

Maryland Historical Trust

Maryland Inventory of Historic Properties number: B-4535

Name: BC-1406/MT. ROYAL AVE. OVER HOWARD 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 <u> X </u>	Eligibility Not Recommended <u> </u>
Criteria: <u> A </u> <u> B </u> <u> C </u> <u> D </u>	Considerations: <u> A </u> <u> B </u> <u> C </u> <u> D </u> <u> E </u> <u> F </u> <u> G </u> <u>None</u>
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. B-4535

SHA Bridge No. BC-1406 Bridge name Mt. Royal Avenue over Howard Street

LOCATION:

Street/Road name and number [facility carried] Mt. Royal Avenue

City/town Baltimore Vicinity _____

County _____

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

Ownership: State _____ County _____ Municipal Other _____

HISTORIC STATUS:

Is 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 _____:

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

Other _____ Type Name _____

B-4535

DESCRIPTION:

Describe Setting

Bridge BC-1406 carries Mt. Royal Avenue across Howard Street at the University of Maryland near Penn Station in the city of Baltimore. It runs in a northwest to southeast direction. It is located in a densely built-up nineteenth- and twentieth-century area of the city.

Describe Superstructure and Substructure:

Bridge BC-1406 is a single span reinforced concrete arched rigid frame structure. It has a total length of 68'-0" and out to out width of about 155'-0". The deck is reinforced concrete with an integral wearing surface. There are 10'-0" sidewalks on both sides along stone parapets. The substructure consists of two reinforced concrete abutments and stone-faced wingwalls. Stepped-back vertical lines climbing the exterior faces of the abutments and wingwalls are a handsome reflection of the Streamline Moderne style popular at the time. The style is also reflected at the horizontal lines running along the exterior faces of the parapets. Under the bridge, there is a 5'-0" sidewalk on the south side along Howard Street. A grassy strip runs between its two pairs of traffic lanes.

Discuss Major Alterations:

There is no evidence of any major rehabilitation or alteration to this bridge.

HISTORY:

WHEN was bridge built (actual date or date range) 1938

This date is: Actual Estimated _____

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

Other (specify) Greiner Inspection Report

WHY was bridge built? To provide a reliable crossing of Mount Royal Avenue over Howard Street, to meet the transportation needs of the city of Baltimore..

WHO was the designer _____

WHO was the builder _____

WHY was bridge altered? [check N/A if not applicable]

Was bridge built as part of organized bridge-building campaign? Yes No _____

This bridge was built by Baltimore City as part of the Good Roads Movement.

SURVEYOR/HISTORIAN ANALYSIS:

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

A - Events _____ B- Person _____

C- Engineering/architectural character

B-4535

Was bridge constructed in response to significant events in Maryland or local history? No Yes
If yes, what event?

This bridge was built during the 1930s as part of the Good Roads Movement during the period.

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

This bridge probably replaced an earlier span and the area was already largely developed at the time of its construction. However, it still continued to promote residential, commercial, and industrial development in and around this built-up area of the city.

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

The bridge is located in a heavily built-up area of Baltimore with many surrounding resources that are more than 50 years old. There could conceivably be a historic district in the area, but it was beyond the scope of this project to define the boundaries of such a potentially enormous district.

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

Concrete bridges are the largest component of Maryland's historic bridges. Their numbers reflect how quickly they became popular after their introduction to the state and the country at the opening of the twentieth century. Many in Maryland are purely functional structures, but their plastic nature made them amenable to graceful curves and ornamental parapets that reflected the influence of the City Beautiful movement during the first part of the twentieth century. The versatility and strength of reinforced concrete bridges, along with their plasticity, made them the preferred choice for bridges by state and county highway departments in Maryland and throughout the country in the 1910s. The standard plans of the State Roads Commission of the teens, twenties, and thirties made their use almost universal during that period.

