

Maryland Historical Trust

Maryland Inventory of Historic Properties number: BA-2852

Name: GLEN ARM RD. OVER GUNPOWDER FALLS

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> </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>

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

MHT No. BA-2852

SHA Bridge No. B0075 Bridge name Glen Arm Road over Gunpowder Falls (Cromwells Bridge)

LOCATION:

Street/Road name and number Glen Arm Road

City/town Perry Hall Vicinity X

County Baltimore

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 _____

DESCRIPTION:**Describe Setting**

Bridge B0075 carries Glen Arm Road over Gunpowder Falls in Baltimore County. Glen Arm Road runs north and south over the southeasterly flowing Gunpowder Falls. The area immediately adjacent to the bridge has no residential development. The bridge is located in Gunpowder Falls State Park.

Describe Superstructure and Substructure:

Bridge B0075 is a double span filled concrete arch bridge. The total length of the bridge is 160 feet 9 with the clear spans measuring 53 feet and 52 feet. The spandrel walls are approximately 13 feet tall and 25 feet wide. The bridge has a rise of approximately 12 feet 4 inches from springline to crown. There is a clear roadway width of 20 feet 4 inches and an overall bridge width of 22 feet 4 inches. Each arch barrel has heavy cracking with visible efflorescence. There are large areas of scale and reinforcement bar exposure at the joint of the parapet and spandrel wall. The spandrel walls have large areas of cracking and patched areas from previous repairs. In addition, the walls have areas of efflorescence. According to a 1995 inspection report, the bridge is in poor condition with a sufficiency rating of 26.8.

The center pier is 36 feet 9 inches long and approximately 5 feet wide. There are 1-inch spalls under the weep holes on the south face. The northeast wingwall has a spall at the lower section near the spandrel wall that is 1 inch in diameter. The southeast and southwest wing walls have tiebacks at the top preventing the movement of the wall. All walls have map cracking and minor surface erosion.

Bridge B0075 retains its original parapets. There are 2 sections running the length of the bridge, including the wingwalls. The first section includes the endblock over the wingwall and measures 3 feet 8 inches high by 4 feet 11 inches wide at the base. The endblock includes an incised panel that is 11 inches high and 3 feet 4 inches long. The rest of the first section is a closed paneled parapet with 7 incised panels. The first section from the endblock to the beginning of the second section is approximately 50 feet. The incised sections are standardized throughout the bridge. The pattern in long panel (lp), short panel (sp). The long panel has dimensions of the incision in the endblock. The short panel is excised. The panel is 11 inches high and 1 foot 2 inches long and is separated from the first section by a 1/4-inch felt joint. Therefore, the second section is expansion joint, lp, sp, lp, sp, lp, and endblock. The second section measures approximately 50 feet.

Discuss major Alterations:

The bridge has had threadbar tieback assemblies with double channel whalers installed in the wingwalls and spandrel walls to prevent movement. Major patching has occurred on the barrel and abutments.

HISTORY:

WHEN was bridge built (actual date or date range) 1924
This date is: Actual Estimated
Source of date: Plaque Design plans County bridge files/inspection form
 Other (specify) _____

WHY was bridge built? To replace an existing structure.

WHO was the designer? Luten Bridge Company

WHO was the builder? Baltimore County Highways Department

WHY was bridge altered? To prevent movement of the wingwalls and spandrel walls.

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

Yes, this bridge was built as part of Baltimore County road extensions.

SURVEYOR/HISTORIAN ANALYSIS:

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

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

This bridge was determined eligible by the Interagency Review Committee in June 1996.

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

It is unknown why the first bridge at this site was built. However, during the early days of improved road construction in Maryland, a policy of building narrow roads and bridges was adopted so that a complete system of highways might be completed within a reasonable time limit and with limited funds. As traffic increased, it became necessary to reconstruct existing roads to greater width and strength. In 1918, the State Roads Commission developed the use of a concrete bridge. This bridge was probably built as part of the State Roads Commission's "Lateral and post Roads Loan of 1920." In 1920, the state received an appropriation of \$3,000,000. The money allowed for the construction of rural post roads, lateral roads, and the extension of the State Roads System with the assistance of funds from the US Government and several counties in the state. The state and counties received funding for lateral road improvements.

