MARYLAND HISTORICAL TRUST ADDENDUM SHEET Property Name: Guilford Quarry Pratt Through Truss Bridge **HOWARD COUNTY SPINAL PATHWAY PHASE 3a**

Property Address _B&O Railroad (Spur) over Little Patuxent River, south of the intersection of Guilford Road and Rt 32, Guilford vicinity, Howard County

Survey No.: HO-349

Owner Name/Address Howard County Department of Public Works, 3450 Courthouse Drive, Ellicott City, MD

Year Built 1902

Description:

The Guilford Pratt Through Truss Bridge, a single-span, metal truss, railroad bridge, was previously surveyed circa 1978. by the Howard County Office of Planning and Zoning—Comprehensive Planning Section. It crosses the Little Patuxent River in Howard County immediately east of Route 32 and south of old Guilford Road. There have been no changes to the structure since the previous survey.

Historical Narrative:

General History of the Guilford Area

The bridge spanning the Little Patuxent River in Howard County was built in 1902 to carry a railroad spur from Savage north to the Guilford Quarry, which is located just north of the bridge on the north side of Guilford Road. Until the spur was laid, stone from the guarry had to be carried over land since the river is not navigable.

The area immediately north of the bridge began to be developed in the mid 18th century as a small milling complex. responding to the shift in local agricultural practices from tobacco to wheat farming. A gristmill was built by Alexander Warfield and Elizabeth Warfield Ridgely near where the quarry is sometime in the 1760s (Draft Phase I Archeological Survey and Historic Architectural Evaluation of Howard County Spinal Pathway System Construction Phase 3). A 1792 deed of trust describes the property as including a gristmill, a sawmill, a blacksmith shop, and a stable. A small granite quarry was excavated nearby in the 1830s, but due to the difficulties in hauling the stone by wagon, the quarry did not grow significantly until the beginning of the 20th century.

It was not until the late 19th century that more than a handful of structures existed in Guilford near the future site of the Guilford railroad bridge. Martenet's 1860 Map of Howard County, indicates several structures in the area near where the bridge would be later located and denotes the conglomerate as Guilford Factory. The structures include a factory north of the river, but south of old Guilford Road, another building immediately to its south on the other side of the river, and five buildings lining Guilford Road, including a wheelwright. The map is clearly an approximation of buildings' locations.

The 1890 U.S. Geological Survey Map notes but a single building where the Martenet map had noted several. Nonetheless, it does indicate that the area was called Guilford. The next 15 years saw significant development in the area, probably encouraged by the opening of the Baltimore and Ohio (B&O) freight spur from Savage to Guilford in 1902. In 1901, the quarry was purchased by the Maryland Granite Company. It is unclear whether the company purchased the site in anticipation of the freight line being extended or if the company had some influence in getting the line constructed a year later. With the introduction of the railroad, quarrying clearly became more lucrative and led to the growth of Guilford, although by then the mill appears to have been shut down. According to USGS maps, by 1904, the village had over two dozen buildings, including two churches. The village was centered around old Guilford Road and present-day Oakland Mills Road, just to the east of modern Route 32 and the mill and quarry site. Several unpayed roads had been cut through the area, as well. This increase in building had subsided by the early years of the century. Maps through the 1930s show that little, if any additional development took place from the turn of the century until that time. Most of this took place much farther south along Guilford Road, just north of Savage as that village expanded. The 1940 Map of Howard County Showing Topography and Election Districts shows that the spur north from Savage was no longer in use. No railroad tracks are indicated on the map. The quarry was closed during the 1950s and eventually flooded. The buildings of the mill were demolished long ago. The construction of new Route 32 isolated the former industrial/milling core of Guilford from the rest of the village. Today, a handful of historic buildings remain in Guilford. The village is

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Historical Narrative (continued):

undergoing a transformation from a crossroads community to a suburban development—all to the east of Route 32 and entirely separated from the Little Patuxent River which was the catalyst for its founding.

History of the Guilford Pratt Through Truss Bridge

The B&O opened the Washington Branch in 1835. The line runs roughly along Howard County's eastern border, connecting Baltimore with Washington, D.C. In 1888 a freight line was extended from this branch to Savage to reach the mills there. In 1902, this spur was extended to reach Guilford, presumably so that granite from the Maryland Granite Company quarry could be more easily transported. The spur crossed the Little Patuxent River immediately south of Guilford on a single-span, Pratt Through Truss Bridge, which is the subject of this form.

The Pratt Through Truss Bridge was patented in 1844 by Thomas and Caleb Pratt and quickly became one of the most popular forms of bridge construction. The development of the metal truss bridge in Maryland was the result of need to carry early railroad lines. Despite their popularity in the second half of the 19^{the} century and into the 20th century, few Pratt Through Truss bridges survive in Maryland today.

The Guilford bridge carried the freight line into the 1930s and was abandoned for railroad use by 1940. According to USGS maps, a deck was added to the bridge in the 1950s to accommodate vehicular traffic. Today the deck is gone, leaving only stringers and floor beams.

National Register Evaluation:

The Guilford Quarry Pratt Through Truss Bridge qualifies for listing in the National Register under Criteria A and C.

