NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

Wash., D.C.
3/28/97

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 Camelback Bridge

other names/site number Illinois Central Railroad Bridge No. A797-14

2. Location

street & number Virginia Avenue and the Constitution Trail ☐ not for publication

city or town Normal ☐ vicinity

state Illinois code IL county McLean code 113 zip code 61761

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.)

William L. Wheeler /SHPO 3-20-97
Signature of certifying official/Title Date

Illinois Historic Preservation Agency
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:

Signature of the Keeper Date of Action

☐ 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:) _____

Camelback Bridge
Name of Property

McLean, Illinois
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(s)
- ☐ 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

n/a

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: King post,pony
timber truss; Phoenix column

Materials
(Enter categories from instructions)

foundation Iron
walls Wood
roof N/A
other 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 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

1906

Significant Dates

n/a

Significant Person
(Complete if Criterion B is marked above)

n/a

Cultural Affiliation

N/A

Architect/Builder

Illinois Central Railroad,

Phoenix Iron 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:

McLean County Historical Society

Camelback Bridge
Name of Property

McLean, Illinois
County and State

10. Geographical Data

Acreage of Property less than one acre

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

	Zone	Easting	Northing
1	16	332000	4484740
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 Jeanne Howard

organization Friends of the Bridge date December, 1996

street & number 1202 South Fell Avenue telephone 309/454/3688

city or town Normal state Illinois zip code 61761

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 Town of Normal

street & number 100 E. Phoenix Avenue telephone 309/454/2444

city or town Normal state Illinois zip code 61761

NARRATIVE DESCRIPTION

The distinctive, humped, iron and wood bridge spanning the Constitution Trail at Virginia Avenue in Normal, Illinois has long been called the "Camelback Bridge" (The Daily Pantagraph, 1904). The bridge carries two way vehicular traffic over what was formerly the Illinois Central Railroad line. The Camelback Bridge was constructed in 1906 by the Illinois Central Railroad. As noted by William Walters, cultural geographer, the bridge serves as a "unique solution to the competing needs of street and rail transportation. Its humped structure allowed the smokestacks of Illinois Central's locomotives to pass underneath while accommodating traffic above"(Walters, 1994.) The bridge utilizes a king post, pony truss wood upper central structure supported by twelve 1860's Phoenix Iron Company wrought iron columns. The Camelback Bridge is the only known functioning king post pony truss bridge in Illinois (Swallow, 1995). The Camelback Bridge is one of only two known Illinois bridges using Phoenix columns.

GENERAL DESCRIPTION

The Camelback Bridge in Normal, Illinois, is an eight span structure with the center two spans supported by a double timber floor beam connected to a timber king post pony truss above the span. There are six simply supported spans, three on each side of the central 32 foot long truss span. The decking consists of timber planks, measuring 3" thick by 10" wide, and they are supported on timber stringers of varying spacing and depths running parallel to Virginia Avenue. The stringers are supported on wrought iron floor I-beams, which are in turn supported on twelve wrought iron Phoenix columns. The bottoms of the columns are cast into concrete footings (Frauenhoffer & Associates, 1993). As indicated in an Illinois Central Railroad drawing and bill of materials in the possession of the Town of Normal, the concrete footings are five feet in total height. The bottom three feet of each footing is 3'6" square and the top two feet taper from 3'6" square to 1'6" square. The bottom 1'6" of each Phoenix column is cast into the top of the two foot tapered section.

The bridge is 115'11" long, from the face of the east concrete abutment to the face of the west concrete abutment. There is a main central span, the longest span, which is 32 feet long (Frauenhoffer & Associates, 1993). This center span originally could have accommodated two railroad lines, for two way rail traffic. However, only one rail line ever ran under the center span, on the west side thereof. The east approach of the bridge, from the east concrete abutment to the edge of the center span, measures 42'4". The west approach of the bridge, from the west concrete abutment to the edge of the center span, measures 41'7". The bridge vehicular traffic width is 16'6", between timber curbs. The timber deck width totals 22'9"(Frauenhoffer & Associates, 1993) Asphalt approach roadways, which are 24 feet wide, are not part of the structure being nominated to the National Register. There are concrete abutments at the east and west ends of the structure. A walkway along the north side of the structure has timber plank

flooring and timber handrails. There are vehicular timber guardrails on both sides of the bridge, above the timber curbs. The bridge carries two lanes for two way traffic and is posted for 8 tons single vehicle weight (Frauenhoffer & Associates, 1993). The posted speed limit is 10 miles per hour.

