

Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA-2719

Name: BRIDGE #3031, MD 30 OVER WEST
MD. RAILROAD

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 <u> X </u>	Eligibility Not Recommended <u> </u>
Criteria: <u> X </u> A <u> </u> B <u> X </u> C <u> </u> D	Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> None
Comments: _____ _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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

MHT No. BA-2719

SHA Bridge No. 3031 Bridge name MD 30 over Western Maryland R.R. (Maryland Midland Railway)

LOCATION:

Street/Road name and number [facility carried] MD 30

City/town Glen Morris

Vicinity _____

County Baltimore

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

Ownership: State X County _____ Municipal _____ Other _____

HISTORIC STATUS:

Is the 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 _____

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. 3031 carries MD 30 over the Maryland Midland Railway (formerly the Western Maryland Railway) in Baltimore County. MD 30 runs in a north-south direction and the Maryland Midland runs east-west. The bridge is located in the community of Glen Morris and is surrounded by widely-spaced single family dwellings, open space, and a lumberyard on the southeast side of the bridge.

Describe Superstructure and Substructure:

Bridge No. 3031 is a three-span, two-lane, rolled girder bridge. The bridge was originally built in 1936. The structure consists of three spans with equal lengths of 68 feet each for a total length of 204 feet and a minimum vertical clearance over the railroad tracks of 22 feet. The roadway has a clear width of 40 feet with one sidewalk on the east side that measures 4 feet, 11 inches clear. The out-to-out width is 48 feet, 6 inches. The superstructure consists of 12 (twelve) rolled girders which support a concrete deck and concrete balustrades with the outer girders encased in concrete on the outer sides and bottom. The concrete deck is 10.25 inches thick including a 1 inch monolithic wearing surface. The structure has concrete pierced balustrade railings with simple ornate endblocks and the roadway approaches at either end have moderate upgrades. The substructure consists of 2 (two) concrete abutments and 2 (two) concrete piers placed on a 33°18' angle to the road centerline running in a northeast-southwest direction.

According to the 1998 inspection report, the overall condition of the bridge was not noted, however, various defects were recorded including minor cracking and some spalling and concrete deterioration on both abutments. Both piers were noted to have fine cracks and deteriorated concrete with exposed rusted reinforcement, and deterioration was noted on the movable bearings in the form of severe rust scale and holes through the stiffener webs. Many of the bearings were leaning with some of the rockers raised off the masonry plate. No mention was made in the inspection report about the asphalt wearing surface or concrete railings, however, each appear to be sound with some concrete spalling noted around the arched openings in the railings and cracks in the asphalt where the asphalt was applied over the expansion joints.

Discuss Major Alterations:

A notation on the original bridge Plan and Profile dated November 14, 1995, states that the bridge is "as built." In addition, inspection reports from 1994 and 1998 detail no major alterations to the bridge.

HISTORY:

WHEN was the bridge built: 1936

This date is: Actual X Estimated _____

Source of date: Plaque _____ Design plans X SHA bridge files/inspection form X

Other (specify): _____

WHY was the bridge built?

The bridge was constructed to eliminate an at-grade railroad crossing and increase the efficiency of the transportation network.

WHO was the designer?

State Roads Commission

WHO was the builder?

Unknown

WHY was the bridge altered?

N/A

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

It appears that the bridge was built as part of an organized bridge building campaign to eliminate grade crossings in Baltimore County.

SURVEYOR/HISTORIAN ANALYSIS:

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

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

The bridge is eligible for the National Register of Historic Places under Criterion A, as an example of one of the many metal girder bridges built as part of the state and national grade crossing elimination movement—a continuing public effort to eliminate dangerous at-grade crossing of railroad tracks by automotive and wagon traffic—in the period between 1920 and 1965. The bridge reflects the development of this trend within the transportation network on the local, state, regional, and national level. The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of rolled girder bridge construction. The structure has a high degree of integrity and retains such character-defining elements of the type as the rolled longitudinal I-beams, concrete deck and balustrade railings, and concrete abutments and piers.

