FHR-8-300 (11-78)

AL-VI-D-308

United States Department of the Interior
Heritage Conservation and Recreation Service

National Register of Historic Places Inventory—Nomination Form

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Waverly Street Bridge

and/or common Westernport Bowstring Arch Truss Bridge

2. Location

street & number Waverly Street at Georges Creek — n/a not for publication

city, town Westernport — n/a vicinity of — **congressional district** Sixth

state Maryland **code** 24 **county** Allegany **code** 001

3. Classification

Category	Ownership	Status	Present Use	
___ district	X public	X occupied	___ agriculture	___ museum
___ building(s)	___ private	___ unoccupied	___ commercial	___ park
___ structure	___ both	___ work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
X object	___ in process	___ yes: restricted	___ government	___ scientific
	___ being considered	X yes: unrestricted	___ industrial	X transportation
	X not applicable	___ no	___ military	___ other:

4. Owner of Property

name City of Westernport

street & number Box 266

city, town Westernport — n/a vicinity of — **state** Maryland 21562

5. Location of Legal Description

courthouse, registry of deeds, etc. Allegany County Courthouse

street & number 30 Washington Street

city, town Cumberland **state** Maryland 21502

6. Representation in Existing Surveys

title Coal Basin Historic Sites Survey — **has this property been determined elegible?** ___ yes X no

date 1982 — ___ federal X state ___ county ___ local

depository for survey records Maryland Historical Trust, 21 State Circle

city, town Annapolis **state** Maryland 21401

7. Description

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Condition		Check one	Check one
___ excellent	___ deteriorated	_X_ unaltered	_X_ original site
_X_ good	___ ruins	___ altered	___ moved date n/a
___ fair	___ unexposed		

Describe the present and original (if known) physical appearance

Number of Resources

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

Number of previously listed National Register properties included in this nomination: none

Original and historic functions and uses: transportation

DESCRIPTION SUMMARY:

The Westernport Bowstring Arch-Truss Bridge, sometimes known as the Waverly Street Bridge, is located within Westernport, a small town in the mountainous southwest corner of Allegany County, Maryland. The bridge carries vehicular traffic on Waverly Street over Georges Creek. It is a single span, bowstring arch through truss steel bridge with a span length of 108 feet. The bridge is supported by stone abutments and has a timber deck and timber stringers. Built in 1892 by the King Bridge Company of Ohio, the bridge has retained its original appearance and is in good condition.

For General Description, see Continuation Sheet No.

GENERAL DESCRIPTION

The Westernport Bowstring Arch Truss Bridge, sometimes known as the Waverly Street Bridge, is located within Westernport, a small coal mining and manufacturing town in the mountainous southwest corner of Allegany County, Maryland. The bridge is located approximately thirty yards from Main Street and the single track of the Western Maryland Railroad (formerly the Cumberland & Pittsburgh Railroad) in a mixed residential and commercial part of town. It carries vehicular traffic over Georges Creek on Waverly Street, which runs perpendicular to Main Street and the railroad tracks.

The steel bridge has a single span bowstring arch through truss with a span length of 108 feet. The truss is pin connected. The arched top chord of the truss terminates at the bridge's bearing joints on the abutments. The bottom chord consists of paired eye bars from joint to joint. Each panel is laterally braced with cylindrical tie rods. The bridge reaches a maximum height of 15.7 feet, and is 15.6 feet wide and consists of eight panels measuring 13' 6" wide.

The fourteen vertical posts, of differing height, consist of two angles tied together with lattice work. Similar latticework is used for the three horizontal braces. A series of three pipes running the length of either side of the bridge serve as guardrails. There are stone abutments which support the bridge on either side of Georges Creek.

The bridge, built in 1892 by the King Bridge Company of Ohio, has not been altered since that time and is in good condition.

8. Significance

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Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion	
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science	
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture	
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	X engineering	___ music	___ theater	
X 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	X transportation	
___ 1900–	___ communications	___ industry	___ politics/government	___ other (specify)	
		___ invention			

Specific dates 1892 **Builder/Architect** King Bridge Co., Cleveland, Ohio

Statement of Significance (in one paragraph)

Applicable Criteria: C
Applicable Exceptions: none
Level of Significance for Evaluation: state

SIGNIFICANCE SUMMARY:

The Westernport Bowstring Arch Truss Bridge is significant as one of only two extant bowstring through truss bridges in Maryland and the only one in use at its original location. The bridge was built in 1892 by the King Bridge Company of Cleveland, Ohio, one of the most prolific and innovative of nineteenth century bridge manufacturing companies in the United States. The bridge embodies the distinctive characteristics of the bowstring arch truss in its two tubular steel arches which stretch between the abutments in a single span. The King Iron Bridge and Manufacturing Company introduced numerous innovations in the truss design, notably the rectangular cross section of the steel tubing forming the arches; this feature was patented in 1861 by the company's founder, Zenas King, and is employed in the Westernport bridge. The bowstring arch truss was one of numerous designs for metal bridges developed during the second half of the 19th century; this design was most suitable for the short spans and low traffic volume, as reflected in the location and use of the Westernport bridge.