Between 1920 and 1935, most of the Baltimore County Highways Department work concentrated on the expansion of the feeder roads to the main arteries being built by the State Roads Commission. Unlike other counties in Maryland during this period, Baltimore County maintained its own roads. Like other counties, Baltimore County has a standing contract with consultants to assist in the design and development of bridges. The Luten Bridge Company of York, Pennsylvania was the consultant for this project

The Luten Bridge Company of York, Pennsylvania, was incorporated in 1909 as a contracting concern specializing in the designs of Daniel Luten. It grew to be the largest of Luten's loosely affiliated corporations and operated offices in Clarksburg, WV; Concord, NH; Columbus, OH; Chatsworth, GA; and Syracuse, NY. Daniel Luten specialized in reinforced concrete bridges. His designs dominated the industry and were copied (under patent protection) and used throughout the eastern United States.

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, there is no evidence that this bridge had an impact on the growth of the area.

Is the bridge located in an area that may be eligible for historic designation?

No, the bridge is not located in an area that is eligible for historic designation.

Is the bridge a significant example of its type?

Yes, this bridge retains integrity of design and materials, and is a significant example of an early-twentieth century concrete arch bridge. In addition, this is one of the few documented multiple spans based on a Luten design in Maryland. Most of the documented Luten arches are single spans.

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

The bridge retains the integrity of a majority of its character defining elements.

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

This bridge is a significant example of the work of the Luten Bridge Company.

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

No, this bridge should not be given further study.

BIBLIOGRAPHY:

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

SURVEYOR/SURVEY INFORMATION:

