Maryland Historical Trust

Maryland Inventory of Historic Properties number: M:37-14

Name: MT 1/MAPLE AVE. OVER SLIGO CRK.

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 _____ Eligibility Not Recommended __X____

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. M:37-14

SHA Bridge No. MT 1 **Bridge name** Maple Avenue over Sligo Creek

LOCATION:
Street/Road name and number [facility carried] Maple Avenue

City/town Takoma Park **Vicinity** X

County Montgomery

This bridge projects over: Road ____ **Railway** ____ **Water** X **Land** ____

Ownership: State ____ **County** X **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 ____ **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 _____X_____ **Small town** _____ **Rural** _____

Describe Setting: Bridge MT 1 carries Maple Avenue over Sligo Creek, within the city of Takoma Park. Takoma Park was one of the first residential suburbs within Montgomery County, with the first houses dating to the 1880s. Today the city remains an important Washington suburb. Sligo Creek is surrounded by a municipal park on either side. The bridge runs in a north-south direction within Sligo Creek Park, while Sligo Creek flows from northwest to southeast.

Describe Superstructure and Substructure:

Bridge MT 1, built in 1930, is a two span concrete slab structure supported by a concrete pier and two concrete abutments. Each span is 20' in length carrying a clear roadway width of 22', and a sidewalk along the west side for pedestrian traffic, for an overall width of 26'. The overall length is 41'-7". The northeast side is characterized by a modern W-beam guardrail. The bridge is not currently posted.

The superstructure, consisting of the roadway, slab and railing, is in fair condition. The entire superstructure was recently repaired, according to the 1993 Inspection report. However, the north span has longitudinal cracks with efflorescence in the concrete slab. The repaired concrete in this area sounds hollow. The concrete rail post is cracked at the northwest end of the bridge. The timber boards of the sidewalk are in fair condition, but the steel support beams and brackets have medium to heavy rust and section loss. The 1993 Inspection Report recommends the replacement of these supports and the sidewalk bracket at the pier.

The substructure consists of the abutments and pier. The concrete abutments are 2' wide and approximately 28' in length. The concrete pier is 2'-8"+/- in width. There is roadway drainage leakage through the pier expansion joint. The substructure was also recently repaired.

Discuss Major Alterations:

W-beam guardrails were added to the railing of the south elevation at an unknown date. Repairs were made to the bridge, do to cracking and spalling prior to the 1991 Inspection Report.

HISTORY:

WHEN was the bridge built: 1930

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

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

Other (specify) _____

WHY was the bridge built?

By 1930 Maryland's primary and secondary roads and bridges had become inadequate to the huge freight trucks and volume of passenger cars in use.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

The bridge was altered to increase safety precautions and extend the life of the bridge.

Was this bridge built as part of an organized bridge-building campaign?
It is likely that this bridge was constructed as a part of an organized bridge building campaign. The majority of the bridges built in the post World War I era were a part of a statewide bridge building campaign.

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 1903-1904 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commissions 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 1920-1929, 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 been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. 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).

In 1930, the roadway width for all standard plan bridges was increased to 27 feet in order to accomodate 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 the load bearing capacities. The reinforcing bars increased in thickness. Visually, the 1930 design can be distingushed 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?
It is not known whether this bridge impacted the growth or development of the 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?
This bridge is located near the Takoma Park Historic District, however, the area around the bridge is not currently eligible. This structure would not detract from the character of a potential designation.

Is the bridge a significant example of its type?
No, this bridge is an undistinguished example of a standardized concrete bridge.

Does the bridge retain integrity of important elements described in Context Addendum?
No, this structure does not retain the integrity of its original design because W-beam guardrails have been added to the railing of the south elevation.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?
No, this bridge is an undistinguished example of a concrete slab bridge.

M:37-14

Should the bridge be given further study before an evaluation of its significance is made?
No, this structure should not be given further study. Although it reflects the state's post war construction needs of an expanded secondary roads system, its current condition places its integrity in doubt.

BIBLIOGRAPHY:

