth of the Wabash River Valley and the State of Indiana.

Water transportation was not the only element of infrastructure developing in the county in the 1850s. The first railroad survey for the Terre Haute & Richmond Railroad was made in 1849. In 1850, construction of the rails began with work commencing from

both ends of the line – Indianapolis and Terre Haute – simultaneously. By 1852, daily freight and passenger trains were crossing the county. By 1872, railroad tracks from the Terre Haute & Cincinnati Railroad and the Brazil branch of the Evansville & Indianapolis Railroad also crisscrossed the county.

Starting with privately financed turnpikes and continuing through the latter decades of the 19th century, Clay County made steady progress in improving its ground system of transportation. Private individuals like David Thomas, who started and operated a ferry across the Eel River west of Bowling Green for almost 50 years, provided a service to the casual traveler, the farmer going to market, and the wagons carrying coal from the small mines in the county.

The 1870s and 1880s in Clay County witnessed many changes. The extensive coal reserves in the county were identified early in the development of the county. From initial estimates, the coal area was found to encompass roughly 300 square miles in the south half of the county. Its positive economic potential for the county was obvious to many but one source defined a problem that could thwart progress because, "for want of suitable transportation ... only a small portion of it [coal reserves] ... can be made available for mining purposes." While railroads would eventually haul the majority of the coal mined in the county, mines not near a railhead or those earliest mines were dependent on wagon transportation to get their coal to the consumers. For example, the pig iron furnaces around Brazil would have ceased to function without adequate supplies of coal.

The need to transport agricultural products to market also spurred development of a more all-weather infrastructure. Clay County's farmers were hard at work to raise more corn and wheat to move to market as grain or as flour processed in some of the local flouring mills. The 790,000 bushels of corn produced in the county in the 1880s nearly doubled to 1,346,160 bushels in the 1890s; a significant achievement but without purpose unless the grain reached market. Wheat, another county-grown grain, increased from 165, 600 bushels in the 1880s to 267, 590 bushels in the 1890s; another admirable achievement. County officials harkened to the needs of the taxable public and moved forward to resolve transportation issues.

As population grew and production of agricultural items and coal increased in the post Civil War decades, county officials and citizens realized that without good roads and all-weather stream crossings in the region real limits to economic success existed. Around 1868, the county commissioners took a major step in resolving some stream crossing problems when they directed construction of a covered wooden bridge over the Eel River west of Bowling Green. Built by the firm of Rarick & Black the bridge cost $12,000 to complete. Next, around 1871, the commissioners engaged contractors Ernst Muehler and David Notter, a firm that operated in Clay County during the 1870s and 1880s, to build a bridge across Jordan Creek north of Bowling Green. The firm built many of the stonework abutments on Clay County bridges of that era. It might be worthy to note that Bowling Green was the county seat until 1877, when the seat of government was moved to the city of Brazil.

Once committed to furnishing permanent all-weather stream crossings, the county commissioners moved rapidly to contract with Muehler & McNamar for the Poland covered wooden bridge over Eel River for $7,200 (1872), and with William Graber and Levi Fair for the Hooker's Point bridge for $6,300 (1876). Later destroyed in 1883 by an act of nature, this bridge was replaced by an iron bridge from the Canton Iron Bridge Company, Canton, Ohio, at a cost of $5,120. Muehler & Notter furnished the stone abutments for $600.00. Muehler & Notter also built the first Feeder Dam Bridge over the Eel River, a wooden structure (1878) at a cost of $8,700. The first iron bridges built over Birch Creek were built by Muehler & Notter on the Bowling Green & Brazil Road (1878), the Birch Creek Reservoir bridge near Saline City (1880), and the abutments for the aqueduct bridge (1880).

Well before these bridges were needed, early settlers established the first of the major communities in the eastern half of the county. Four local gentlemen who owned the four corner lots at the intersection of SR 42 and Bowling Green-Poland Road established Poland, the only town in Cass Township, in 1841. The market place for the surrounding countryside, Poland was the center of commercial activity and the need for reliable transportation infrastructure was recognized quickly. Turnpikes could assist in moving goods but they only favored the traveler as far as the riverbank. Parker's Ferry, named for its owner/operator William B. Parker, crossed the Eel River west of Poland. The ferry carried folks and wagons across the stream for approximately 35 years before a bridge was built north (upstream) of the ferry site.