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 engineer 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 the Jones Falls and the 106-foot double-span girder bridge at Pierces'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 of 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 traverse 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.

Bridge 3031 was built in 1936 to eliminate a railroad grade crossing where the Western Maryland Railway crossed Hanover Road. The bridge is currently in use carrying a steadily increasing traffic load as new housing developments are constructed, businesses are built, and small towns expand between Reisterstown and Baltimore to the south, and Hampstead and Hanover, Pennsylvania, to the north. Beneath the bridge, the Maryland Midland Railway currently operates over the tracks of the former Western Maryland Railway. For almost 140 years the highway and railroad have shared their location in Glen Morris as changes in transportation patterns have affected the evolution of each. However, it was 125 years before the arrival of the railroad that the first road was established through the area that would eventually become Glen Morris.

As the area in and around Baltimore began to grow and expand in the second quarter of the eighteenth century, a series of roads began to develop that tied Baltimore with the farms of Southern Pennsylvania. Located some forty miles closer to Baltimore than Philadelphia, roads from Pennsylvania's Adams and York counties to Baltimore were the direct result of economics and geography (State Roads Commission 1959: 8). In 1736-37 a wagon road was cut through from Baltimore City to the Conewago Settlement [Hanover] in Pennsylvania passing through present-day Glen Morris. Known as the Conewago Road and sometimes called the Pack Horse Road, the dirt road followed an earlier Indian trail as the predecessor to today's MD 30 (Goodwin 1966: 3). The opening of the Conewago Road allowed for the movement of agricultural commerce into Baltimore from Adams County and resulted in a southern migration of German immigrants from Pennsylvania to communities such as Reister's Town and Baltimore Town at the roads southern terminus (Marks 1975: 6).

After more than fifty years of use, the road was ordered widened with a stone base by the state of Maryland in 1793. This was attempted with the use of convict labor who employed wheelbarrows to complete their task. As a result, the road took on a third name as locals referred to it as the Wheelbarrow Road. Due to a lack funds, the work was not completed and the road was bought by private individuals who completed the work and turned it into a turnpike (Goodwin 1966: 9). Incorporated in 1805, the Baltimore and Reisterstown Turnpike Company ran from Franklin Street in Baltimore to Reisterstown where the road split into two branches—the Westminster Branch and the Hanover Branch which followed the old Conewago Road (Hollifield 1978: 32). By 1809, the entire system was being referred to as Reister's Town Turnpike (Marks 1975: 7). However, towards the end of the nineteenth century, period maps consistently label the branches independently with the Hanover Branch identified as the Hanover Turnpike (Bromley 1898). In 1862, the Western Maryland Rail Road was opened through Glen Morris to Union Bridge and soon supplanted commercial traffic on the turnpike causing the road to become more oriented towards the surrounding agricultural area as opposed to a major thoroughfare for non-local commerce (Brooks and Rockel 1979: 309). Railroads in general dominated the movement of commerce in all but local traffic during the second half of the nineteenth century causing a decline in the importance and upkeep of turnpikes due to decreasing revenues (State Roads Commission 1959: 36,39).

Although a Geological Survey Commission report described the Reisterstown Turnpike as one of the best turnpikes around Baltimore in 1899, by 1915 the Baltimore County Circuit Court found the section of the turnpike that included Glen Morris to be in an improper state of repair and suspended the collection of tolls. In the end, the establishment of the Maryland Highway Division—later to become the State Roads Commission—to develop a system of improved roads throughout the state helped to bring about the demise of the turnpike as the Commission acquired all of the important turnpikes. The Hanover Turnpike was officially turned over to the State Roads Commission in 1919 having been one of the last turnpikes acquired by the state. Renamed the Hanover Road and given the numerical designation of MD 30, the road began to regain its former strength as a commercial thoroughfare as automobile and truck technology improved (Hollifield 1978: 10,32,40).