There are twelve Phoenix columns supporting the east and west approaches to the center span; six per approach. Half of the columns support the north side of the approaches and six the south side. The Phoenix columns are made of wrought iron. The Phoenix columns are modular columns with each constructed of four identical, curved panels. Each panel has a 1.75" flanged ear running the length of both edges of the panel. The panels were wrought with a curvature and an angle to the flange such that the panels can be brought together to form a hollow column of a desired length. This is similar to how a cooper shapes staves to form a barrel. The Phoenix panels are held together with rivets placed in evenly spaced holes in the flanges. As noted in an article about the Phoenix Iron Company, the advantage of wrought iron over cast iron is that it can be riveted (The Daily Republican, 1959)

The twelve Phoenix columns used in the Camelback Bridge are each comprised of four flanged panels riveted together to form hollow, circular columns. All twelve of the Camelback Bridge's Phoenix columns are 8" in diameter; the diameter is the same the entire length of the column.

The twelve columns are of five different lengths. The two columns located next to the west concrete abutments are 5' tall. (All measurements are from the top of the concrete footing to the top of the column.) The two middle columns located in the middle of the west approach, between the west abutment and central span, are 12' tall. The four columns located at the central span are all 19'6" in height. The two middle columns located in the middle of the east approach, between the east abutment and central span, are 12' 9" tall. The two columns located next to the east concrete abutments are 6' in height.

There is no way to verify how much of any column is set down into its concrete footing. However, according to the 1906 Illinois Central Railroad drawings, the bottom 1'6" of each Phoenix column is cast into the top of the two foot tapered section of the concrete footings.

Each set of columns is strengthened and braced with two 1" iron tie rods that run diagonally north to south between a set of columns. The Phoenix columns all attach to wrought iron floor beams that run east and west. The wrought iron floor beams are then bolted to the bridge's timber members.

The main central span of the Camelback bridge is 32' wide. The main span is made using a timber king post, pony truss design. The approaches to the central span are timber stringer approach spans (Frauenhoffer & Associates, 1994). The bridge is not a true camelback style bridge and

there is no evidence that one ever existed at the site. The name commonly utilized in referring to the bridge, the Camelback Bridge, is probably a misnomer. As noted The Legacy, a book on historical structures in Normal, "King post style bridges, which were adapted from roof trusses, represent an earlier design style than a true camelback bridge. King post bridges have been built since medieval times" (Ekberg, C., Malone, A., Walter, W., Galt, J. & Young, M., 1990, p.46).

What distinguishes a king post bridge? As stated in The Legacy, its shape functions differently from other structures.

> The strength of a King post derives from the fact that a triangle is rigid, unlike a quadrilateral figure. As weight is applied to the roadbed, the diagonals are compressed and the vertical, the King post, is in tension, controlling the deflection...A through pony truss means that the roadbed is at the lower chord of the truss and that there is no lateral, cross road connections above the truss. (p.46)

The top chord of the trusses, that connect to the center span's King post, are 12" by 12" by 18' timbers. The bottom chord of the trusses are 12" by 14" by 34'(Illinois Central Railroad, 1906). Each king post has an iron bent plate cap on top and another flat plate at the bottom of the king post. A twelve foot iron tie rod runs from the top bent plate, through the King post, and through the bottom flat plate (Ekberg, C., Malone, A., Walter, W., Galt, J. & Young, M., 1990) The iron tie rod has 3" nuts at the top and bottom and this holds the king post truss in tension with the trusses.

> The timber stringers for the six simply supported approach spans measure approximately 16" deep by 7" wide. The timber stringers for the center two spans measure approximately 14" deep by 6" wide, and are continuous over the double timber floor beam. The timber sidewalk is supported on three timber stringers, parallel with the bridge stringers, measuring approximately 12" deep by 4" wide. The sidewalk stringers are supported by timber members, measuring approximately 16" deep by 7" wide, which are cantilevered from the underside of the bridge stringers (Frauenhoffer & Associates, 1993 p.2)

Metal rods connect the timber stringers to the cantilevered timber beams carrying the sidewalk.

