Maryland Historical Trust

Maryland Inventory of Historic Properties number: AL-IV-A-149

Name: US 40 ALT. OVER FRANKLIN ST

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended _____ Eligibility Not Recommended X

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

Reviewer, OPS: Anne E. Bruder Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze Date: 3 April 2001

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** AL-IV-A -149
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. A-C-02 **Bridge name** US 40 Alternate over Franklin Street and CSX Transport

LOCATION:
Street/Road name and number [facility carried] US 40 Alternate

City/town Cumberland **Vicinity** _____

County Allegany

This bridge projects over: Road X **Railway** X **Water** _____ **Land** _____

Ownership: State _____ **County** X **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is bridge located within a designated historic district? Yes___ **No** X
National Register-listed district _____ **National Register-determined-eligible district** ____
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ____ **Trestle** _____ **Timber-And-Concrete** ____

Stone Arch Bridge ___

Metal Truss Bridge X

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** ____ **Bascule Multiple Leaf** ___
Vertical Lift __ **Retractile**_____ **Pontoon** _____

Metal Girder _____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension ___

Metal Arch ___

Metal Cantilever ____

Concrete ____:
Concrete Arch_____ **Concrete Slab**_____ **Concrete Beam** ____ **Rigid Frame** X____

Other _____ **Type Name** _

DESCRIPTION:

Describe Setting:

Bridge A-C-02 carries US 40 Alternate over Franklin Street, the CSX Transport railroad tracks, and industrial buildings in a built-up industrial area of Cumberland, Maryland. It travels in an east-west direction at an angle to the road and tracks. Most of the industrial buildings in the vicinity appear to predate it.

Describe Superstructure and Substructure:

This structure is a skewed, single-span, steel Pratt through-truss bridge. In in addition to the central truss, the bridge also consists of two modern concrete rigid frame spans separated from the central truss by retained fill and Mechanically Stabilized Earth (MSE) walls. The truss span has nine panels at 21'-4" each for a total length of 192 feet. The two modern concrete rigid frame spans are 32'-0" and 36'-0" long, respectively. The horizontal clear roadway width is 27 feet between curbs with a five-foot wide sidewalk on the north side. The center to center of the steel trusses is 31'-0" and the vertical clear roadway height on the truss is 14 feet at the end portals. The top chord of the truss is constructed of a built-up box which consists of steel plates and angles. The bottom chord is of the same type of construction. All diagonal and vertical truss members are built-up members consisting of steel plates and angles connected by lattice work. The deck is supported by floorbeams attached to the vertical members of the truss. The floor system consists of built-up transverse floorbeams and I-shaped longitudinal stringers. The portal and other top bracing between the two trusses is comprised of steel angles and lattice work. All joint and member connections use rivets and riveted gusset plates. The deck consists of a concrete deck slab supported by the longitudinal I-shaped stringers with concrete curbing provided along the roadside face of the north truss. The guardrails consists of modern concrete New Jersey type barrier rails along the roadside face of the south truss and W-shaped steel guardrails attached to the roadside face of the north truss. A concrete sidewalk with concrete barrier wall and handrail exists on the outside face of the north truss. The existing lamp posts and lights on the sidewalk are replicas and are not original to the previous structure. The substructure of the central truss span consists of cut stone masonry piers. MSE walls comprise the remainder of the substructure of the approaches.

Discuss Major Alterations:

The original bridge consisted of 14 spans, which included the central steel Pratt truss and 13 approach spans constructed of 10-inch concrete slab T-beams. In 1990 the approach spans were removed and replaced with MSE walls. The cut stone masonry piers supporting the truss, as well as the truss span itself, were rehabilitated at that time. No major alterations are known to have been made to the truss itself.

HISTORY:

WHEN was bridge built (actual date or date range) 1932; 1990
This date is: Actual X **Estimated** _____
Source of date: Plaque _____ **Design plans** _____ **County bridge files/inspection form** X
Other (specify) _____

WHY was bridge built? To provide a reliable crossing of US 40 over Franklin Street and the railroad, to meet local and regional transportation needs.