Criterion A: Events: Significant Contribution to the Broad Patterns of History

According to a review of historic maps, the spur leading from the Washington Branch of the B&O was the only railroad spur in Howard County well into the 20th century. Although freight spurs were common on the B&O, especially in Baltimore near the harbor, it appears that the Savage-Guilford spur was the only spur built in Howard County. It was the only line that actually penetrated the county as the B&O lines ran generally along the county's eastern and northern boundaries. Without the construction of the spur, it is unlikely that the Guilford quarry that had been established in 1830 would have expanded. The economic opportunity that the quarry provided, once the spur (which terminated with the Guilford Bridge) was in place, in all likelihood, influenced the development of the village of Guilford.

As such, the Guilford Pratt Through Truss Bridge contributed to the development of Guilford and contributes to the understanding of its history.

Criterion B:

The bridge does not qualify for listing in the National Register under Criterion B as it is not associated with the life of a significant person.

Page 2 Preparer: KCI Technologies, Inc. September 1999

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National Register Evaluation (continued):

Criterion C: Design/Construction

Metal truss bridges were first developed in the mid 19th century, with the Pratt Through Truss Bridge being one of the first to be patented. Engineers for the B&O quickly realized the structural advantages of metal truss bridges and began to call for their construction along the B&O lines. Originally constructed of iron and wood, Pratt Through Truss bridges were later built of wrought-iron, and eventually of steel. The design consists of upper and lower chords that resist forces induced by bending and carry the major loads exerted on the bridge. The diagonal members or webs absorb tension stresses as the live loads move across the bridge. After these and other designs for truss bridges proved effective in carrying very large loads, road commissioners began calling for their construction as well. As a result, metal truss bridges became a common site wherever rails and roads were built.

By the time the Guilford bridge was constructed the design of Pratt trusses had made the transition from wrought-iron to steel, had been standardized, and was being increasingly used for highway purposes. Although Pratt Through Truss bridges were common in the second half of the 19th century and continued to be built into the 20th century, few examples remain today in Maryland. The Guilford bridge is a good example of local Pratt Through Trusses. It embodies the distinctive characteristics of type, period, or method of construction that are required for listing in the National Register under Criterion C. Although it is presently abandoned, the structure retains integrity of location, materials, association, and feeling. Other than the deck, the bridge has all of its character defining elements, including: its abutments, floor beams, stringers, lower and top chords, bottom and top lateral bracing, struts, and end posts.

Criterion D:

The bridge does not qualify for the National Register under this criterion as it is unlikely to yield additional information in the future.

Boundary Description and Justification:

The National Register boundaries of the Guilford Quarry Pratt Through Truss Bridge over the Little Patuxent River is described as a rectangle that encompasses the bridge superstructure, as well as its two stone abutments.

Bibliography:

Draft Phase I Archeological Survey and Historic Architectural Evaluation of Howard County Spinal Pathway System Constuction Phase 3. Prepared by Esther Doyle Read for the Bureau of Engineering, Howard County Department of Public Works, December 1998.

Harwood, Herbert H. Jr., *Impossible Challenge, The Baltimore and Ohio Railroad in Maryland*. Baltimore: Bamard, Roberts and Company, Inc., 1979, pp 241-242.

Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Prepared by P.A.C. Spero & Company and Louis Berger & Associates for the Maryland State Highway Administration, July 1995.

Page 3 Preparer: KCI Technologies, Inc. September 1999

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Bibliography (continued):

Martenet's Map of Howard County. Baltimore: John Schofield, 1860.

Maryland Geological Survey, Field Operations, Bureau of Soils. *Map of Howard County Showing the Agricultural Soils*. 1920

Maryland Geological Survey. Map of Howard County Showing the Topography and Election Districts. 1910, 1927, 1940

- U.S. Department of Agriculture, Department of Soils. Soil Map for Howard County, MD, 1916.
- U.S. Geological Survey. Laurel Quadrangle Maps, 1890, 1894, 1904-1906, 1313-1915, 1926, 1949,

MHT CONCURRENCE: Eligibility recommended not recommended Criteria A B C D Considerations Comments:	A B C D E	FGNone
Reviewer, Office of Preservation Services Date	Reviewer, NR program	3 29 00 Date

Page 4
Preparer:
KCI Technologies, Inc.
September 1999

and .

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HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE PRESERVATION PLAN DATA

Geographic Organization:

Western Shore

Chronological/Development Period Theme(s):

Industrial Urban Dominance Period 1870-1930

Prehistoric/Historic Period Theme(s):

Transportation/Industry

RESOURCE TYPE:

Category:

Bridge

Historic Environment::

Rural

Historic Function(s) and Use(s):

Transportation

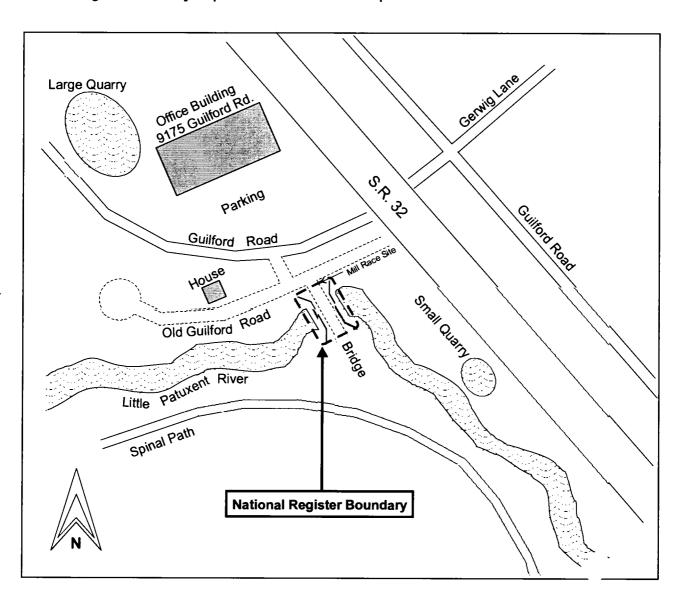
Known Design Source (write none if unknown):