In 1993 an engineering firm hired by the Town of Normal did extensive testing of the bridge's condition. The engineering firm did ultrasonic testing on each of the twelve Phoenix columns, at varying locations on each, and found them to vary in existing column wall plate thickness from

as little as .386" to as thick as .555". The engineers concluded that the Phoenix columns were in good condition. The existing web thickness of each of the wrought iron floor beams was determined at three locations on each floor beam. The web thickness of the center two floor beams fell within one thickness range, and the remaining four floor beams within a separate thickness range. The two center beams averaged web thickness of .447" and the other four .654" (Frauenhoffer & Associates, 1993).

Pulse velocity testing was done by the engineering firm in 1993 on the nine timber stringers, two sidewalk cantilever beams, and the north truss diagonal members. The wood members tested were found to be in fair, poor, and very poor condition. The engineering firm found timber had decayed. The upper portions of all the timbers being in worse condition than the lower portions. Most wood members showed signs of splitting and rotting. There were also signs of burning on wood stringers underneath (from an unknown time) and gouging of the vehicular timber deck was visible (Frauenhoffer & Associates, 1993).

The timber deck was last replaced in 1991. The wrought iron floor beams, the wrought iron Phoenix columns, and the remainder of the original metal substructure were sandblasted and painted in September, 1992 (Frauenhoffer & Associates, 1993).

In 1993 the engineering firm gave the Town of Normal an opinion on the Camelback Bridge's condition which raised concerns about load bearing capacity and overall stability. Because of the report the Town of Normal decided to close the bridge to vehicular traffic until a steel sub-structure was added under the bridge in September, 1993 in order to shore the bridge up. The new sub-structure is constructed of steel square tubing, angle iron, and I beams. The new sub-structure stands like a four legged card table under the center of the bridge's 32' central lower span. The four legs of the new sub-structure are made of 4" square tubing. The four legs rest on 18" square concrete pads. The legs on the east and west faces are 28' apart. The legs on the north are 21' from the south legs. Angle iron, 3" by 3", runs diagonally in a crisscross pattern on each of the four sides so as to brace the four legs. At the top of the legs rest two 14" steel I beams; these beams run from east to west. On top of the two beams are four 14" steel I beams that run north to south. These four beams support the east to west flooring timber stringers that the vehicular deck rests on. There are wood shims that connect these four upper steel beams to the wood flooring timbers. As such, the new sub-structure gives the bridge additional strength and reduces flexing and movement by providing a stable frame.

Another 1993 addition was horizontal steel struts, attached above the base of one Phoenix column to the mid-point of the next taller Phoenix column; serving to brace the Phoenix columns and the entire bridge. One horizontal strut connects a middle column to the central column and another strut connects the middle column to the outer abutment column. There are four struts on the north face and four on the south face. No struts span across the central span.

NARRATIVE STATEMENT OF SIGNIFICANCE - SUMMARY

The Camelback Bridge in Normal, Illinois, meets Criterion C for listing in the National Register of Historic Places in the area of engineering. The locally significant 1906 timber and metal bridge has the distinctive characteristics of two structural systems: a wooden king post pony truss and wrought iron Phoenix columns. Both the timber truss and the metal columns support the full span of the bridge. Many early 20th century timber bridges also called for timber support columns. However, in the case of the Camelback Bridge the structure is supported by twelve 1860s Phoenix Iron Company wrought iron columns. It is likely the columns were salvaged from an earlier bridge and reused in the Camelback Bridge. The Camelback Bridge is the only known functioning king post truss bridge in Illinois, and the only one made of wood. The Camelback Bridge is also one of only two known bridges in Illinois that utilize Phoenix columns.

The Camelback Bridge and the Illinois Central Railroad

The Camelback Bridge in Normal, Illinois would not exist were it not for the Illinois Central Railroad [ICRR]. The bridge solved a problem for the railroad and the community. It enabled the steam engines of the ICRR to pass through this section of Normal while accommodating town traffic above, without the inconvenience of a blocked street. The use of the ancient king post pony design to accommodate the modern transportation system is an interesting example of the blending of old and new technology.

The Illinois Central Railroad was chartered by the State of Illinois on February 10, 1851. The most extensive railway project of its day, its 705 mile route was twice the length of any contemporary railway (Illinois Central Railroad, 1959). The rail line was built quickly. The Illinois Central Railroad was required to build 50 miles of the road within two years from the time it obtained the charter. That 50 miles was built from LaSalle to Bloomington (Burnham, 1879).

