Maryland Historical Trust

Maryland Inventory of Historic Properties number: HA-1882

Name: Plumtree Rd. over Plumtree Run.

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 ___X____ Eligibility Not Recommended _____

Criteria: ____A ____B _X_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 Properties
Historic Bridge Inventory
Maryland State Highway Administration
Maryland Historical Trust

MHT Number HA-1882

Name and SHA No. H 50 over Plumtree Run

Location:
Street/Road Name and Number: Plumtree Road over Plumtree Run

City/Town: Fallston Vicinity X

County: Harford

Ownership: __State_X_County Municipal__Other

This bridge projects over: __Road__Railway_X_Water__Land

Is the bridge located within a designated district:__yes_X_no

__NR listed district__NR determined eligible district
__locally designated__other
Name of District_____

Bridge Type:

__Timber Bridge
__Beam Bridge__Truss-Covered__Trestle
__Timber-and-Concrete

__Stone Arch

__Metal Truss

__Movable Bridge
__Swing __Bascule Single Leaf__Bascule Multiple Leaf
__Vertical Lift__Retractile__Pontoon

_X_Metal Girder
_X_Rolled Girder __Rolled Girder Concrete Encased
__Plate Girder __Plate Girder Concrete Encased

__Metal Suspension

__Metal Arch

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_Metal Cantilever

_Concrete
_Concrete Arch _Concrete Slab_Concrete Beam
_Rigid Frame
_Other Type Name_____

Description:

Describe Setting:
Bridge H 50 carries Plumtree Road east-west over Plumtree Run in Harford County, Maryland. The east approach to the bridge is a bituminous roadway with a sharply curved steep downgrade. The west approach to the bridge is a gravel roadway, and has a slight curve and downgrade to the bridge. There is a W-beam traffic barrier on the east approach to the bridge; there is no traffic barrier on the west approach. The area around the bridge is surrounded by woods.

Describe Superstructure and Substructure:
Bridge H 50 is a 24' single span steel beam structure with a timber plank deck. It is supported on two full height stone masonry abutments partially encased in concrete. The main superstructure members consist of seven stringer I-beams and two wide flange beams. Two of the seven stringers have steel bearing plates, but the other stringers have no bearings. The timber deck is composed of 3" x 12" wood planks set at a 65° to the stringers. They are attached to 4" x 6" timber nailers running adjacent to the steel beams. The deck is 14.5' wide (out-to-out) and has a clear bridge width of 13.75'. The abutment backwalls consist of steel channel sections. The railing is a W-beam guardrail.

The substructure of the bridge is in fair condition however, the superstructure is in need of replacement. The steel beam stringers are severely corroded with a 35% maximum measured loss of bottom flange area. The webs are also severely corroded with 10% measurable loss. The second interior stringer on the north side has a local buckle in the top flange 8' from the east abutment, and the first interior stringer on the north side has a 1" wide 1 1/2" long slotted hole in the bottom flange at mid-span. The abutment and wing wall surfaces are sound except for some areas of mortar loss near the base of the east breastwall, and a 2' x 12' area of mortar loss at the base of the west abutment. The end portion of the downstream east wing wall is composed of piled stones. The steel channel backwalls are severely corroded but have no corrosion holes.

Discuss Major Alterations:
The current timber deck was replaced between 1991 and 1993, which had not been attached to the steel stingers. W-beam guardrail was placed on the bridge in 1992. The lack of bearings and the difference in the steel stringer types may represent and episode of repair and replacement. This bridge had a 1989 PSI rating of 12,708. Due to the deteriorated condition of this bridge, this was not the maximum

PSI rating. However, the next highest rating of 14,000 PSI is likely to have been close to the bridges original load capacity. If that is the case, this is consistent with steel beams used in bridge construction before 1905. It is likely that the wide flange steel beams which were introduced at a later date, are part of a rehabilitation project of the superstructure. The partial encasement of the abutments and wingwalls in concrete may also represent an episode of modification or repair. The W-beam guardrails replaced an earlier guardrail of unknown type.

History:
When Built: 1900 est.
Why Built: Local transportation needs
Who Built: Unknown
Why Altered: Improved to meet current safety standards
Was this bridge built as part of an organized bridge building campaign:Unknown

Surveyor Analysis:
This bridge may have NR significance for association with:
__A Events __Person
__C Engineering/Architectural

Was this bridge constructed in response to significant events in Maryland or local history:

No, this bridge was not constructed in response to significant events in Maryland or local history.

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?

The construction and or alteration of this bridge has not had a significant impact upon the growth and development of the local area.

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

This bridge may be located in an area which may be eligible for historic designation. It is located just outside the Edgewood historic district, any future expansion of the district boundaries may include this bridge within its boundaries. It is unknown whether this bridge would add or detract from the historic and visual character of the possible district.

Is the bridge a significant example of its type?

This does not appear to be a significant example of its type. One of the bridge files estimated that this bridge may have been constructed as early as 1900. The PSI rating of this bridge indicates that some of the steel stingers date before 1905. Though bridge No H 50 represents a very early example of the use of rolled girder bridges, its loss of integrity makes unlikely to be a significant example of its type.

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

This bridge does not appear to retain the integrity of the primary character defining elements. The abutments are partially encased in concrete, and evidence indicates that two of the original steel I-Beam stringers have been replaced with wide flange steel stringers. The original timber deck was recently replaced with a new timber deck. The current W-Beam guardrail probably replaced an earlier timber or steel pipe style of guardrail. The only original character defining elements which appears to retain integrity, are several of the steel I-Beams, which probably date to the original structure.

Should this bridge be given further study before significance analysis is made and Why?