None

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National Register Boundary Map and Resource Sketch Map:



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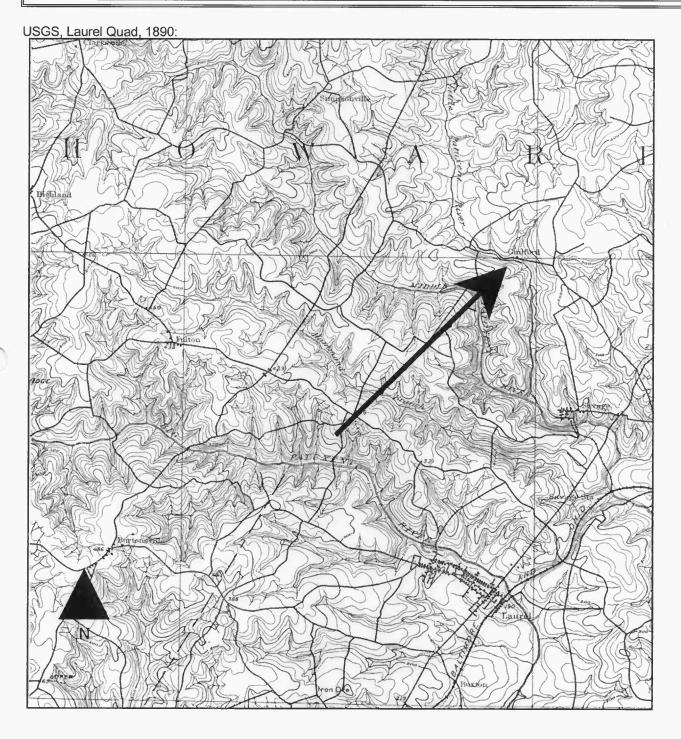
Martenet's Map of Howard County, Maryland, 1860:



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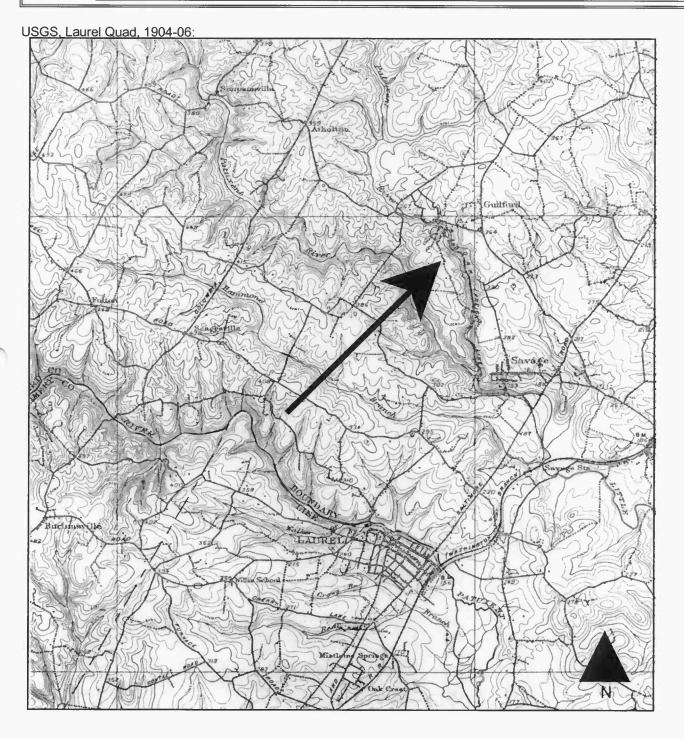
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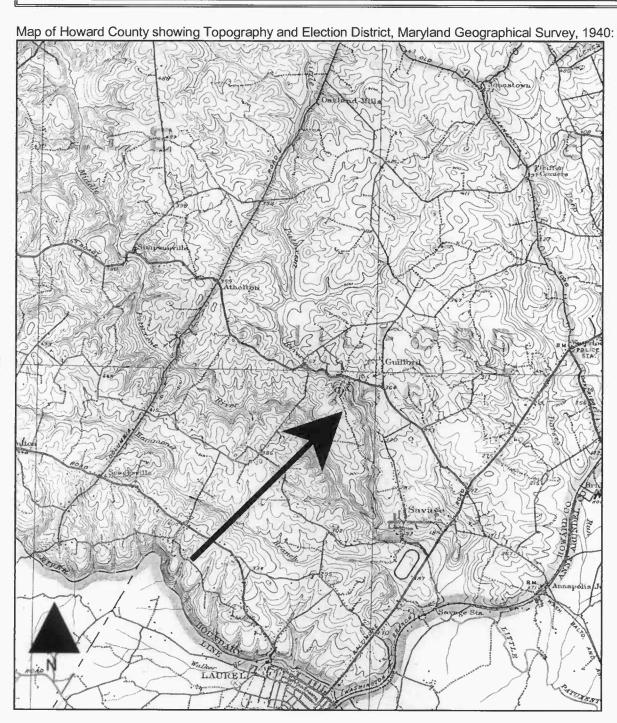


