Maryland Historical Trust

Maryland Inventory of Historic Properties number: CARR-1469

Name: 6018/ Rt. 86 over Br. of 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 ___X____ Eligibility Not Recommended _____

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____

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

MHT No. CARR-1469

SHA Bridge No. 6018 **Bridge name** Route 86 over Branch of Gunpowder Falls

LOCATION:
Street/Road name and number [facility carried] Branch of Gunpowder Falls

City/town Lineboro **Vicinity** _____

County Carroll

This bridge projects over: Road____ **Railway**_____ **Water** X_____ **Land** ____

Ownership: State X_____ **County** _____ **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes X **No** _____
National Register-listed district ____ **National Register-determined-eligible district** __
Locally-designated district X **Other** _____

Name of district Lineboro Historic 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 _____ **Retractile**_____ **Pontoon** _____

Metal Girder_____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X:
Concrete Arch_____ **Concrete Slab** X **Concrete Beam** ___ **Rigid Frame** _____
Other _____ **Type Name** _____

DESCRIPTION:

Setting: Urban _____ **Small town** ___X___ **Rural** _____

Describe Setting:

Bridge No. 6018 carries Route 86 over a branch of Gunpowder Falls near the village of Lineboro in Carroll County. Route 86 runs north-south while Gunpowder Falls flows in an east-west direction. Lineboro is a small rural community near the Pennsylvania border with numerous old buildings.

Describe Superstructure and Substructure:

This bridge was built in 1929 following the SHA Detail Sheets from 1924 for a standard 20' concrete slab. The superstructure comprises a concrete slab with a 4¼" bituminous wearing surface and closed concrete parapets. The substructure consists of concrete abutments and flared wingwalls. The bridge is 23' long and 24' wide with a clear span of 20'. It has a skew of 65 degrees. The approaches all have guardrails. There is a retractable gate 10' north of the bridge. It is used to raise the water level by the Lineboro Fire Company.

The inspection report in 1993 described the condition of the bridge as follows. The slab is cracked with exposed reinforcement. The substructure exhibits some cracks, spalling, and efflorescence.

Discuss Major Alterations:

There are no records available which detail repairs/alterations made to this bridge, when they were undertaken, or the extent thereof.

HISTORY:

WHEN was the bridge built (actual date or date range) 1929

This date is: Actual X **Estimated** _____

Source of date: Plaque ____ **Design plans** ___ **County bridge files/inspection form** ____

Other (specify) Maryland State Highway Administration bridge files

WHY was the bridge built?

Statewide road improvement programs and local transportation needs

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

Extent of alterations/repairs unknown

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

Yes. This bridge was constructed as a part of post World War I improvements to secondary roads in Maryland.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

Was the bridge constructed in response to significant events in Maryland or local history?
Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-04 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's road and bridge improvement programs mirrored economic cycles. The first road improvement program of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war-related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920 to 1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund [with an equal sum from the counties] the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had become inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930s. Most improvements to local roads waited until the years after World War II.

With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer stated in 1906, "The general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do way with the further expense of the maintenance of expensive and dangerous wooden structures". Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

The creation of standard plans and a description of their use was first announced in the 1912-15 Reports of the State Roads Commission whereby bridges spanning up to 36 feet were to use standardized designs.

Published on a single sheet, the 1912 Standard Plans included those structures that were amenable to such an approach: slab spans, (deck) girder spans, box culverts, box bridges, abutments, and piers (State Roads Commission 1912). Slab spans, with lengths of 6 to 16 feet in two foot increments, featured a solid parapet that was integrated into the slab, with a roadway of 22 feet.

In the Report for the years 1916-1919, a revision of the standard plans was noted:

> During the four years covered by this report, it has been found necessary to revise our standard plans for culverts and bridges, to take care of the increased tonnage which they have been forced to carry. Army cantonments...increased their operations several hundred per cent, and the brunt of the enormous truck traffic resulting therefrom, was borne by the State Roads of Maryland. In addition to these war activities, freight motor lines from Baltimore to Washington, Philadelphia, New York, and various points throughout Maryland, and the weight of many of these trucks when loaded, was in excess of the loads for which our early bridges were designed (State Roads Commission 1920:56).

Published on separate sheets, the new standard plans (State Roads Commission 1919) for slab bridges reveal that the major changes was an increase in roadway width from 22 feet to 24 feet and a redesign of the reinforcement. The slab spans continued to feature solid parapets integrated into the span. The range of span lengths remained 6 to 16 feet, but the next year (1920) witnessed the issue of a supplemental plan for a 20 foot long slab span (State Roads Commission 1920).

The 1924 standard plans remained in effect until 1930, when the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase load bearing capacities. The reinforcing bars were increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

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?

Unknown.

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?

Bridge No. 6018 is located within a locally designated historic district.

Is the bridge a significant example of its type?

No. This bridge is one of many standard concrete slab bridges built after the first World War in Maryland. It is in deteriorating condition, and it is not an exceptional example of its type.

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

Yes. This bridge appears to have retained the integrity of its design. However, its condition is such that its material integrity has been compromised.

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

No. This bridge is not a significant example of work completed by the State Roads Commission.

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

No further evaluation is necessary to determine National Register significance. Although it reflects the state's post World War I expansion of secondary road systems, it is an undistinguished example of its type. However, additional research concerning the history of this bridge and its relationship to the surrounding landscape may be useful in providing a more complete picture of the bridge's background.