WHO was the designer _____

WHO was the builder _____

WHY was bridge altered? [check N/A _____if not applicable] structural needs/safety
Was bridge built as part of organized bridge-building campaign? Yes X **No** _____
This bridge was built by Allegany County as part of the Good Roads Movement.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events X **B- Person** _____
C- Engineering/architectural character X

Was bridge constructed in response to significant events in Maryland or local history? No_ **Yes** X
If yes, what event?

This bridge was one of a small but significant number of metal truss bridges erected in Maryland from the 1920s through the 1940s. Its heavy, solid construction reflects continuing advances in metal truss technology and fabrication early in the century, and the almost unyielding reliability of substantial trusses for major crossings. Such bridges were built throughout the state during the period, particularly in the early 1930s, as part of the Good Roads Movement promoted by the State Roads Commission. Many of them retain plaques indicating that they were built under the aegis of the Commission, even though they were designed by private bridge building firms.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area? No ___ **Yes** X

Because of their solidity and reliability, metal truss bridges with heavy members such as this bridge were often utilized in Maryland from the 1920s through the 1940s at long crossings. Multi-lane facilities carrying major thoroughfares, they had not only a significant impact on local growth, but facilitated regional residential, commercial, agricultural, and industrial development.

Is the bridge located in an area which may be eligible for historic designation? No X **Yes** _____
Would the bridge add to _____or detract from _____historic & visual character of the possible district?

Is the bridge a significant example of its type? No _ **Yes** X

Between 1840 and the Civil War, under the impetus of a rapidly expanding railroad system, the majority of early American metal truss bridge forms were patented and introduced. In Maryland, the earliest metal truss bridges carried rail lines, which required their great strength and reliability. From the War through the end of the century, metal truss technology was improved, steel began to replace iron, and the use of trusses was expanded to carry roads as well as rail lines.

Numerous metal truss bridges were erected in Baltimore, the original hub of the metal truss in the state, from the 1850s through the 1880s. From Baltimore, the use of the metal truss spread out to other parts of the state, particularly the Piedmont and Appalachian Plateau. Many bridge and iron works were established in the eastern United States to design and fabricate truss members, which were then shipped to sites in Maryland and elsewhere to be erected. More than 15 different bridge companies located in Maryland, Ohio, Pennsylvania, New York, Virginia, and Indiana are known to have shipped metal truss bridges to sites throughout Maryland. Bridges were first fabricated in Maryland, and shipped to sites within the state and beyond, by the companies of seminal bridge designer Wendel Bollman.

Early in the twentieth century, concrete bridges began to compete with metal truss bridges throughout the state at small to moderate crossings. With the development of uniform standards for concrete bridges by the State Roads Commission in the 1910s, the construction of smaller metal truss bridges significantly declined throughout the state. The metal truss still remained the bridge of choice for large crossings, however. In the 1920s, heavier members began to be used at these bridges. Reflecting even heavier load requirements and increased lengths, metal truss bridges erected in the state in the 1930s and 1940s were heavy and solid, rather than light and delicate like their late-nineteenth and early-twentieth century predecessors.

Numerous Pratt truss bridges were erected throughout the country between 1844, when the type was patented by Thomas and Caleb Pratt, and the early twentieth century. The Pratt has diagonals extended across one panel in tension and verticals in compression, except for hip verticals immediately adjacent to the inclined end posts of the bridge. The large majority of Maryland's surviving metal truss bridges are Pratts, built as through or pony trusses either riveted or pin-connected.