While concrete bridges as a whole are very common in Maryland, reinforced concrete rigid frame bridges make up one of the smallest groups of historic bridge types in the state. There are probably only about a dozen such structures standing in the state under county or state control that were erected prior to 1945. The rigid frame bridge, unlike other reinforced concrete spans, is monolithic. It is characterized by a superstructure and substructure, including abutments, designed as a continuous unit. (Concrete balustrades, cast afterwards, are not part of the monolithic design.) The rigid frame was an important engineering advance for reinforced concrete bridges. It was developed by German engineers and Brazilian Emilio Baumgart around 1920, and introduced to the United States primarily through the efforts of New York engineer Arthur G. Hayden in 1922-1923.

Concrete rigid frame bridges became increasingly popular in the 1930s and 1940s. It was during this period that Maryland's few examples of the type were erected. These include bridges 1030 (1937, 1992) in Allegany County; BC-1406 (1938) and BC-3402 (1940) in Baltimore City; 5013 (1936) in Caroline County (1936); 6031 (1934) in Carroll County; 10058 (1941) in Frederick County; 11018 (1937) in Garrett County; 13032 (1939) in Howard County; 21013 (1941), 21015 (1936), and 21016 (1936) in Washington County; and WO-801 (c.1930) in Worcester County. These bridges generally have one or two spans of between 30 and 60 feet; the longest, BC-1406, measures 68 feet. With the exception of WO-801, the history of which remains clouded, they were built by the state or the city of Baltimore.

This bridge falls within the 1910-1940 period of significance for concrete bridges, during which reinforced concrete bridge construction was increasingly standardized in the state and particular subtypes, including the rigid

B-4535

frame, were introduced to the state road network. It is notable beyond its engineering for its deft expression of the Streamline Moderne style, which was popular during this period, particularly in the late 1930s when the bridge was constructed.

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

Is bridge a significant example of work of manufacturer, designer and/or engineer? No Yes

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

It is believed that no further research is necessary to determine the eligibility of this bridge for listing in the National Register. It should be compared with the other concrete rigid frame bridges listed above and a determination should be made whether all of them (excluding 1030 in Allegany County, 13032 in Howard County, and WO-081 in Worcester County, which have lost their integrity) are eligible to the Register because of their rarity and/or good representation of the type, or just the best examples. Additional research, however, 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.

BIBLIOGRAPHY:

Bridge inspection reports and files of the Maryland State Highway Administration.

Condit, Carl. *American Building*. Chicago: University of Chicago Press, 1968.

County survey files of the Maryland Historical Trust.

Greiner Inspection Report.

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.