The rail line began and passed through the property of influential Central Illinois citizens. "Ground was first broken at the Bloomington end of the sixth division of the Central Road, May, 1852, adjacent to the residence of prominent Bloomington citizen and Supreme Court Justice David Davis. For the distance of one mile north of the depot grounds through the premises of Judge Davis, Wm. Flagg, and Joshua R. Fell, a goodly amount of grading was done by June 18, 1852" (Cavanaugh, 1952, p. 112). A letter sent May 22, 1853 to W.P.Burrall, President of the ICRR stated "trains will commence running May 23 between LaSalle and Bloomington (Neal, 1853).

It is not known when Virginia Avenue (formerly Sill Street), first crossed the Illinois Central Railroad line. The 1874 Atlas of McLean County does not show any street crossing the ICRR line where Virginia Avenue is today. A street and bridge appear at the site on a plat of Normal printed in 1895 (Atlas of McLean County, 1895). Although not verified by atlas or plat book, it is possible that a bridge existed at the site from at least

the middle 1880's. According to a September 13, 1904 article from a local newspaper concerning the need to replace the then existing older, all wood bridge with what is the current one, the reporter wrote that, "the bridge has been built since the road came through in 1883"(The Daily Pantagraph, 1904).

The Illinois Central Gulf Railroad sold the Camelback Bridge to the Town of Normal on December 18, 1986 when the railroad abandoned the Bloomington line. The Town paid $89,000 for the bridge and railroad right of way located through the Town, according to the deed at the McLean County Recorder of Deeds. On April 8, 1991 the Town of Normal Council approved the petition initiated by the Normal Historic Preservation Commission to rezone the Camelback Bridge S-3, Historic and Cultural District (Minutes of Meetings, Town of Normal, 1991). This local designation is the equivalent of being named a historic landmark.

Bridge Engineering

> The developing transportation system of post Civil War America required not only better bridges, but affordable ones. The use of iron in truss bridges created a new technology and industry. Metal bridges could be manufactured with repetitive designs under shop conditions and with quality control. The unassembled bridge could be easily shipped to the bridge site and erected by unskilled local labor with minimal equipment. This ease of dispersement promoted the popularity of the metal truss bridge and led to a large number of local and regional bridge companies (Wyatt, 1986, pp.12,13).

Wendell Bollman was the first individual to begin the trend toward fabrication of iron bridge components. Bollman was one of the first to examine:

> the inherent tensile weakness of cast iron when used in long, slender columns. He realized that a great advantage would be gained by the substitution of wrought iron, a material strong equally in tension and in compression. Taking specially rolled segmented wrought-iron shapes, he riveted them together into a circular column that was well able to withstand a compressive load... As Robert Vogel said, 'The design exhibits the inspired combination of functional perfection and simplicity that seems to characterize most great inventions...'(Plowden, 1974, p.65)

Many companies patented different kinds of columns, but the most widely used type was the Phoenix. This column bore a clear similarity to Bollman's, whose design he never patented. Bollman had shown it to Samuel Reeves of Clarke, Reeves & Company, the predecessor of the Phoenix Bridge Company at Phoenixville, Pennsylvania, and the patent was taken out in

their name. The company became "one of the foremost and influential bridge manufacturing concerns in American bridge history..."(Plowden, 1974, p.62)

The Phoenix Iron Company began in Phoenixville, Pennsylvania. The company began by making iron nails in 1783. The company's Philadelphia administrative headquarters were opened in 1856 (Burnham, 1959). In 1863 the Phoenix Bridge Company was founded, "the oldest [bridge company] in the United States"(Phoenix Steel Corporation, 1963, p.4) The Phoenix Columns used in the Camelback Bridge have raised lettering reading "PHILADA, PA" which stands for the company's main office. The plant which actually manufactured columns was always located in Phoenixville (Donovan, 1994).