BIBLIOGRAPHY:

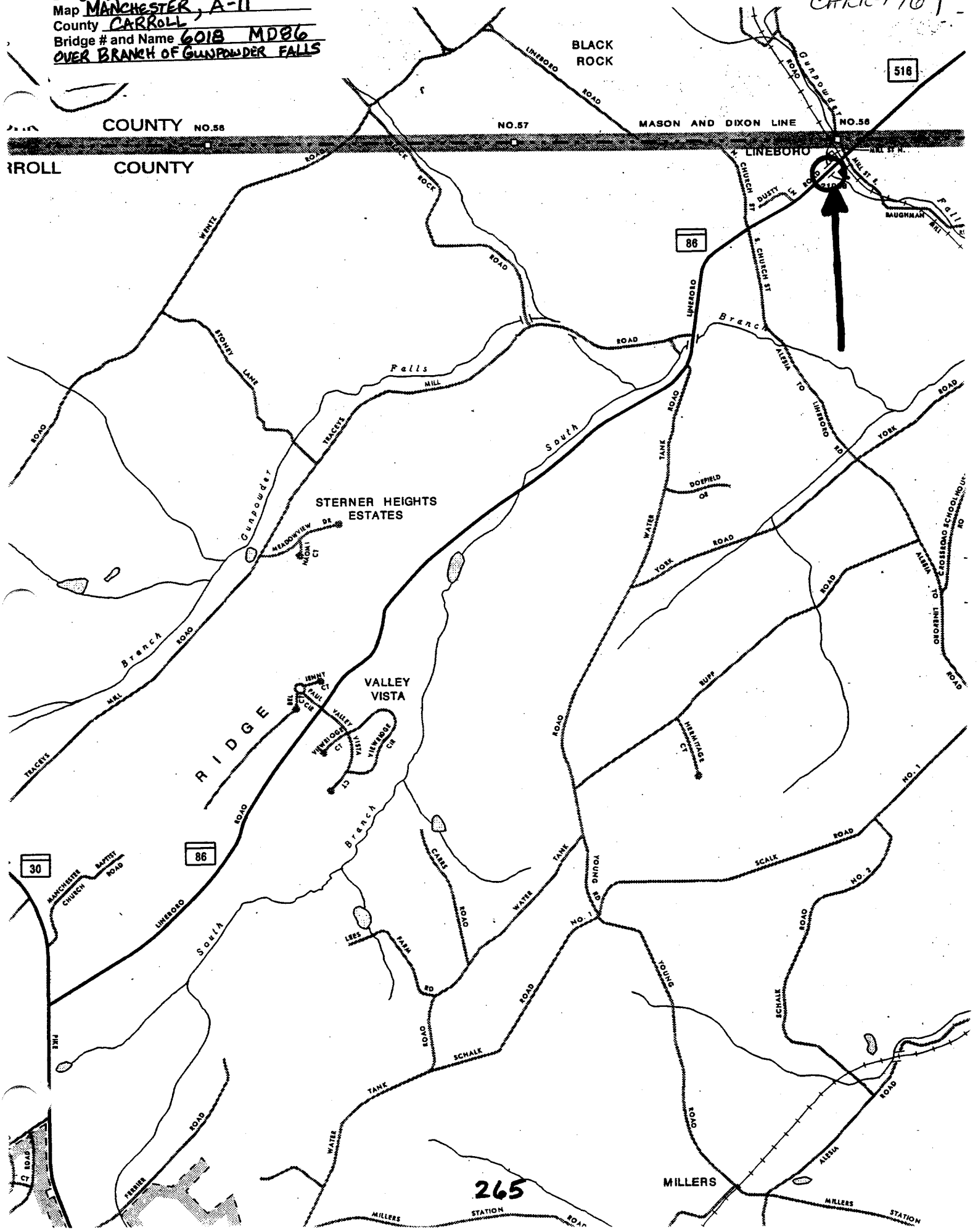
County inspection/bridge files _____ **SHA inspection/bridge files** X
Other (list):

SURVEYOR:

Date bridge recorded August 1995
Name of surveyor Leo Hirrell
Organization/Address P.A.C. Spero & Company; 40 West Chesapeake Avenue, Suite 412; Baltimore, Maryland 21204
Phone number 410-296-1635 **FAX number** 410-296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE SLAB
Map MANCHESTER, A-11
County CARROLL
Bridge # and Name 6018 MD86
OVER BRANCH OF GUNPOWDER FALLS

CARR-1469



Inventory # CARR-1469
6018
Name Md. 86 over Br. of Gunpowder Falls
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA.

Description west approach looking east

Number 1 ~~27~~ of 4 ~~29~~

Inventory # CARR 1469
6018

Name Md. 86 over Br. of Gunpowder Falls

County/State Carroll Co. Md.

Name of Photographer D. Diehl

Date 2-95

Location of Negative SHA

Description east approach looking west

Number ~~22~~ 2 of ~~29~~ 4

Inventory # CARR-1469
6018

Name Md. 86 over Br. of Gunpowder Falls

County/State Carroll Co. Md.

Name of Photographer D. Diehl

Date 2-95

Location of Negative SHA

Description south elevation looking north

Number ~~23~~ 3 of ~~29~~ 4

Inventory # CARR-1469
6018

Name Md. 86 over Br. of Gunpowder Falls

County/State Carroll Co. Md.

Name of Photographer D. Diehl

Date 2-95

Location of Negative SHA

Description north elevation looking south

Number ~~24~~ 4 of ~~29~~ 4