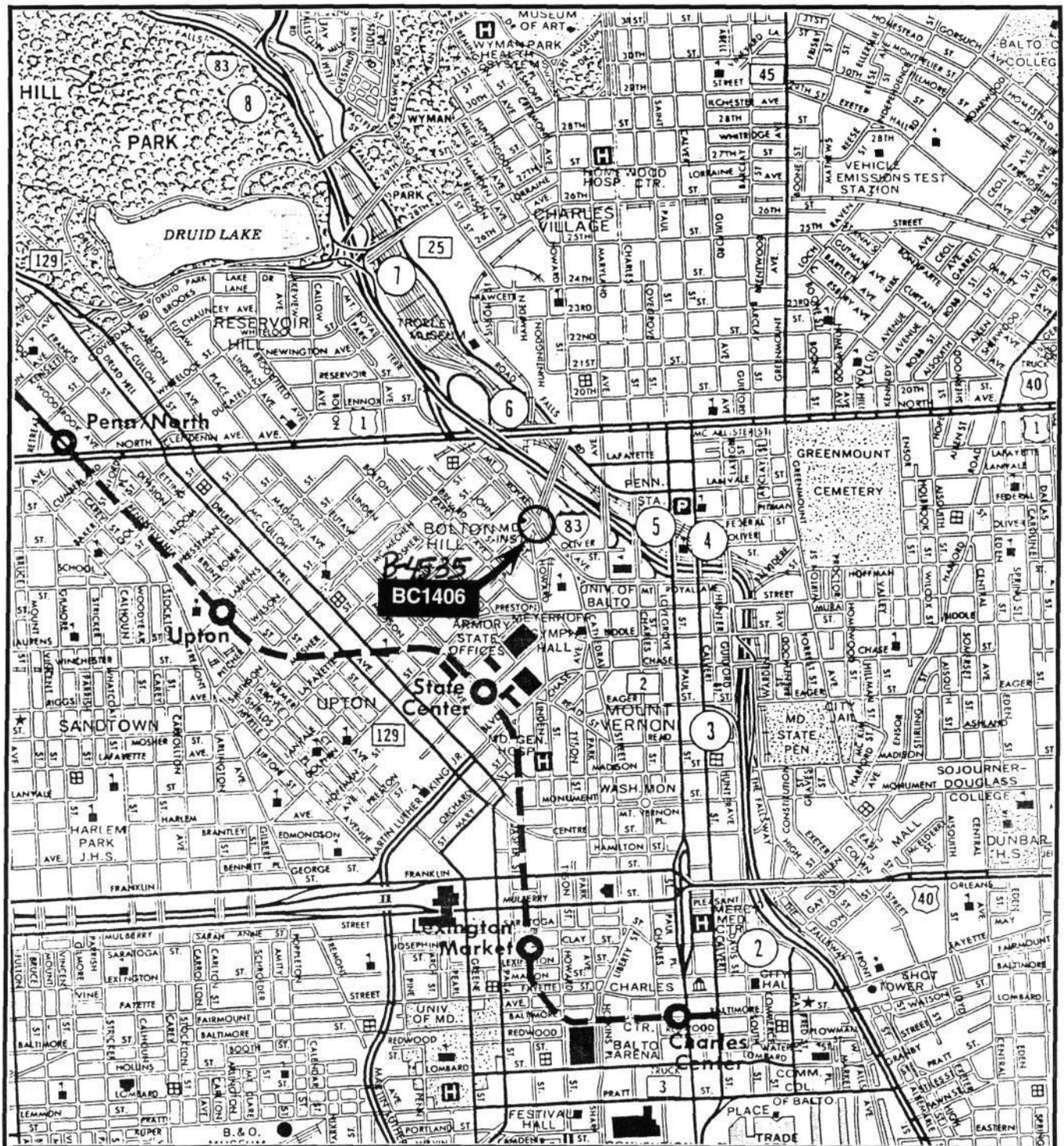
SURVEYOR/SURVEY INFORMATION:

Date bridge recorded 1/25/95

Name of surveyor Brandi Carr/Tim Schoen/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