In 1862, the Phoenix Column, "a hollow circular section built up of four, six or eight flanged, rolled wrought iron segments riveted together", was invented (Burnham, 1959, p.223). Its primary use was in high buildings and bridge structures. The Phoenix Column was an important innovation. The real advantage of wrought iron over cast iron was that wrought iron could be riveted, allowing columns to be much more rigid. The Phoenix Iron Company boasted that its column provided a maximum of strength with a minimum of weight and that, due to the simplicity of its construction, it was the cheapest column on the market. The use of a hollow circular shaft to support loads raised the question of rusting within the center. This concern was addressed in company literature, with such reassurances as "...whenever Phoenix Columns are employed, the interior surfaces are thoroughly painted before the segments are riveted together"(Burnham, 1959, p.223).

Phoenix columns were used in many important structures. The most famous and enduring is the Washington Monument in Washington, D.C. Designed by Robert Mills in 1833, it was begun in 1848 and completed thirty six years later, "because of the intermittent flow of private and state contributions that paid for its construction..." (Condit, 1968, p.91)

The Washington monument provided clear evidence of the possibilities of this new structural system. Condit notes:

> [t]he unique feature is the iron framework that defines the interior elevator shaft and acts as the support for the elevator system and partly for the iron stairway that surrounds it. The primary members of the frame are wrought-iron columns of the type known as Phoenix columns... The Phoenix columns of [the] Washington Monument form the highest iron frame erected up to that time (Condit, 1968, pp.91-92).

The ability of Phoenix columns to support high structures influenced building outside the United States as well. In 1874, David Reeves, the son of the inventor of the Phoenix Column, proposed a 1000 ft high observation tower to be built of Phoenix Columns for the Centennial Exposition in Philadelphia in 1876 (Burnham, 1959). While the proposed tower was never

built, the design "so intrigued Gustave Eiffel, who saw the model, that he later gave credit to the American for having inspired him to design his famous steel tower in Paris in 1888 (Burnham, 1959, p.224).

Other famous structures constructed with Phoenix Columns were: the Ledger Building and the Girard Avenue Bridge in Philadelphia, the New York City Metropolitan Elevated Railway, the Old Colony Building in Chicago, and the Kennebee River Bridge in Augusta (Burnham, 1959).

The use of Phoenix columns was relatively brief. By the late 1880's, "steel was widely replacing iron as the building material of choice in bridges. In the 1890's Zee-bar and rolled steel 'H' heralded the demise of the Phoenix Column and other wrought iron structural materials" (Burnham, 1959, p.224).

Camelback Bridge Structural Systems

The king post truss design is an ancient engineering form. The effectiveness of this form is indicated by its use into the 20th century at the Camelback Bridge. Earlier in the 19th century many different truss types were developed, especially during the second half of the century. Most were designed to be constructed of metal The principle of the truss is based on the use of:

> short pieces of material configured in triangles to create a beam which could span longer distances that was possible with post and beam construction...The structural triangle required only that its members resist forces in tension and compression and not that the vertices or joints resist rotation. By contrast, the joints of a rectangle had to resist rotation as well or deform to the shape of parallelogram. The advantages of the triangular configuration then were simplified joint construction and members in tension or compression only. Thus, the truss was a very simple configuration to design and build (Wyatt, 1986, p.12).

There are three types of bridge trusses: through, pony, and deck. A through truss carries traffic loads on its bottom chords. A pony truss is a variation of the through truss, with no lateral bracing between its top chords. A deck truss carries its traffic loads on the top chords (Comp & Jackson, 1977).

The Camelback Bridge in Normal, Illinois is representative of two structural systems: the timber king post pony truss and the supporting wrought iron Phoenix columns. Webster's New World Dictionary defines a king post as a "vertical supporting post between the apex of a triangular truss and the base, or tie beam" (1980, p.777). The Camelback Bridge's king post truss is constructed of timber and it supports the central 32 foot wide span of the bridge. It is constructed of large 12" X 12" square timbers in

Bridge" to determine "if it would be feasible to make a grade crossing at that place (Minutes of Meetings, Town of Normal, 1905).

On December 12, 1905, the Council passed a motion requesting that the ICRR build a new bridge at Sill Street and that the ICRR maintain such new bridge. On January 15, 1906 the ICRR proposed to the Council that the ICRR "construct an iron bridge" and maintain it. The Town would construct the approaches on either end of bridge (Minutes of Meetings, Town of Normal, 1906).