Date bridge recorded June 1996

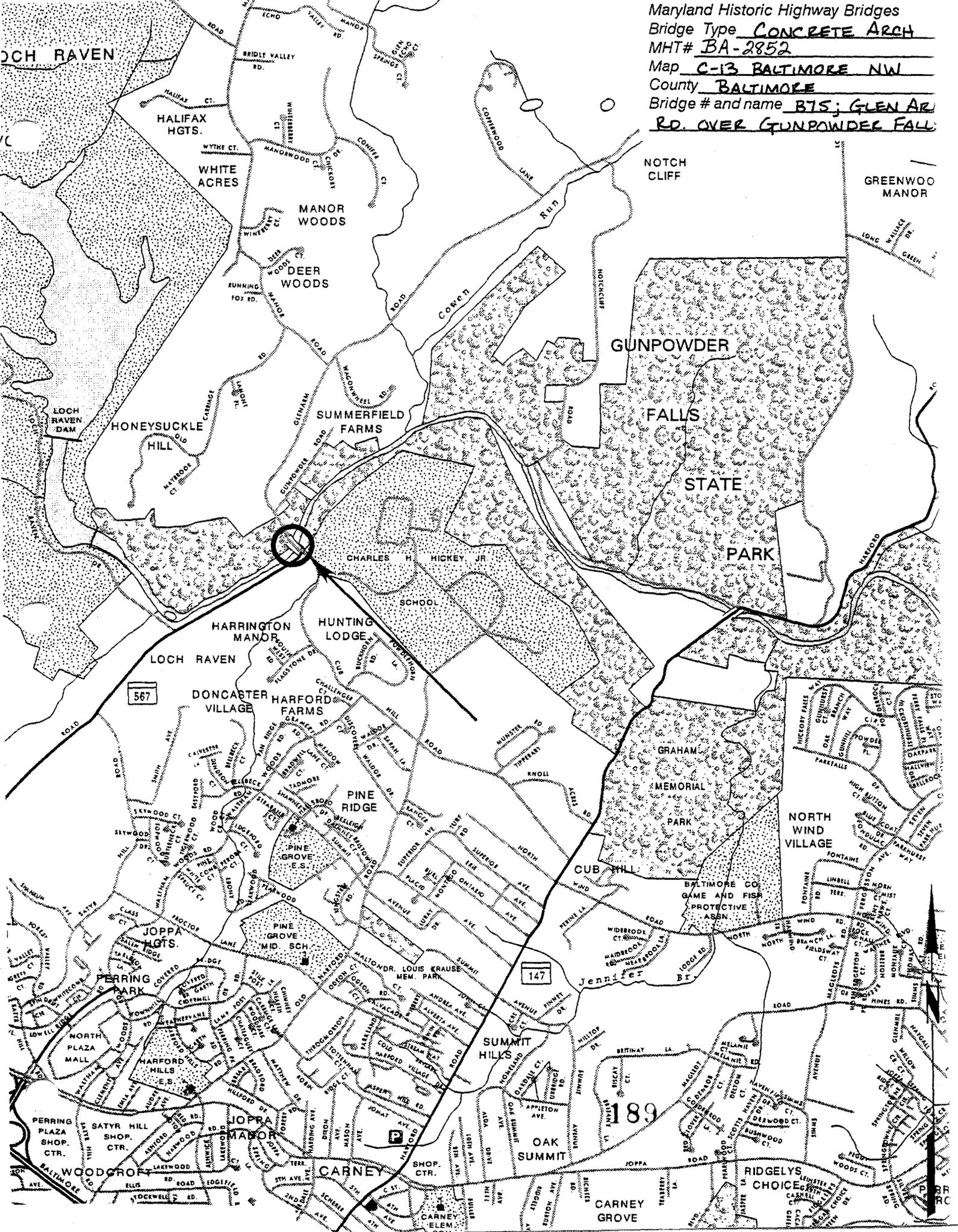
Name of surveyor Stacie Webb

Organization/Address State Highway Administration, 707 North Calvert Street, Baltimore, MD

Phone number 410-545-8559

Edited by P.A.C. Spero & Company, December 1997

Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# BA-2852
Map C-13 BALTIMORE NW
County BALTIMORE
Bridge # and name B75; GLEN AR
RD. OVER GUNPOWDER FALL



Jmg

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Cromwell Rd Bridge/Gunpowder ^{#B0075} Rv. Survey Number: BA-2852 ~~NA/BA Co~~

Project: Proposed Replacement Agency: FHWA

Site visit by MHT Staff: no yes Name LLB/RLA Date 5-1-92

Eligibility recommended Eligibility not recommended

Criteria: A B C D Considerations: A B C D E F G None

Justification for decision: (Use continuation sheet if necessary and attach map)

Cromwell Road Bridge is a concrete filled arch bridge constructed in 1924 by the Luten Bridge Company of York, PA. Spanning Gunpowder Falls, just north of Cub Hill Road in Baltimore County, the bridge is a two span arch, typical of Luten's "Highway Bridge of Plain design." This design is characterized by incised rectangular panels, parapet walls, closed spandrel arch and simple end blocks. The Luten Bridge Company introduced this design in 1917; examples of the design can be seen throughout the east and midwest due to its immense popularity. Although not attributed to Luten, at least eight other county-owned concrete arch bridges of this type exist in the county, several retain a higher degree of integrity (such as Bridges 58 and 110). The current structural condition of the bridge is very deteriorated. Extreme flooding in 1972 necessitated the inclusion of tie rods to support the structure as well as a new deck. Additionally, staff noticed extreme cracking and spalling during its site visit. Some of the rebar is exposed and badly rusted. For these reasons, we believe the bridge is not eligible for the Register.

Documentation on the property/district is presented in: concrete arch bridge draft historic context (SHA), compliance file, and concrete arch br. file in Balto. Co.

Prepared by: LLB, John McGrain, Rita Suffness

LL Bowlin May 7, 1992
Reviewer, Office of Preservation Services Date

NR program concurrence: yes no not applicable
[Signature] *[Signature]*

BA-2852

Survey No. NA, BA Co.

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

- Eastern Shore (all Eastern Shore counties, and Cecil)
- Western Shore (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
- Piedmont (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
- Western Maryland (Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

- Paleo-Indian 10000-7500 B.C.
- Early Archaic 7500-6000 B.C.
- Middle Archaic 6000-4000 B.C.
- Late Archaic 4000-2000 B.C.
- Early Woodland 2000-500 B.C.
- Middle Woodland 500 B.C. - A.D. 900
- Late Woodland/Archaic A.D. 900-1600
- Contact and Settlement A.D. 1570-1750
- Rural Agrarian Intensification A.D. 1680-1815
- Agricultural-Industrial Transition A.D. 1815-1870
- Industrial/Urban Dominance A.D. 1870-1930
- Modern Period A.D. 1930-Present
- Unknown Period (prehistoric historic)

III. Prehistoric Period Themes:

- Subsistence
- Settlement
- Political
- Demographic
- Religion
- Technology
- Environmental Adaption

IV. Historic Period Themes:

- Agriculture
- Architecture, Landscape Architecture, and Community Planning
- Economic (Commercial and Industrial)
- Government/Law
- Military
- Religion
- Social/Educational/Cultural
- Transportation