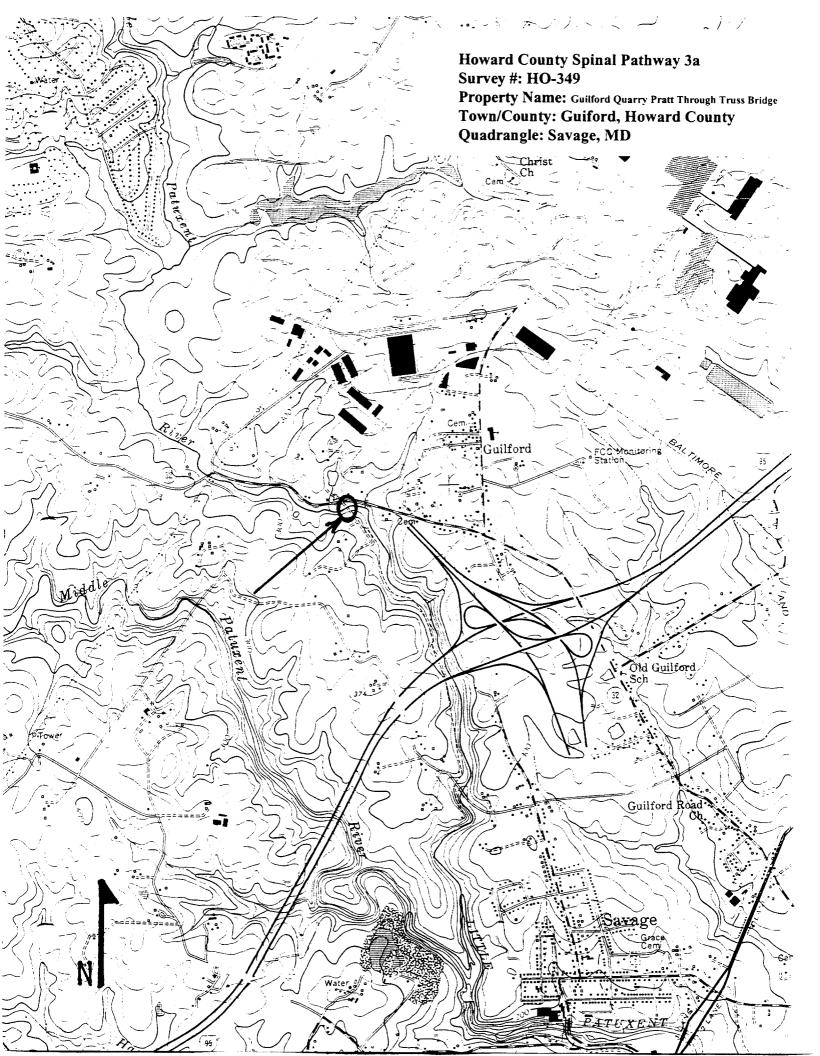
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Ho-349
Guilford Quarry Pratt Thru Truss
Bridge and Ruins
Guilford
Private

circa 1878

The Guilford Quarry Pratt Through Truss Bridge, spanning the Little Patuxent River, is located on the west side of Route 32, 4/10 of a mile from its intersection with Murray Hill Road. In 1878 it provided a span for the railroad going to Savage and the surrounding area, passing and being used by the quarry located on the east side of Route 32. Large stone ruins quite close to the road can be seen as well as a deep hole (now a swimming pool) resulting from the quarry's activities.

The bridge is a basic Pratt Through Truss Bridge, the design of which was patented in 1844 by Thomas and Caleb Pratt.

It consists of five north and south struts which run to the top chords from floor beams. The end beams rest on huge granite piles, located on each side of the Middle Patuxent River, creating a single span bridge. These struts are interconnected by thin, flexible rods which form King trusses, the east and west ends of which form the inclined end posts of the bridge. Many comparatively small pieces of iron are joined together in a series of triangles. These interconnect with one another to form the complete bridge.

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

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BUILDING(S)	POBLIC _XPRIVATE	XUNOCCUPIED	COMMERCIAL	PARK	
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SITE	PUBLIC ACQUISITION	ACCESSIBLE	ENTERTAINMENT		
OBJECT	_IN PROCESS	. ¿YES. RESTRICTED	GOVERNMENT	SCIENTIFIC	
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STREET & NUMBER	gard Research & De	sveTobment.	Telephone #: 9	92-6000	
CITY. TOWN			STATE , Z	zip code	
	umbia	VICINITY OF	Maryland	21044	
LOCATION	OF LEGAL DESC	RIPTION	Liber #: p.29	p.390	
COURTHOUSE.	Tax Map 42, p.	223, 29,390	Folio #: 717	569	
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CONDITION

CHECK ONE

CHECK ONE

H0 - 349District 6

XUNALTERED _ALTERED

X.ORIGINAL SITE

X_GOOD __FAIR

__EXCELLENT

__RUINS _UNEXPOSED

__DETERIORATED

__MOVED

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Guilford Quarry Truss Bridge is located on the west side of Route 32, 4/10 of a mile from its intersection with Murray Hill Road. It spans the Little Patuxent River and provided a span for the railroad going to Savage and the surrounding area. passing and being used by the quarry, which was located on the east side of Route 32. Large stone ruins quite close to the road still exist as well as the deep hole resulting from the quarry's industrial activity and used in recent years as a swimming pool for occupants of the old Perry residence, noted on the Hopkins Atlas of 1878 and located southeast of the ruins.