This bridge was erected during one of the three key periods (1840-1860, 1860-1900, and 1900-1960) of bridge construction in Maryland. Built in 1932, it falls within the period 1900-1960. During this era, metal truss highway bridges became increasingly standardized. Also during this period, smaller and moderate length trusses were gradually replaced by reinforced concrete structures, and the modern metal girder bridge, which could easily be widened, replaced the metal truss bridge at all but the largest approaches and crossings. Built after 1930, it is characterized by heavy solid members, rather than the relatively delicate members that characterized its late-nineteenth and early-twentieth century predecessors.

Does bridge retain integrity [in terms of National Register] of important elements described in Context Addendum? No ___ Yes _____

The metal truss itself retains its integrity. A determination has to be made, however, whether the modern concrete rigid frame spans added to either side of the truss vitiate this integrity.

Is bridge a significant example of work of manufacturer, designer and/or engineer? No__ Yes _X_

In the early twentieth century, metal truss bridges were largely supplanted in the state by concrete and, later, metal girder structures. The old metal fabricators disappeared during this period. They were replaced, in the 1920s and 1930s, by a new if less numerous generation of metal truss fabricators. Among the new bridge companies active in Maryland was the Roanoke Iron and Bridge Company, the McClintic-Marshall Company, and the American Bridge Company. This bridge was likely built by one of these three companies or one of their competitors.

Should bridge be given further study before significance analysis is made? No _X_ Yes _____

It is believed that no further evaluation is necessary to determine the eligibility of this bridge for listing in the National Register. The determination should hinge on whether or not the addition of modern concrete rigid frame bridges at either end of its truss in 1990 destroyed its integrity. If so, it is not eligible. Additional research, which could be conducted as part of any future National Register nomination prepared for the bridge, might provide further information about its history and environs.

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County survey files of the Maryland Historical Trust.

Jackson, Donald H. *Great American Bridges and Dams*. Washington, D.C: The Preservation Press, 1968

P.A.C. Spero & Company and Louis Berger & Associates, Inc. *Historic Bridges in Maryland: Historic Context Report*. Prepared for the Maryland State Highway Administration, September, 1994.

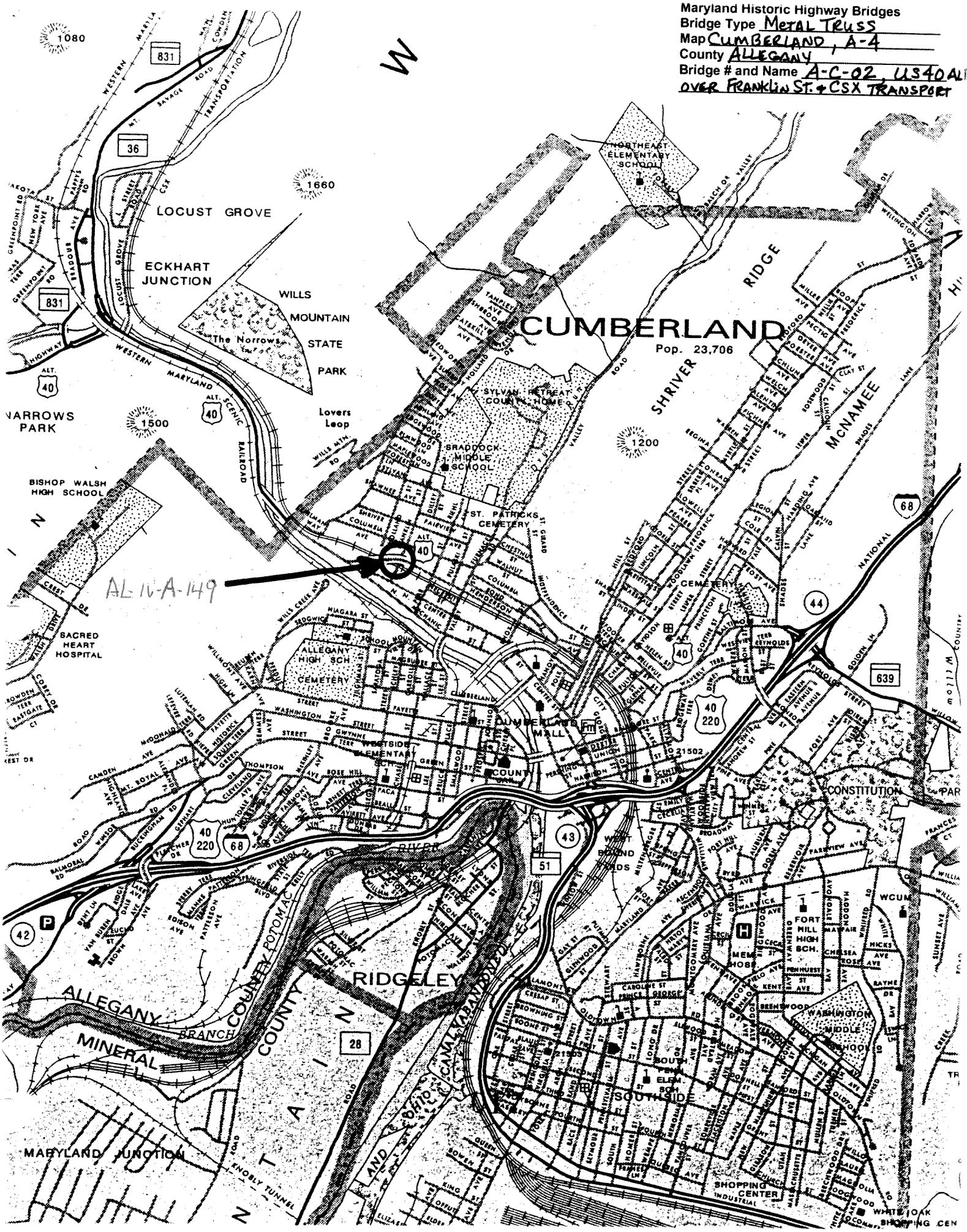
Pennsylvania Historical and Museum Commission and Pennsylvania Department of Transportation. *Historic Highway Bridges in Pennsylvania*. Commonwealth of Pennsylvania, 1986.

SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 2/2/95

Name of surveyor Charles Ziegler/Marvin Brown
Organization/Address GREINER, INC., 2219 York Road, Suite 200, Timonium, Maryland 21093-3111
Phone number 410-561-0100 **FAX number** 410-561-1150

Maryland Historic Highway Bridges
Bridge Type METAL TRUSS
Map CUMBERLAND, A-4
County ALLEGANY
Bridge # and Name A-C-02, US40 AL
OVER FRANKLIN ST. & CSX TRANSPORT




Southern States

AL-IU-A-149

#A-C-02

BR #~~20AL021O~~

FRANKLIN ST & CSX TRANSPORT

ALLEGANY CO., MD.

CHARLES ZIEGLER

2/2/95

S. H. A.

EAST APPROACH

1 OF 5

AL-IV-4-149
#A-C-02

BR #~~20A0210~~

FRANKLIN ST. & CSX TRANSPORT

ALLEGANY CO., MD.

CHARLES ZIEGLER

2/2/95

S. H. A.

SOUTH ELEVATION

2 OF 5

AL-IV-A-149
#A-C-02

BR# ~~20A0270~~

FRANKLIN ST & C.S.X. TRANSPORT

ALLEGANY CO., MD

CHARLES ZIEGLER

2/2/95

S.H.A

NORTH ELEVATION

3 OF 5


BENNETT

AL-IV-A-149
#A-C-02

BR # 20AC0210

FRANKLIN ST & CSX TRANSPORT

ALLEGANY CO., MD.

CHARLES ZIEGLER

2/2/95

S. H. A

WEST APPROACH

4 OF 5

AL-IV-A-149
#A-C-02

BR # 20A0210

FRANKLIN ST. & CSX TRANSPORT

ALLEGANY CO., MD

CHARLES ZIEGLER

2/2/95

S. H. A.

WEST APPROACH

5 OF 5