V. Resource Type:

Category: structure

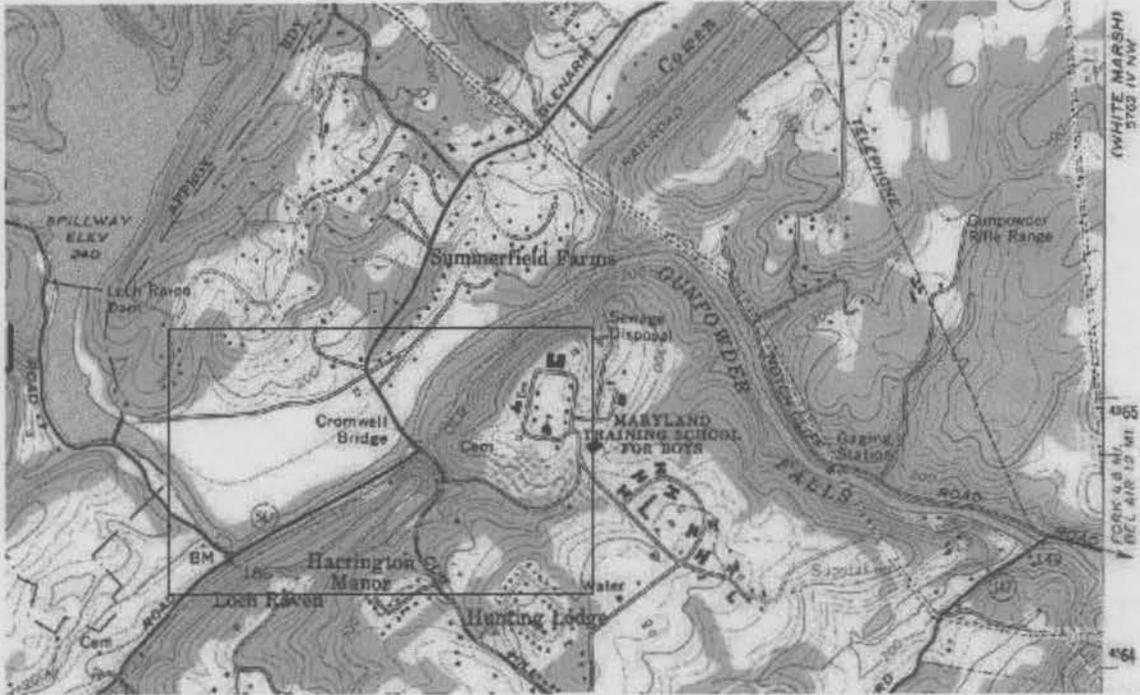
Historic Environment: rural

Historic Function(s) and Use(s): transportation

Known Design Source: Luten Bridge Co., York, PA

BA- 2852

CROMWELL ROAD BRIDGE (#B0075)
CROMWELL BRIDGE ROAD OVER GUNPOWDER FALLS/RIVER
NORTH OF CARNEY
TOWSON QUAD
BALTIMORE COUNTY





Inventory # BA-2852

Name BOOTS GLEN ARM RD OVER GUNPOWDER FALLS

County/State BALTIMORE COUNTY / MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description NORTH APPROACH LOOKING
SOUTHEAST

Number 135 of 275



Inventory # BA-2852

Name BUDTS-GLEN ARM RD OVER GUNPOWDER FALLS

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description EAST ELEVATION LOOKING

SOUTHWEST

Number 2 of 3A5



Inventory # BA-2852

Name BOOTS- GLEN ARM RD OVER CUMPOWDER FALLS

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description WEST ELEVATION LOOKING

NORTH

Number 3 of 395



Inventory # BA-2852

Name BOOTS - GLEN ARM RD OVER GUNPOWDER FALLS

County/State BALTIMORE COUNTY / MO

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description SOUTH APPROACH LOOKING
NORTHWEST

Number 436 of 37 **45**

BALTIMORE COUNTY
HIGHWAYS DEPARTMENT
CROMWELLS BRIDGE
1924

COUNTY COMMISSIONERS
HARRISON UNDER, PRESIDENT
WILLIAM F. ECKMAN
ROBERT S. LARSON

SAMUEL S. ORLEN, ROAD ENGINEER
JAMES W. BEECHER, SUPERVISOR

Inventory # BA-2852

Name 15075 - GLEN ARMAD OVER GUNPOUNDER FALLS

County/State BALTIMORE COUNTY/MD

Name of Photographer DAVE DIEHL

Date 1/95

Location of Negative SHA

Description PLAQUE ON PARAPET

Number 5 of 39 5