The bridge is a basic Pratt through truss bridge, the design of which was patented in 1844 by Thomas and Caleb Pratt.

its end floor beams (running north-south) rest on huge granite piles on each side of the Middle Patuxent River, making it a single span Pratt through truss. Five struts on the north and south run from the floor beams to the north and south top chords. They are interconnected by thin, flexible rods which form King Trusses. Those on the east and west corners form the inclined end posts of the bridge, while their struts form the portal bracing for each end of the bridge. Portal struts feature latticed trusses while those struts between the two portal struts feature King posts with several inch spans between the members which form the strut. (See photograph)

The bridge appears structurally sound other than the need of a new floor.

PERIOD	AREAS OF SIGNIFICANCE CHECK AND JUSTIFY BELOW					
—PREHISTORIC —1400-1499 —1500-1599 —1800-1899 —1700-1799 —1800-1899 —1900-	_ARCHEOLOGY-PREHISTORIC XARCHEOLOGY-HISTORIC _AGRICULTURE _ARCHITECTURE _ART _COMMERCE _COMMUNICATIONS	COMMUNITY PLANNINGCONSERVATIONECONOMICSEDUCATION X_ENGINEERINGEXPLORATION/SETTLEMENT X_INDUSTRYINVENTION	LANDSCAPE ARCHITECTURE LAW LITERATURE LMILITARY LMUSIC LPHILOSOPHY LPOLITICS/GOVERNMENT	—RELIGION —SCIENCE —SCULPTURE —SOCIAL/HUMANITARIAN —THEATER XTRANSPORTATION —OTHER (SPECIFY)		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The Guilford Quarry iron truss bridge is significant historically and structurally.

Historically it is associated with Maryland's engineering, industrial and technological heritage. Our national government has passed for the public safety the Special Bridge Replacement Program which is 100 percent federally funded and is administered through the State Highway Administration. This program may well endanger these early bridges, many of which have already been replaced. There is now on the floor of Congress a bill pertaining to the new Bridge Safety Act of 1977 which essentially calls for the rehabilitation of existing bridges whereever possible, before replacement. The Guilford Quarry Bridge has no floor at present and would require such rehabilitation. Whether it is otherwise structurally sound would require additional examination by a structural engineer. The important thing, however, is that this bridge still stands and can be either rehabilitated or replaced.

Bridges of this kind were once crucial to America's industry and economy. The Guilford Quarry Truss Bridge provided access to Savage from the quarry located on the east side of Route 32. A dominant stone ruins stands on that side of Route 32 east of the bridge, which was once a part of the industrial operation. Both Granite Hill, Ho-188, and Moundland, Ho-40, located in the vicinity of the quarry were constructed of ashlar cut granite blocks from this quarry as indicated from early deeds.

Structurally this bridge is a fine example of the basic Pratt truss, patented in 1844 by Thomas and Caleb Pratt and distinguished by vertical members acting in compression and diagonals acting in tension. This design reduced the length of the compression members to help insure against bending or buckling. In a metal truss such as this, many comparatively small pieces of iron or steel are joined together in a series of triangles. These interconnect with one another to form the complete bridge. Each of these pieces or members of the bridge is put in either tension or compression when resisting loads placed by gravity upon it. In compression, the forces acting upon the member tend to push it together. In tension, the forces tend to pull it apart. The main members of the bridge are stiff, heavy posts or struts which are capable of withstanding both tension and compression and thin flexible rods or bars capable only of tension.

CONTINUE ON SEPARATE SHEET IF NECESSARY

Significance Page 2 of 2

The Guilford Quarry Bridge is historically and technologically significant as an example of a through Pratt truss, carrying its traffic load level with the bottom chords. The Hopkins Atlas of 1878 indicates the quarry operation. In all probability the bridge was used at this time.

The present transportation planning in this area presents a line for the relocation of Route 32 running east of the stone ruins and the large hole resulting from the operation of the quarry, the latter of which in recent years has been used as a private swimming pool for those residing in the house southeast of the ruins. The relocation of Route 32 as well as the plans for future development of the surrounding area by Columbia, place the future of the bridge in uncertainty, not to mention future effects of the Special Bridge Replacement Program of the federal government.

For these reasons the Guilford Quarry Bridge should be considered for inclusion to the National Register and the State Critical Areas Program.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Memorandum: To Historic Sites Surveyor from Mark Edwards re: Historic Iron Bridge Identification, January 23, 1978.

Comp, T. Allan and Jackson, Donald. "Bridge Truss Types: A Guide to Dating and Identifying," Historic American Engineering Record. National Park Service.

