

Maryland Historical Trust

CARR-

Maryland Inventory of Historic Properties number:

~~MD 1559~~

Name:

MD 482 over east Branch

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

James

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. CARR-1559

SHA Bridge No. 6036 Bridge name MD 482 over East Branch

LOCATION:

Street/Road name and number [facility carried] MD 482 (Hampstead Mexico Road)

City/town Hampstead Vicinity X

County Carroll

This bridge projects over: Road Railway Water Land

Ownership: State County Municipal Other

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes No

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 _____

Movable Bridge _____:

Swing _____ Bascule Single Leaf Bascule Multiple Leaf _____

Vertical Lift _____ Retractable _____ Pontoon _____

Metal Girder X _____:

Rolled Girder X _____ 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 _____

Other _____ Type Name _____

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X _____

Describe Setting:

Bridge No. 6036 carries MD 482 (Hampstead Mexico Road) over East Branch in Carroll County. MD 482 runs east-west and East Branch flows north-south. The bridge is located in the vicinity of Hampstead and is surrounded by farmland.

Describe Superstructure and Substructure:

Bridge No. 6036 is a 1-span, 2-lane, metal girder bridge. The bridge was originally built in 1936, and the deck and parapets were replaced in 1981. The structure is 32 feet long and has a clear roadway width of 31 feet, 7 inches. The out-to-out width is 33 feet, 7 inches. The superstructure consists of nine (9) rolled girders which support a concrete deck and guardrails. The girders are 7 inches x 26 inches and are spaced 3 feet, 9 inches apart. The roadway is carried on the rolled girders. The concrete deck is 11 inches thick and it has a bituminous wearing surface. The roadway approach from the west curves southward and the east approach is straight. The substructure consists of two (2) concrete abutments. There are four (4) flared wing walls. The bridge has a sufficiency rating of 77.5.

According to the 1995 inspection report, this structure is in fair condition with minor section loss, cracking, spalling, and scour. The girders have minor pitting and section loss in the web areas and bottom flanges. The concrete surface has some light surface erosion. The concrete is in poor condition in the substructure. The abutments have spalling and horizontal cracking. There is heavy spalling at the west abutment and wing wall. There is also scour along the northeast wing wall and the west abutment.

Discuss Major Alterations:

According to 1981 reconstruction plans, the deck and parapets were replaced and guard rails were added to the structure.

HISTORY:

WHEN was the bridge built: 1936
This date is: Actual _____ X _____ Estimated _____
Source of date: Plaque _____ Design plans _____ County bridge files/inspection form _____
Other (specify): State Highway Administration bridge files/inspection form

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to correct functional or structural deficiencies.

Was this bridge built as part of an organized bridge-building campaign?

Unknown

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

- A - Events** _____
- B- Person** _____
- C- Engineering/architectural character** _____

The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost \$2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic. The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900"

by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a metal girder bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge, no longer retains its original parapets, which were replaced with guard rails during the 1981 reconstruction of the bridge. Because of this, it is lacking the integrity of distinctive features visible from the roadway and is an undistinguished example of a metal girder bridge.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including rolled longitudinal I-beams and concrete abutments.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files _____ SHA inspection/bridge files X
 Other (list):

Gunnarson, Robert

1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario.* Greenberg Publishing Co., Sykesville, Maryland.

Johnson, Arthur Newhall

1899 *The Present Condition of Maryland Highways.* In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

Tyrrell, Henry G.

1911 *History of Bridge Engineering.* Published by author, Chicago.

SURVEYOR:

Date bridge recorded 3/4/97

Name of surveyor Caroline Hall/Eric F. Griffitts

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Maryland Historic Highway Bridges