As the number of motor vehicles increased in the nineteen twenties, the Commission turned its attention towards the comfort and safety of the motorist (State Roads Commission 1959: 70). One improvement made benefited both the motorist and the railroads. In 1929, one-half cent of a four cent gasoline tax was designated for the elimination of railroad grade crossings. The railroads would be required to contribute 50%, but would be able to eliminate crossing gates, watchman, and reduce their liability in damage suits. By 1930, 21 grade crossings were eliminated with 13 more in the planning stage (State Roads Commission 1959: 104).

The MD 30 bridge in Glen Morris was built to eliminate the grade crossing that had existed since the Western Maryland Rail Road arrived in 1862. Located a short distance to the west of the original crossing, one can see that earthen ramps were built up to the bridge to give the highway the elevation needed to clear the railroad right-of-way. As part of the grade elimination project, a short stretch of MD 30 had to be relocated, although the original alignment still exists as a local access road—the grade crossing is no longer in existence. In addition to bypassing the original railroad crossing, the Reisterstown Lumber Company complex is adjacent to the bridge on the southeast side and is situated around the southern approach to the old grade crossing. At least one building located adjacent to the old crossing was built circa 1877 by Peter Zouck. Today, the building houses offices of the Reisterstown Lumber Company having seen service as a residence, store, post office, apartment building, and possibly the Glen Morris railroad station (Eckhardt n.d.: article).

Bridge 3031 spans the right-of-way of the Maryland Midland Railway, the origins of which date to May 27, 1852. On that date the Maryland General Assembly granted a charter to the Baltimore, Carroll & Frederick Rail Road for the purpose of constructing a railroad from Baltimore to Westminster and then westward to the Monocacy River in the vicinity of Hagerstown. The ultimate goal of the railroad was to tap the iron mines, mills, and quarries located in and around Westminster and to access the Cumberland Valley's rich agricultural resources that were being diverted to Philadelphia by the Cumberland Valley Rail Road (Cook and Zimmerman 1981: 37). The railroad was opened through Glen Morris in November 1862 at which time the terminus was located in Union Bridge to the west of Westminster. Further construction stalled as a result of the Civil War and did not begin again until 1868. On July 2, 1863, the Western Maryland through Glen Morris gained strategic value as the Union Army took possession of the line for five days to supplement the flow of military supplies from Baltimore to Westminster (Cook and Zimmerman 1981: 38).

The location of the railroad in relation to the MD 30 crossing is a direct result of the refusal of the Reisterstown townspeople to allow the railroad to locate its right-of-way in their town. As a result, the railroad skirted the town to the east, turning west north of town and creating the present alignment with MD 30 (Brooks and Rockel 1979: 308). Prior to 1873, trains from Westminster through Glen Morris reached Baltimore by way of a branch line originally built by the Baltimore & Susquehanna Rail Road between Owings Mills and Relay House. At Relay House trains were routed onto the Northern Central Railway for the remainder of the trip into Baltimore (Cook and Zimmerman 1981: 38). In 1873, the Western Maryland completed its own line into Baltimore and by 1912, the main line extended from Port

Covington on Baltimore's Patapsco River waterfront through Glen Morris to Cumberland in Western Maryland. There the railroad branched north to Connellsville, Pennsylvania, and south to the coal fields of West Virginia. As a result, the Western Maryland provided an important tidewater terminal for West Virginia coal and freight traffic from Pittsburgh and the mid-west in competition with the Baltimore & Ohio and Pennsylvania railroads. Much of the railroad's expansion at the beginning of the twentieth century was the result of its acquisition by George Gould, represented by the Fuller Syndicate, who intended to include the Western Maryland as the eastern terminus of a transcontinental railroad system. However, through a long series of events that caused Gould to over-commit himself, the Western Maryland Rail Road entered receivership in March of 1908, reemerging as the Western Maryland Railway in January of 1910 (Cook and Zimmerman 1981: 40-49).