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY

Please see Attachment 1, Tax Map 42, p. 29

VERBAL BOUNDARY DESCRIPTION

Please see Howard County Land Records, Liber 400 , folio 717, 727

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE

Maryland

COUNTY

Howard

STATE

COUNTY

111 FORM PREPARED BY

NAME / TITLE

Cleora Barnes Thompson, Archivist

ORGANIZATION

DATE

Office of Planning & Zoning-Comprehensive Planning Section 465-5000 x257

STREET & NUMBER

TELEPHONE

3450 Court House Drive

STATE

CITY OR TOWN

Ellicott City

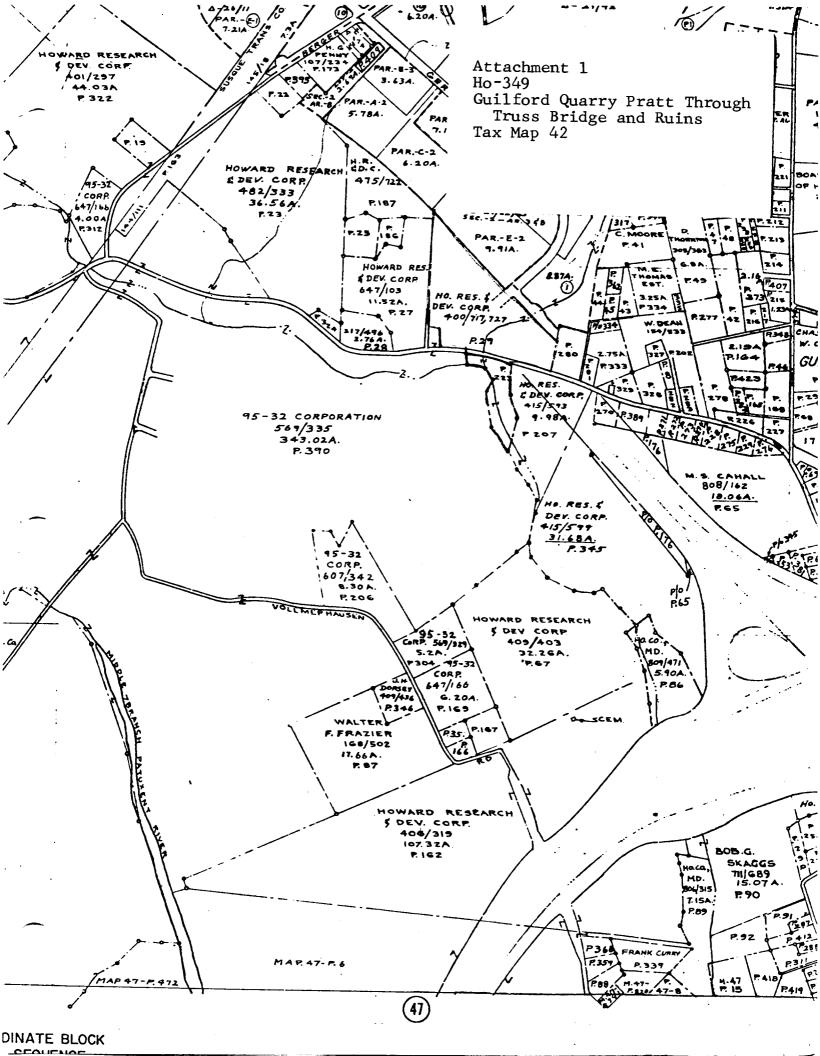
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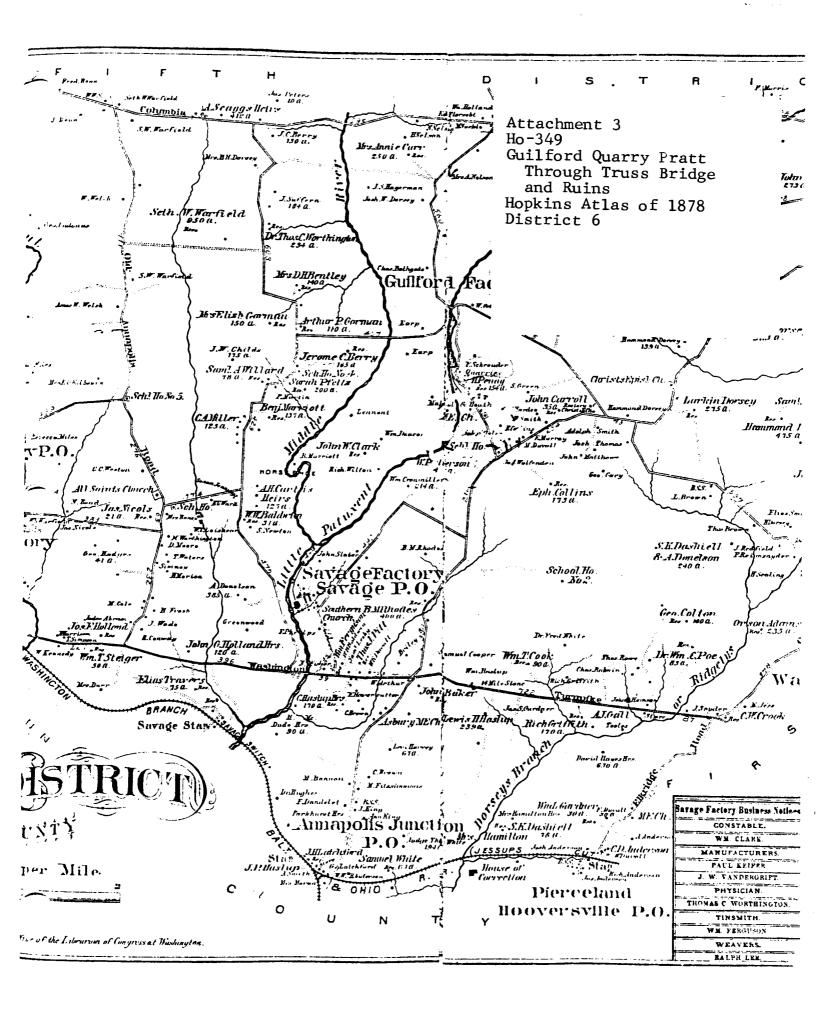
The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