This bridge does not appear to retain integrity of its primary character defining elements, and is not eligible for inclusion on the National Register of Historic Places.

Replacement of the bridge superstructure and approaches was recommended following the 1993 inspection report.

Bibliography:

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1953 7.5' Edgewood Quadrangle, photorevised 1985.

United States Geological Survey
1901 15' Gunpowder Quadrangle.

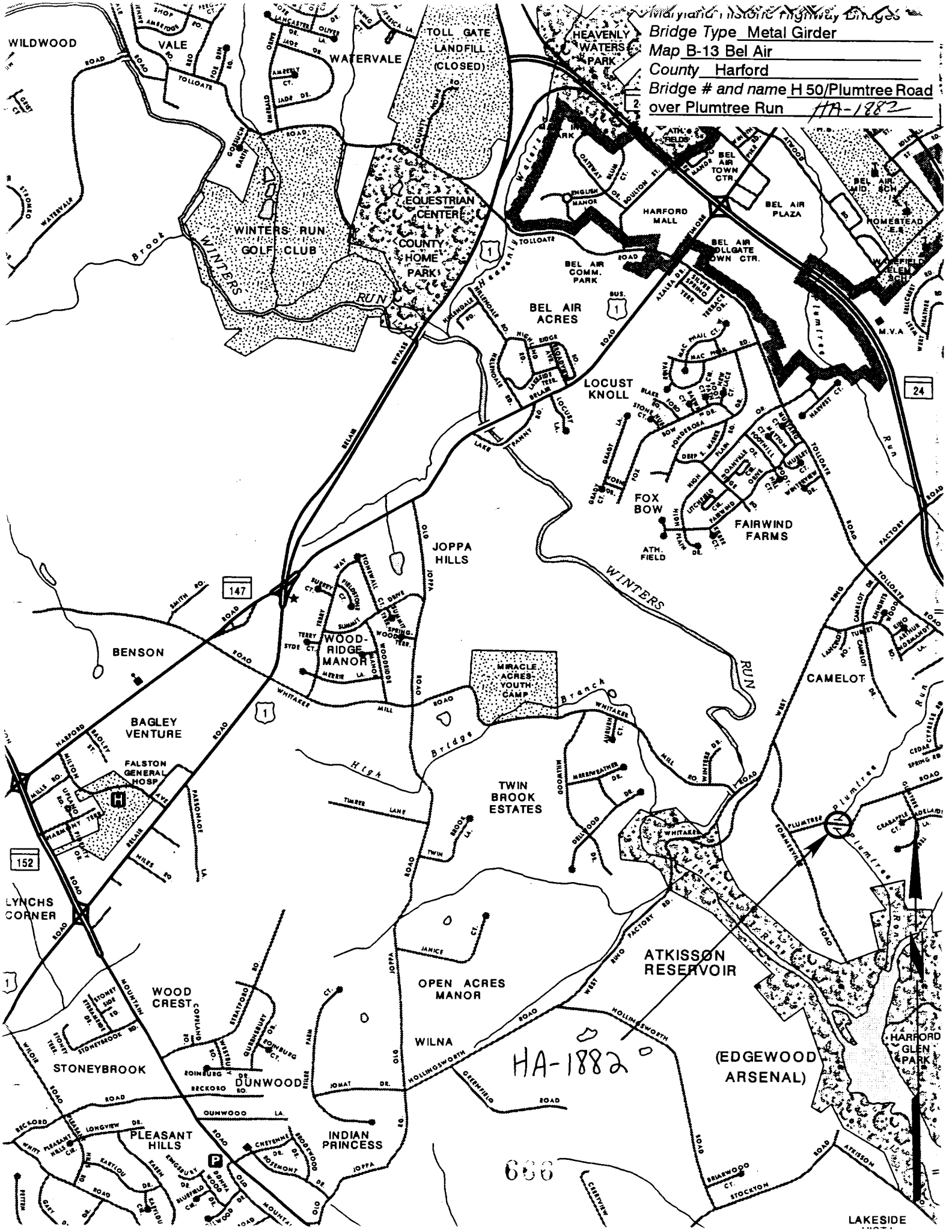
Wright, C. Milton.
1967 Our Harford Heritage: A History of Harford County, Maryland.

Surveyor:

Name: Jason D. Moser **Date:** September 1995
Organization: State Highway Admin. **Telephone:** (410) 321-2213
Address: 2323 West Joppa Road Brooklandville, MD 21022

Maryland Historic Highway Bridges

Bridge Type Metal Girder
Map B-13 Bel Air
County Harford
Bridge # and name H 50/Plumtree Road
over Plumtree Run HA-1882



HA-1882

HARFORD COUNTY, MD

JOHN TARQUINIO

26 JAN 1995

~~MARYLAND SHPO~~

- BRIDGE NO. H50 OVER PLUM TREE RUN
- VIEW LOOKING EAST ON
  PLUM TREE RD

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HA-1882

HARFORD COUNTY, MD

JOHN TARQUINIO

26 JAN 1995

MARYLAND SHPO

- BRIDGE NO. ~~H54~~ H50 OVER PLUM TREE RUN

- VIEW LOOKING WEST ON PLUMTREE ROAD

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HA-1882

HARFORD COUNTY, MD

JOHN TARQUINIO

26 JAN 1995

MARYLAND SHPO

- BRIDGE NO. ~~A50~~ H50 OVER PLUMTREE RUN

- VIEW LOOKING SOUTH

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HA-1882

HARFORD COUNTY, MD

JOHN TARQUINIO

26 JAN 1995

MARYLAND SHPO SHA

- BRIDGE NO H50 OVER PLUM TREE RUN

- VIEW LOOKING NORTH

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