At the October 1, 1906 Council meeting the blueprints and specifications of the bridge on Virginia Avenue were referred to a Mr. Milluish for the purpose of checking on the work and finding out if it was being done according to contract (Minutes of Meetings, Town of Normal, 1906). In April, 1991 the ICRR sent to the Town of Normal the following drawing # 4638 12306 (1/23/1906); marked "High Bridge At Sill St. (Kay, 1994). This 1906 drawing is apparently the working plan for the current bridge. This is probably the drawing that Mr. Milluish was to review, on October 1, 1906, to see if work was "done according to contract." On May 6, 1907 the Council passed a motion thanking the ICRR for their promptness in placing a hand rail on the walk at Beaufort St. Crossing and requesting that hand rails be placed on the approach to the Camelback Bridge (Minutes of Meetings, Town of Normal, 1907). Thus it appears that the new bridge was in place and rancor about it diminished by the spring of 1907.

Source of the Phoenix Columns

The 1906 drawing of the Camelback Bridge states that the columns to be used were "old". This reference and the fact that the columns are stamped with an 1862 patent date suggest they were salvaged from another structure. It seems logical to conclude that in 1906 the only source for columns manufactured over forty years prior would be from a salvaged structure; new stock generally does not last that long in inventory.

Where did the columns come from? There is no definitive answer, but information from the records of the Phoenix Iron Company provides some clues. The Illinois Central Railroad is known to have purchased only one Phoenix Iron Company columned bridge, the one constructed between 1868 to 1870, that spanned the Illinois River at LaSalle (Donovan, 1994).

A Phoenix Iron Company publication recounts that one of the great achievements of the company was the "I.C.R.R. bridge over the LaSalle river in Illinois, 18 spans."(Phoenix Iron Company, 1940). Illinois history and geography shows that there has never been a LaSalle River in Illinois. It can be assumed that the Phoenix Iron Company publication meant the Illinois River at LaSalle.

This bridge was designated by the railroad as A855-5. This A855-5 Phoenix bridge was replaced between 1893 and 1897. It appears reasonable to conclude, though it cannot be directly documented, that the Camelback

Bridge in Normal was built with Phoenix Columns salvaged from the ICRR 1868 -- 1870 bridge at LaSalle over the Illinois River. The history of these two ICRR bridges parallel each other and join together very well.

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Minutes of Meetings, Town of Normal, Town Council (1905)

Minutes of Meetings, Town of Normal, Town Council (1906)

Minutes of Meetings, Town of Normal, Town Council (1907)

Minutes of Meetings, Town of Normal, Town Council (1991)

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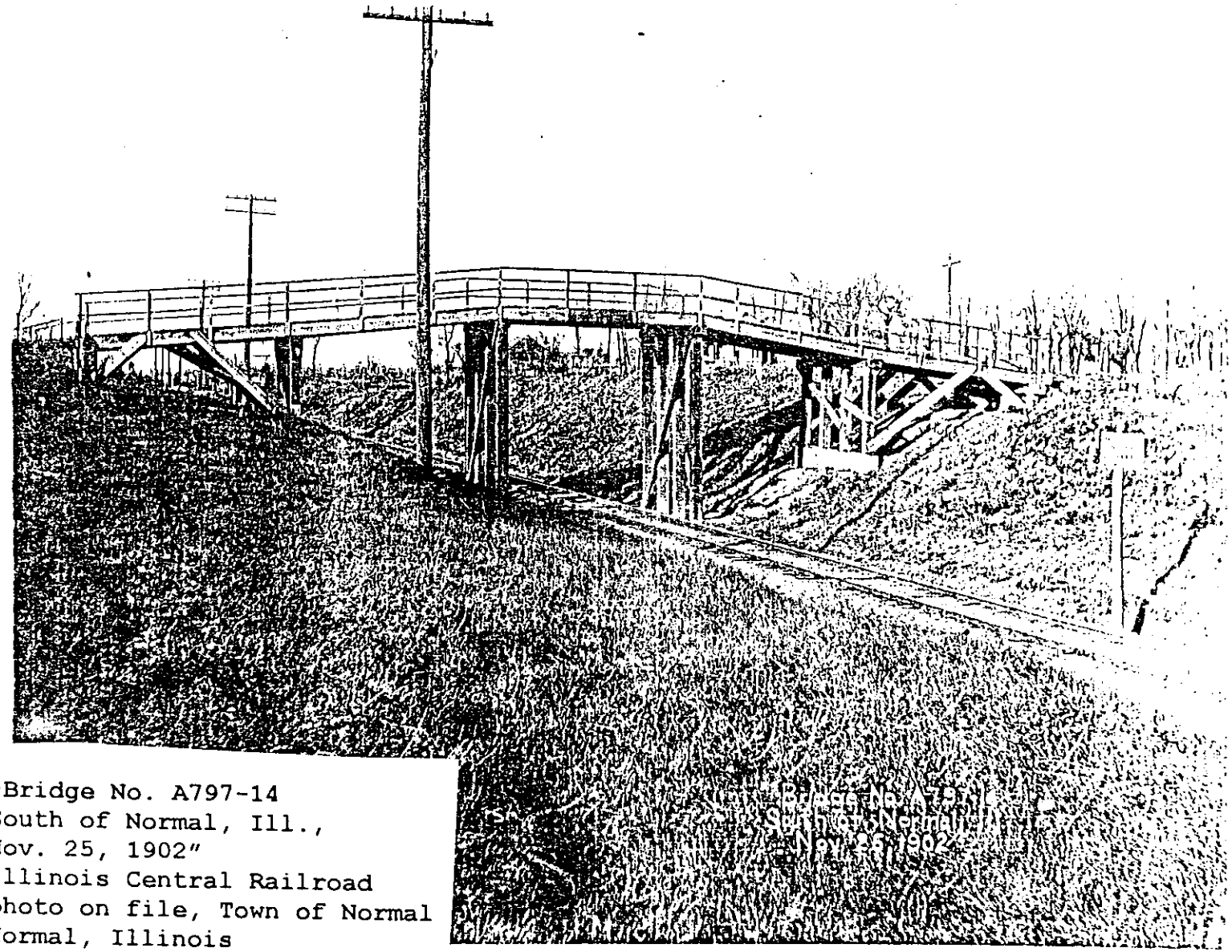
Verbal Boundary Description