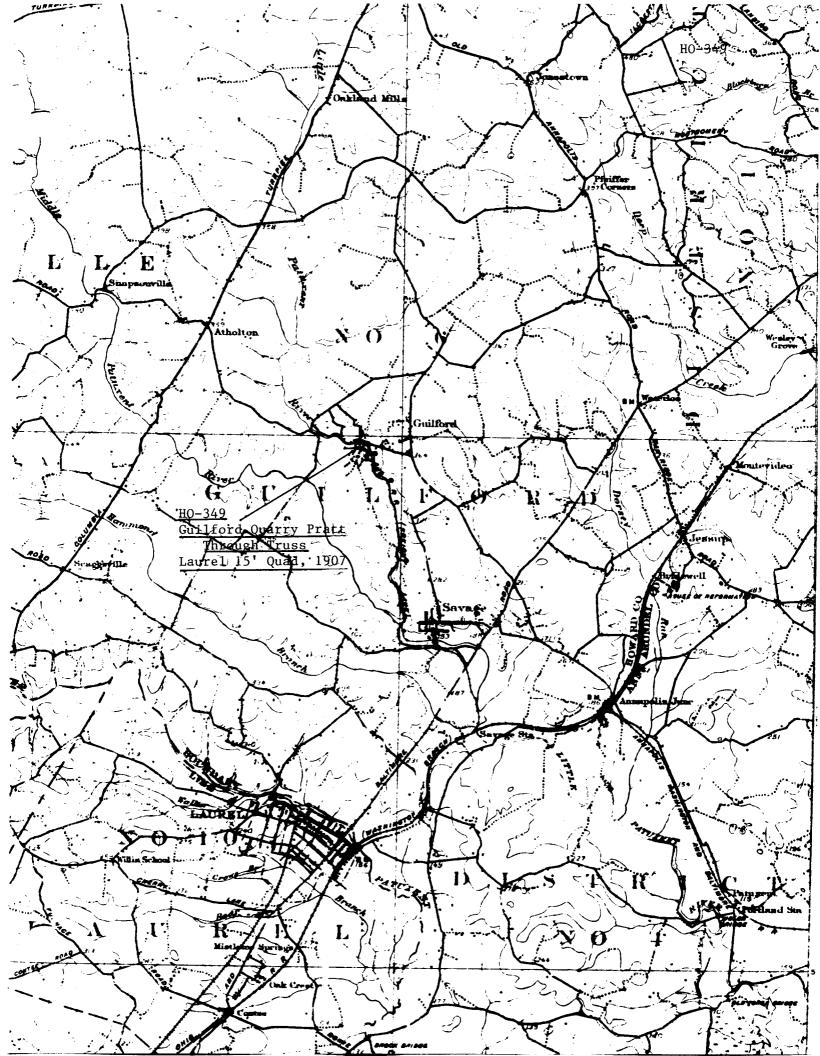
The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust The Shaw House, 21 State Circle Annapolis, Maryland 21401