Sorely needed permanent solutions to the Eel River's penchant for flooding and no doubt, pressure from area residents, energized the county commissioners to take positive steps. In 1872, the commissioners contracted with Muehler & McNamar to build the Poland/Eel River bridge, a 160' covered, Burr Arch, timber truss structure, for $7,200. Known locally as the Poland Beach Bridge, the structure served the Cass Township community until it was replaced in 1938-39 by the present structure. Prior to the any bridge's construction, foot traffic used Rizley Drift, a collection of solidly packed debris that stretched across the Eel River south of the bridge site. According to one source the drift first occurred during the high waters of the winter of 1846-47 when receding floodwaters deposited trees and other debris to form a crossing site. The drift was removed about 10 years later.

In the late 1910s, the Indiana State Highway Commission (ISHC) began to assume responsibility for the construction and maintenance of certain roads and bridges previously administered by county governments. One major program was the replacement of the timber truss bridges on roadways designated state highways that once were the responsibility of the counties.

The state survey of the Poland Bridge site was conducted in May-Jun 1937. In field notes drafted by the survey chief-of-party, local residents provided historical accounts of past high water levels and other pertinent flood plain information. Local resident H.S. Dodson remarked that the east abutment of the old bridge was often covered by water during floods. Another longtime resident, Ed Frazier, commented that

high water in 1913 was, "up to that nail (elevation 584.8') in the maple tree northeast of the site." These comments were collected to assist in determining average high water levels and the new bridge deck elevation. Also identified during these testimonies were any special engineering considerations needed to mitigate the effect of flood conditions.

In 1937, ISHC advertised in various newspapers to replace the old wooden bridge. In January 1938, R. McCalman, Inc. of Danville, Indiana, successfully bid the contract to build two 40', reinforced concrete, T-beam approach spans, a pier, an abutment, and coped approach railings with brushed panels for the sum of $45,434.69. The Vincennes Bridge Company of Vincennes, Indiana won the contract for the superstructure for $22,704.59. The present bridge was completed in early 1939. T-beams replaced in 1978.

Still active, the bridge and its site are symbols of a number of significant events in the history of Clay County. First, the building of the covered bridge acknowledged the need for overcoming natural barriers to settlement, agricultural growth, and economic development and the role of county commissioners (local authority) in accomplishing this action. Secondly, the present bridge symbolizes its importance in the establishment of all-weather infrastructure and the evolution of the bridge builder's technology. Thirdly, it remains as an example of the ever-decreasing number of steel truss bridges that once dotted the landscape and if not protected in the future, will disappear as have many of the 19th century truss bridges.

Section 9 Bibliography

Blanchard, Charles, ed. *Counties of Clay and Owen, Indiana, Historical and Biographical Atlas.* (Chicago, Ill.: F. A. Battey & Company, 1884).

Edwards, Llewellyn N. *A Record of the History and Evolution of Early American Bridges.* (Orono, Me.: University Press, 1959.

Hool, George A. and W. S. Kinne, eds. *Steel and Timber Structures.* (New York: McGraw-Hill Book Company, 1942).

Indiana Department of Transportation. *Field Survey Notebooks.* Bridge 42-11-3101, Contract # 1586 -A-B and Bridge 46-11-1316, Contract #684.

Travis, William. *History of Clay County, Indiana. Vols. 1&2.* (Chicago, Ill.: Lewis Publishing Company, 1909).