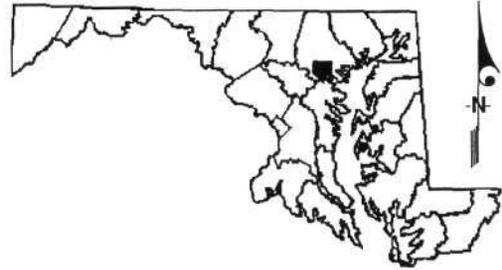


Baltimore City - Bridge Number BC1406

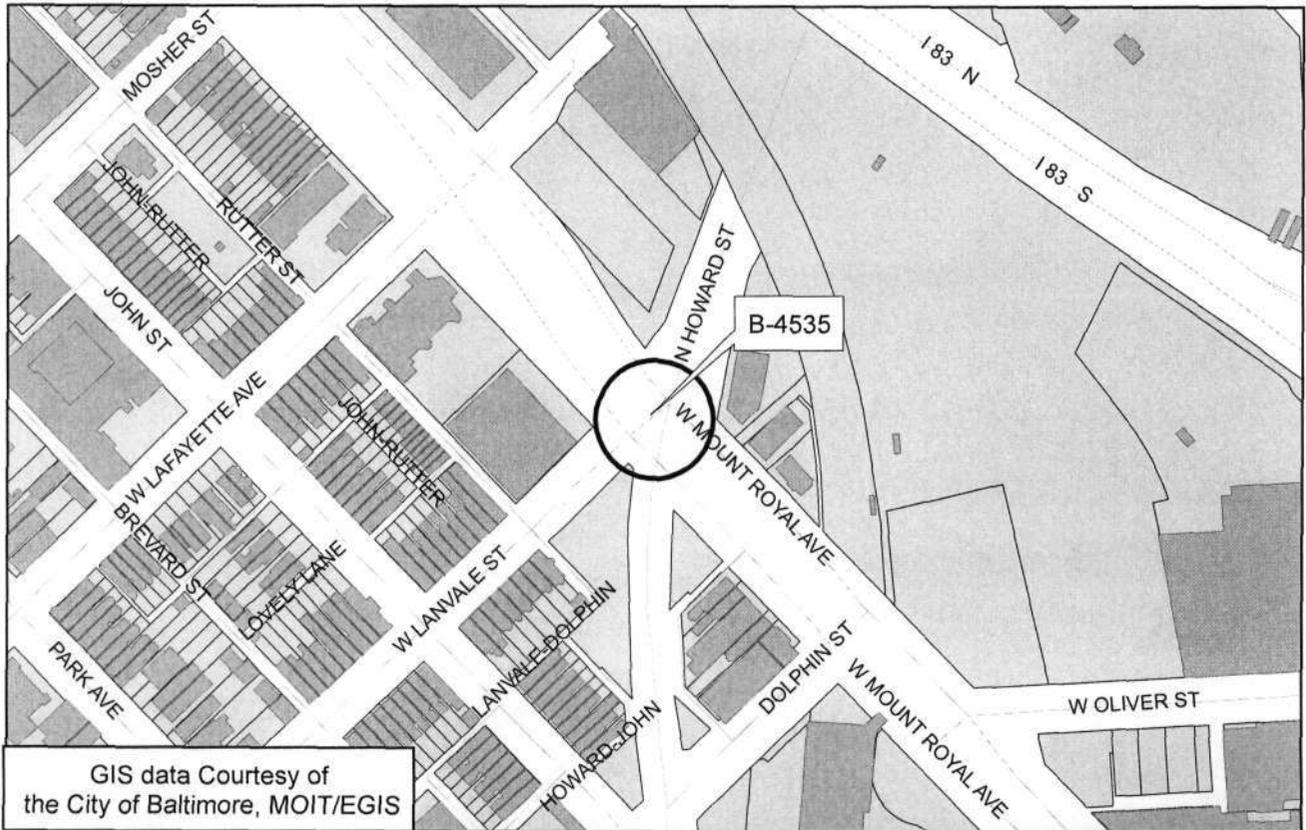
Mt. Royal Avenue over Howard Street, 1938

B 4535

Scale 0 1000 2000 feet
0 0.5 kilometer



B-4535
Mt. Royal Avenue Bridge (BC1406)
Mt. Royal Avenue over Howard Street
Baltimore City
Baltimore East Quad



GIS data Courtesy of
the City of Baltimore, MOIT/EGIS



MT. ROYAL AV

149



NO PARKING
ANY
TIME

Inventory # B-4535

Name ^{BL-} 1406-MT ROYAL AVE OVER HOWARD ST

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number 9 of 33 — 1 of 4



Inventory # B-4535

^{BC-}
Name 1406 - MT ROYAL AVE OVER HOWARD ST

County/State BALTIMORE CITY MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description WEST APPROACH

Number ~~10~~ of ~~33~~ 2 OF 4



Inventory # B-4535

BC-

Name HOB-MT ROYAL AVE OVER HOWARD ST

County/State BALTIMORE CITY/MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SHA

Description EAST APPROACH

Number ~~# of 33~~ 3 of 4

0150 54010110004148



MT. ROYAL AV

1410

126

12-6

Inventory # B-4535

BC-
Name 1406 MT ROYAL AVE OVER HOWARD STREET

County/State BALTIMORE CITY/MID

Name of Photographer TIM SCHWEN

Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION

Number 12 of 33 4 of 4