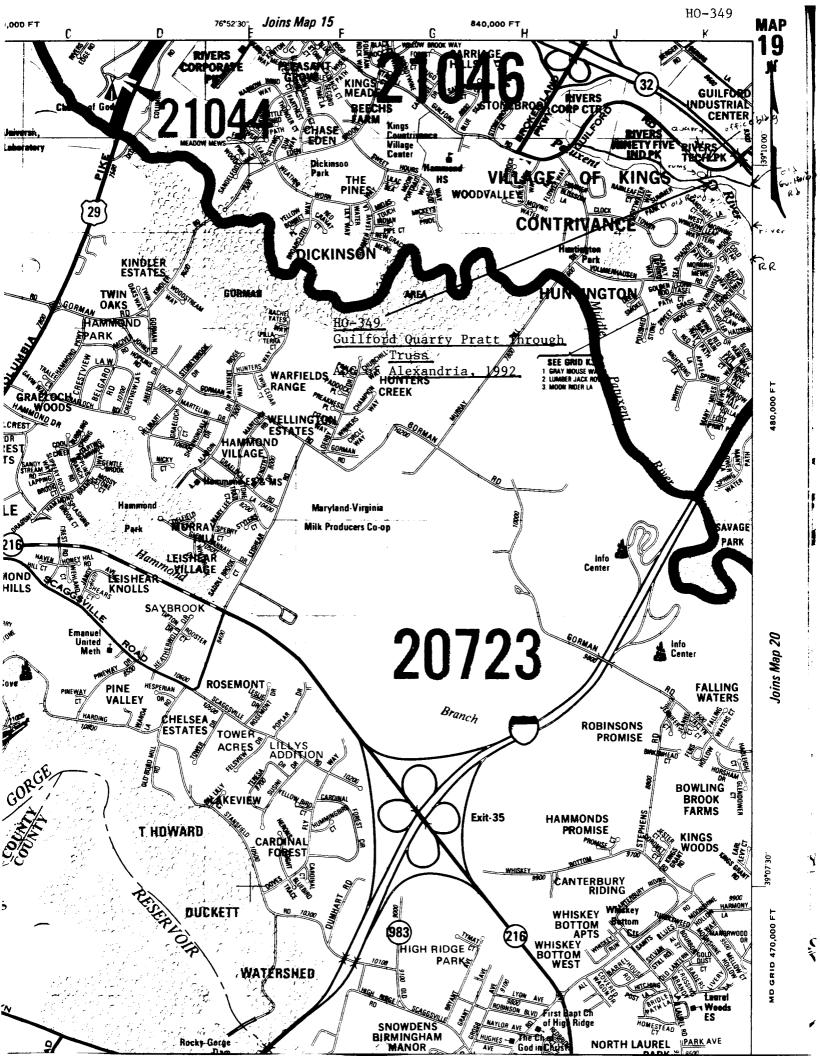
(301) 267-1438



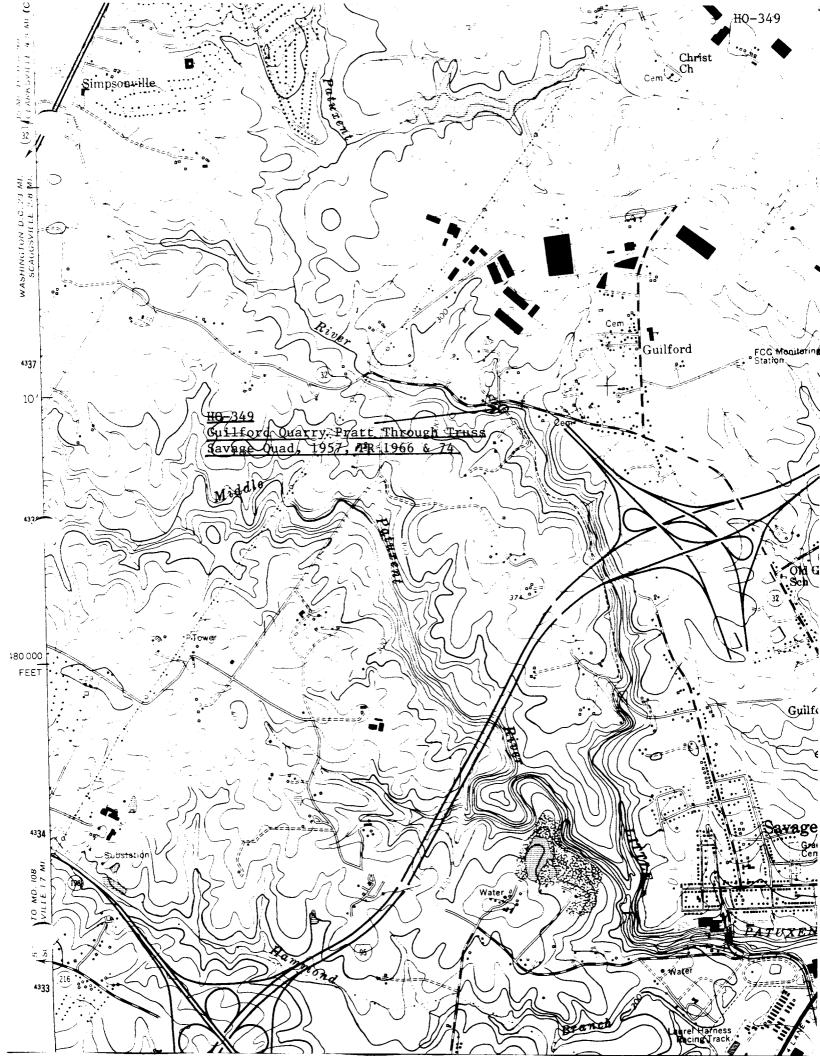










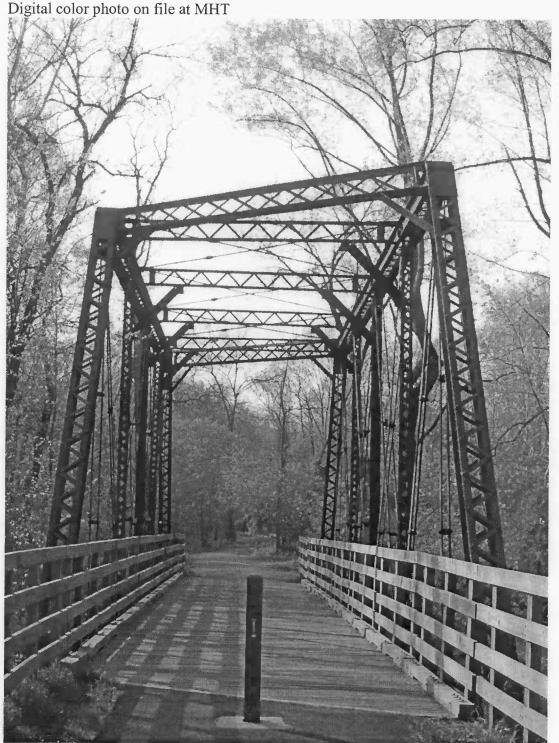


HO-349 Guilford Truss Bridge Jennifer K. Cosham April 22, 2004 Digital color photo on file at MHT





HO-349 Guilford Truss Bridge Jennifer K. Cosham April 22, 2004 Digital color photo on file at MHT





HO-349
GUILFORD QUARRY PRATT
THROUGH TRUSS BRIDGE & RUINS
EAST
CB THOMPSON, AIP
FEB-1978