Bridge Type METAL GIRDER

MHT # CARR-1559

Map WESTMINSTER B-11

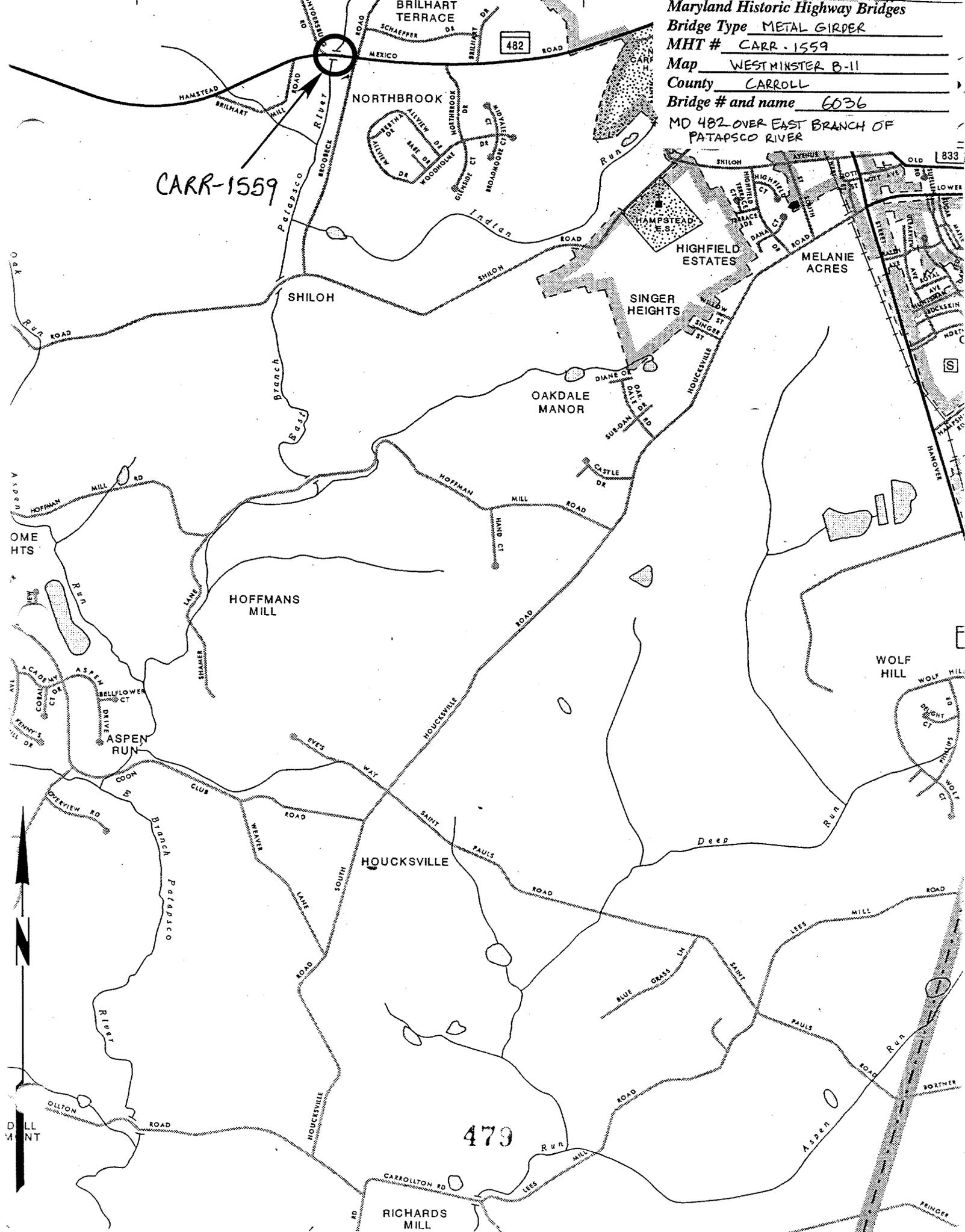
County CARROLL

Bridge # and name 6036

MD 482 OVER EAST BRANCH OF PATAPSCO RIVER

CARR-1559

479





1. CARR-1559
2. MD 482 over EAST Branch
(6036)
3. Carroll
4. Eric Griffiths
5. 3-97
6. MD SHPO
7. detail of Girders under
Bridge
8. 10+6



1. CARR - 1559
2. MD 482 over EAST Branch
(6036)
3. Carroll
4. Eric Griffiths
5. 3-97
6. MD SHPO
7. South Elevation of Bridge
8. 2 of 6



1. CARR-1559
2. MD 482 over EAST BRANCH
(6036)
3. Carroll
4. Eric Griffiths
5. 3-97
6. MD SHPO
7. West Approach
8. 30+ 4



1. CARR-1559
2. MD 482 over East Branch
(6036)
3. Carroll
4. Eric Griffiths
5. 3-97
6. MD SHPD
7. EAST Approach
8. 4 of 6



1. CARR - 1559
2. MD 482 over East Branch
3. Carroll (6036)
4. Eric Griffiths
5. 3-97
6. MD SHPD
7. North Elcuation
8. 5 of 6



1. CARR - 1559
2. MD 482 over East BRANCH
(6036)
3. Carroll
4. Eric Griffiths
5. 3-97
6. MD SHPD
7. Condition of Northeast Wingwall
8. 60 of 6



CARR-1558

Bridge # 6026

5/89

MD 832 / BEAR BR,

I.D PHOTO

Looking at S. end



CARR-1558

Bridge# 6026

5/89

MD 832/BEAR BR.

I. D. PHOTO

Looking at N. end