A structure, commonly referred to as the Camelback Bridge, located in the NE 1/4 of Section 33, Township 24 North, Range 2 East, Third Principle Meridian, more particularly described as follows: Commencing at the NE corner of the NE 1/4 of Section 33; thence westerly along the north line of Section 33 a distance of 99 feet, being the west right of way line of Linden Street; thence southerly along west right of way line of Linden Street an approximate distance of 1,625 feet, to the center of Virginia Avenue right of way; thence westerly along the center line of Virginia Avenue right of way, an approximate distance of 249 feet to the center of the Camelback Bridge also known as the Virginia Bridge over the Town of Normal Constitution Trail (formerly Illinois Central Gulf Railroad), in McLean County, Illinois.

Boundary Justification

The boundary includes only that portion of land which directly relates to the Camelback Bridge including its structural members, King post, through pony timber truss, and Phoenix columns; but not its approaches.



"Bridge No. A797-14
South of Normal, Ill.,
Nov. 25, 1902"
Illinois Central Railroad
photo on file, Town of Normal
Normal, Illinois

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127

IN REPLY REFER TO:

The Director of the National Park Service is pleased to announce actions on the following properties for the National Register of Historic Places. For further information contact Edson Beall via voice (202) 343-1572, fax (202) 343-1836 or E-mail: edson_beall@nps.gov

Visit our web site at http://www.cr.nps.gov/nr/nrhome.html

JUN - 6 1997

WEEKLY LIST OF ACTIONS TAKEN ON PROPERTIES: 5/26/97 THROUGH 5/30/97

KEY: State, County, Property Name, Address/Boundary, City, Vicinity, Reference Number, NHL, Action, Date, Multiple Name