In addition to freight traffic, the Western Maryland main line through Glen Morris provided an important avenue of transportation for local and luxury long distance passenger trains at a time when overland road transportation was slow and inefficient. Although the long distance "limiteds" that included sleepers, diners, parlors, and club cars only lasted from 1912 to 1917, shorter coach-only trains provided basic service from opening of the line to Union Bridge until 1957 (Cook and Zimmerman 1981: 242). These coach-only trains gained a substantial portion of their revenue from Railway Post Office business (Cook and Zimmerman 1981: 239). Trains 20 and 21 between Union Bridge and Baltimore were the Western Maryland's designated commuter trains offering convenient access to Baltimore from Glen Morris, however, the railroad charged high fares that deemed the service impractical (Brooks and Rockel 1979: 308). The final regularly scheduled passenger train through Glen Morris was the Baltimore-Hagerstown local in June of 1957 (Cook and Zimmerman 1981: 266).

In 1967, as a result of evolving changes in the operations and economics of eastern railroads, the Interstate Commerce Commission approved a bid by the Chesapeake & Ohio-Baltimore & Ohio railroads to control the Western Maryland. Eventually swallowed up as part of the Chessie System that contained all three railroads, the original main line through Glen Morris saw a decline in traffic until sections were washed out by Hurricane Agnes in June 1972. Reopened in November 1974, the line was again washed out in September 1975 by Hurricane Eloise (Cook and Zimmerman 1981: 281,291). It wasn't until 1987 that the line would be rebuilt by the Maryland Midland Railway—a regional railroad created in 1980 with Maryland's help to maintain service on marginal rail lines considered unprofitable by the Chessie System and Conrail. Today, the line through Glen Morris supports traffic interchanged with CSX Corporation (Chessie's successor) at nearby Emory Grove that is destined for industries in and around Westminster and Union Bridge (House 1993: pull out section).

Bridge 3031 has been in continuous use since it was built in 1936 as a two-lane highway bridge. Despite the relocation of the stretch of Hanover Road that incorporates the bridge, the road and bridge retain the rural character of the original two-lane road and continue to be an important link north to Pennsylvania and the growing suburban communities between Reisterstown and the state line.

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?

The bridge is a potentially significant example of a rolled girder bridge, possessing a high degree of integrity.

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

The bridge retains much of the character-defining elements of its type including the longitudinal steel I-beams, concrete deck and balustrade railings, concrete encased outer beams, and concrete abutments and piers. However, some deterioration is evident.

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

This bridge is a significant example of the work of the State Roads Commission in the 1930s.

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.

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SURVEYOR:

Date bridge recorded 06/27/00

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BA 2719
Bridge 3031

West Looking East

MD 30 over Western MD RR

negs at MD SHA

Bridge Engineer (SHA)

1996.

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BA 2719

Bridge 3031

MD 30 over Western MD
Railroad.

Photos by Bridge Engineers (EHA)
1996

reps at MDSHA.

Top Deck, looking north

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Bridge 3031

MD 30 over Western Md
Railroad

Photos taken by SHA bridge
engineers (1976)
near at MD SHA

North looking South
End

3/8



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Bridge 3031

MD 30 over Western Md RR

Bridge Engineers (SHA) 1997

→ negs at MD SHA D

Sidewalk (N.E. end).

418



BA 2719

Bridge 30 31

MD 30 over Western MD RR

Bridge Engineers (SHA) 1997

req at MD SHA

Overview of Pier # 2

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BA 2719

Bridge 3031

MD 30 over Union Md RR.

Photos - Bridge engineers (SAA)

1996

Negs at MD SIAA

East Looking West

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BA 2719

Bridge 3031

MD 30 over Western Md RR

Photo: Bridge Engineers, 1996

negs at MD SHA

Sidewalk on East side

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BA 2719

Bridge 3031

MD 30 over Wabash and RR.

SHA bridge engineer - 1997

near at MD 54 VA

South Portal, west side