Section 10 Geographical Data

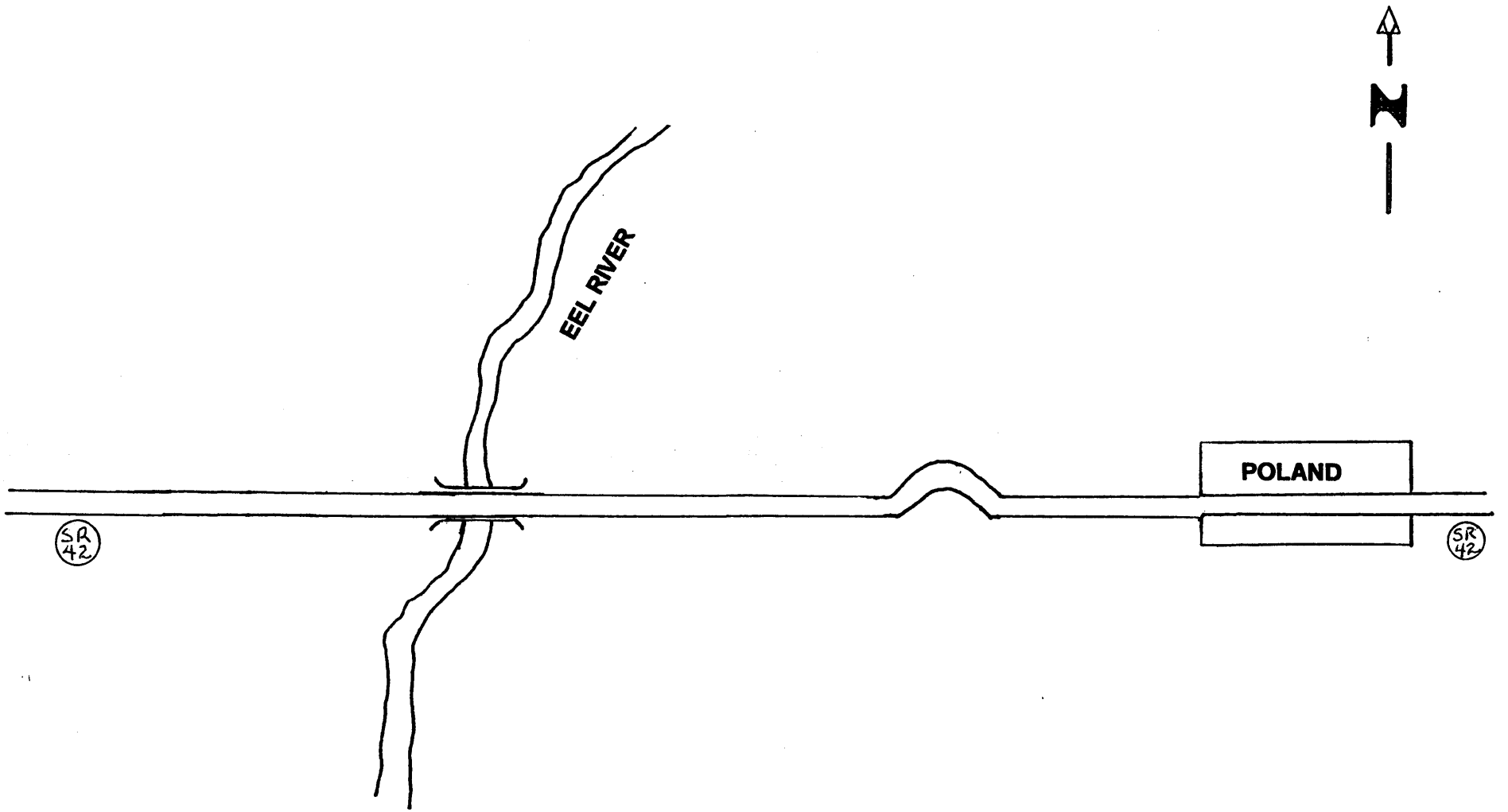
National Register of Historic Places
Continuation Sheet - State Bridge # 42-11-3101

Verbal Boundary Description

From a start point 40 feet east and 10 feet north of the northeast endpost of the bridge; turn south and proceed across SR 42 to a point 40 feet east and 10 feet south of the southeast endpost of the bridge; turn west and proceed across the river to a point 40 feet west and 10 feet south of the southwest endpost of the bridge; turn north and proceed across SR 42 to a point 40 feet west and 10 feet north of the northwest endpost of the bridge; turn east and proceed across the river to close on the start point.

Boundary Justification

The boundary as described includes the approaches, wingwalls, abutments, and spans of the bridge and its immediate environs.



BRIDGE 42-11-3101
CLAY COUNTY, INDIANA
NE ¼, NE ¼, S 24, T 11N, R 5W

Not to Scale