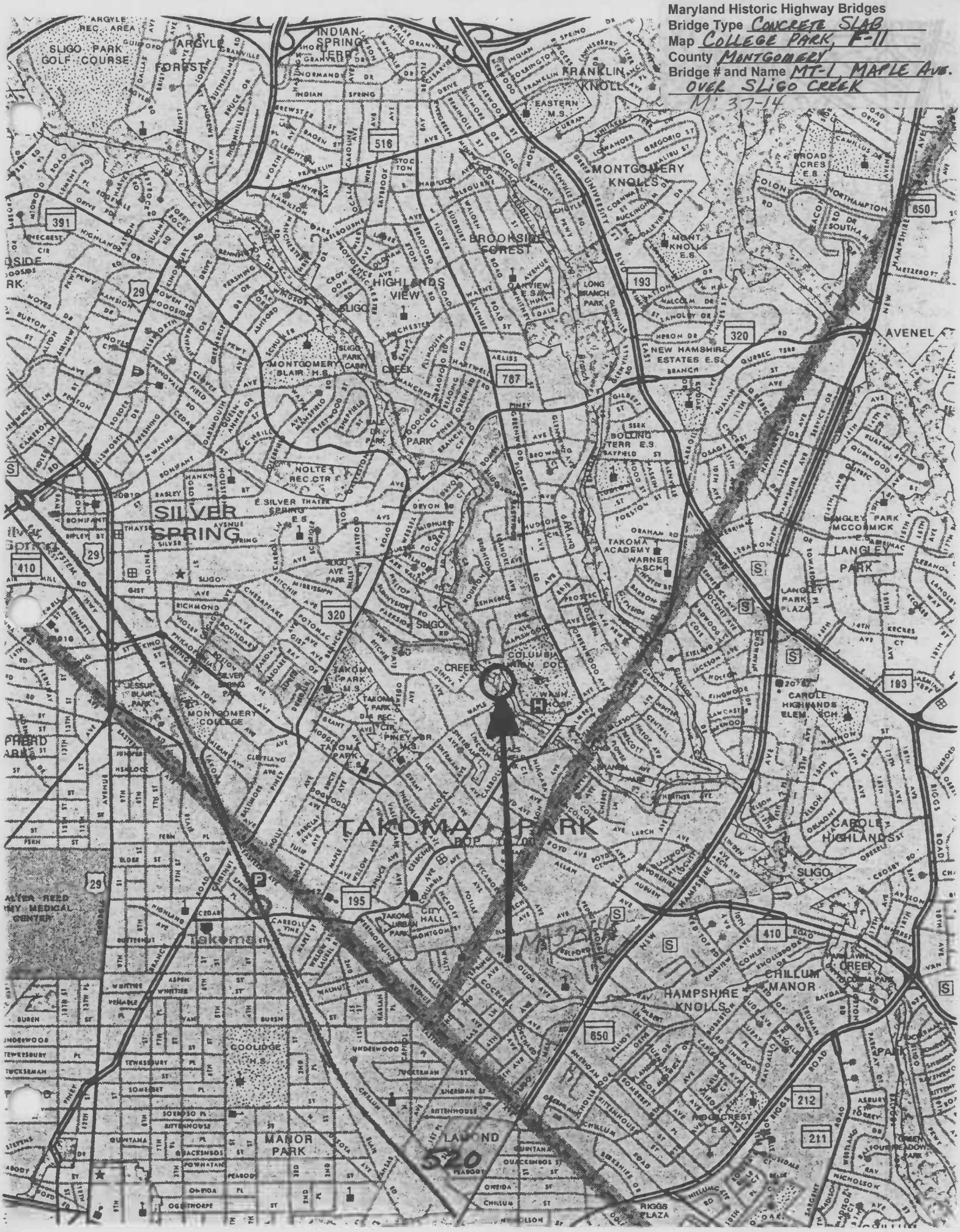
County inspection/bridge files X **SHA inspection/bridge files** _____
Other (list):
Montgomery County Bridge Inspection Report, 1993.

SURVEYOR:

Date bridge recorded 8/95

Name of surveyor Leo Hirrell
Organization/Address P.A.C. Spero & Company, 40 W. Chesapeake Avenue, Suite 412, Baltimore, MD 21204
Phone number (410) 296-1635 **FAX number** (410) 296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE SLAG
Map COLLEGE PARK, F-11
County MONTGOMERY
Bridge # and Name MT-1, MAPLE AVE. OVER SLIGO CREEK
M: 37-14



Inventory # M:37-14

Name MT1 - MAPLE AVE OVER SLIGO CREEK

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description ELEVATION SOUTH

Number ~~29~~ 1 of ~~39~~ 4

Inventory #M:37-14

Name MT1 - MAPLE AVE OVER SLIGO CREEK
County/State MONTGOMERY / MD
Name of Photographer FRANK JULIANO
Date 2/95

Location of Negative SHA

Description APPROACH WEST

Number ~~30~~ 2 of ~~34~~ 4

Inventory # M-37-14

Name MTL - MAPLE AVE OVER S HIGO CREEK
County/State MONTGOMERY / MD
Name of Photographer FRANK SUHANO
Date 2/95

Location of Negative SHA

Description ELEVATION NORTH

Number ~~31~~ 3 of ~~34~~ 4

Inventory # M:37-14

Name MT1 - MAPLE AVE OVER SLIGO CREEK

County/State MONTGOMERY / MD

Name of Photographer FRANK JULIANO

Date 2/95

Location of Negative SHA

Description APPROACH EAST

Number 4 ~~32~~ of 4 ~~34~~