FLORIDA, CHARLOTTE COUNTY, Mott Willis Store, 22960 Bayshore Rd., Charlotte Harbor, 97000434, LISTED, 5/30/97
ILLINOIS, MCLEAN COUNTY, Camelback Bridge, Virginia Ave., across the Constitution Trail, Normal, 97000383, LISTED, 5/15/97
LOUISIANA, ACADIA PARISH, Le Vieux Presbytere, 205 Rue Iry Lejeune, Church Point, 97000508, LISTED, 5/30/97 (Louisiana's French Creole Architecture MPS)
MASSACHUSETTS, ESSEX COUNTY, Rockport High School, 4 Broadway, Rockport, 97000498, LISTED, 5/30/97
MASSACHUSETTS, MIDDLESEX COUNTY, Pearl Street School, 75 Pearl St., Reading, 97000496, LISTED, 5/30/97
MICHIGAN, KALAMAZOO COUNTY, Richland Historic District, 7567--8020 N. 32nd, 8023--8047 Church, 8951--8965 Park Sts., 8650--8118 E. D Ave., 8760--8905 Gull Rd., 9057--9063 RR, Richland, 97000278, LISTED, 4/11/97
MINNESOTA, RAMSEY COUNTY, Hamm Building, 408 Saint Peter St., St. Paul, 97000499, LISTED, 5/30/97
MONTANA, LEWIS AND CLARK COUNTY, Crum, William C., House, 535 5th Ave., Helena, 97000502, LISTED, 5/30/97
MONTANA, RAVALLI COUNTY, Etna School, 2853 Eastside Hwy., Stevensville, 97000504, LISTED, 5/30/97
NEW HAMPSHIRE, CHESHIRE COUNTY, Jewett--Kemp--Marlens House, North Rd. 2 mi. N of jct. NH 123, Alstead, 97000506, LISTED, 5/30/97
NEW JERSEY, BERGEN COUNTY, Crocker--McMillin Mansion--Immaculate Conception Seminary, Ramapo Vallet Rd., jct. of Campgaw Rd., Mahwah Township, Ramsey vicinity, 96001562, LISTED, 5/23/97
NEW JERSEY, MORRIS COUNTY, Jenkins--Mead House, 14 Revere Rd., Morristown, 97000106, LISTED, 3/10/97
NORTH DAKOTA, PEMBINA COUNTY, Crystal Bridge, Appleton Ave., over Cart Cr., Crystal vicinity, 97000507, LISTED, 5/30/97 (Historic Roadway Bridges of North Dakota MPS)
OHIO, PUTNAM COUNTY, Columbus Grove Municipal Pool, 47510 Rd. P, Columbus Grove vicinity, 97000511, LISTED, 5/30/97
OHIO, WILLIAMS COUNTY, Hill, James Delos, House, 201 E. Main St., Montpelier, 97000509, LISTED, 5/30/97
OKLAHOMA, OKLAHOMA COUNTY, Douglas DC-3 Airplane, N-34, 6500 S. MacArthur Blvd., Hangar 10, Oklahoma City, 97000443, LISTED, 5/29/97
PENNSYLVANIA, ALLEGHENY COUNTY, Kaufmann's Department Store Warehouse, 1401 Forbes Ave., Pittsburgh, 97000513, LISTED, 5/30/97
PENNSYLVANIA, ALLEGHENY COUNTY, Reymer Brothers Candy Factory, 1425 Forbes Ave., Pittsburgh, 97000514, LISTED, 5/30/97
PENNSYLVANIA, ALLEGHENY COUNTY, Scott, James, House, 5635 Stanton Ave., Pittsburgh, 97000515, LISTED, 5/30/97
PENNSYLVANIA, LANCASTER COUNTY, Mumma, Samuel N., Tobacco Warehouse, Elizabeth St., jct. with Barbara Ave., East Hempfield Twnshp., Landisville, 97000517, LISTED, 5/30/97
PENNSYLVANIA, LUZERNE COUNTY, West End Wheelmen's Club, 439 S. Franklin St., Wilkes-Barre, 97000521, LISTED, 5/30/97
PENNSYLVANIA, WASHINGTON COUNTY, Fleming, Molly, House, 616 Wood St., California, 97000519, LISTED, 5/30/97
PENNSYLVANIA, YORK COUNTY, Glen Rock Historic District, Roughly bounded by Glenvue Rd., Hanover, Manchester, Valley, Church and Center Sts., Shrewsbury Township, Glen Rock, 97000518, LISTED, 5/30/97
SOUTH CAROLINA, SUMTER COUNTY, Goodwill Parochial School, 295 N. Brick Church Rd., Mayesville vicinity, 97000523, LISTED, 5/30/97
TEXAS, WISE COUNTY, Texas Tourist Camp, 900--904 S US 81/287, Decatur, 97000477, LISTED, 5/30/97
WASHINGTON, SPOKANE COUNTY, Desmet Avenue Warehouse Historic District, Roughly, N side of Desmet Ave., from Pearl St. to US 395-2, Spokane, 97000450, LISTED, 5/27/97