For History and Supporting Documentation, see Continuation Sheet No. 2

9. Major Bibliographical References

See Footnotes on Continuation Sheet No. 3.

10. Geographical Data

Acreage of nominated property less than one acre

Quadrangle name Westernport, V. Va.-MD. **Quadrangle scale** 1:24,000

UMT References

	Zone	Easting	Northing
A	17	668310	4372740
B			
C			
D			
E			
F			
G			
H			

Verbal boundary description and justification

The nominated property consists of the bridge and its stone abutments, comprising the full extent of the historic resources.

List all states and counties for properties overlapping state or county boundaries

state	n/a	code	county	code
state		code	county	code

11. Form Prepared By

name/title	Geoffrey Henry with contributions by Mark Eduwards, David Dorsey and Paula Spero
organization	Maryland Historical Trust
date	15 April 1984
street & number	21 State circle
telephone	(301) 269-2438
city or town	Annapolis
state	Maryland 21401

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national X state ___ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the Heritage Conservation and Recreation Service.

State Historic Preservation Officer signature

title STATE HISTORIC PRESERVATION OFFICER **date** 7-30-84 (date from letter)

For HCRS use only

I hereby certify that this property is included in the National Register

Entered in the National Register

for Keeper of the National Register **date** 9/7/84

Attest: **date**

Chief of Registration

GPO 938 835

HISTORY AND SUPPORT

The bowstring arch truss bridge in Westernport is significant as one of only two extant bowstring through truss bridges in Maryland and the only one in use at its original location in the state. The other bridge, located in Frederick County, has been moved to a state park and carries no vehicular traffic.

In May 1891, a motion was set before the town commissioners of Westernport to have the existing bridge over Georges Creek inspected for needed repairs.[1] The earlier bridge was obviously deemed obsolete or irrepairable, as the town commissioners appeared before the Allegany County Commissioners in early 1982 seeking funds "... to place an iron bridge over the run."[2] At their June 23, 1892 meeting the town commissioners resolved to contract with the King Bridge Company to erect a bridge over Georges Creek. Adam Lebbek's low bid of $149.00 was accepted for construction of abutments for the bridge and on July 5, 1892 a contract with the company was "...properly signed."[3] In October of that year the bridge was shipped to Westernport.

The bowstring truss was one of several bridge types developed in the nineteenth century and reflected a trend to replace wooden bridges with metal because of its greater strength and durability. Its economy and relatively large carrying capacity made the bowstring truss particularly popular, although in the long run examples of other truss systems such as Warren and Pratt were to be more numerous. Several patents were taken out for bowstring designs during the 1850s and 1860s, most of them concerning methods to increase the lateral stiffness of the arch or to reduce its tendency to sway under live loads.[4] Bowstring bridges were not generally used to carry heavy weight such as railroads but were used instead in rural areas or on lightly used throroughfares.

Zenas King, who founded the King Iron Bridge and Manufacturing Company in 1858, was one of the first to develop and refine this form of truss. King began his career in Ohio and was an agent for the Moseley Iron Bridge Company which specialized in a tubular wrought iron arch bridge patented in 1857.[5] The arch itself was a tube, triangular in cross section, which also featured inverted counter arches.

After he left the Moseley firm, King designed a Tubular Arch Bridge, first built in 1859 and patented in 1861. King's patented designs substituted a square shaped tube for the triangular Moseley design along with a "tie beam" bottom chord and radial rods connecting them.[6] The revised and repatented design of 1866 consisted of an upper chord of a built up section, a lower chord of two parallel rods, the two connected by vertical rods and diagonal bracing.[7]

Although the company's reputation was originally based on King's bowstring designs, it rarely built more than two dozen such truss spans annually during its early years. However, by 1874 their catalogue claimed an annual production number of 250-300 tubular arch spans with over 2700 in use by that year.[8]

See Continuation Sheet No. 3

HISTORY AND SUPPORT (continued)

The King Iron Bridge and Manufacturing Company was one of the most prolific and innovative manufacturers of metal truss bridges in the United States during the nineteenth century. By 1884 the company had the largest highway bridge works in the country, "with the capacity for wrought iron and steel bridges, high and low trusses, arch bridges, swing bridges, iron turntables and combination bridges of all styles."[9]

Footnotes

[1]Proceedings of the Commissioners of Westernport, p. 161.

[2]Piedmont (W. Va.) Herald, June 10, 1892.

[3]Proceedings of the Commissioners of Westernport.

[4]Ohio Department of Transportation. The Ohio Historic Bridge Inventory - Evaluation and Preservation Plan, (n.p. 1893), p. 21.

[5]Simmons, David A., in Ohio Cities and Villages, August 1978, pp. 13-18.

[6]Spero, Paula A. C., Metal Truss Bridges in Virginia 1865-1932. (Charlottesville, Va., 1980), Vol. 7, p. 8.

[7]Simmons, op. cit.

[8]Diebler, Dan Grove, A Survey and Photographic Inventory of Metal Truss Bridges in Virginia 1865-1932. (Charlottesville, Va, 1980).

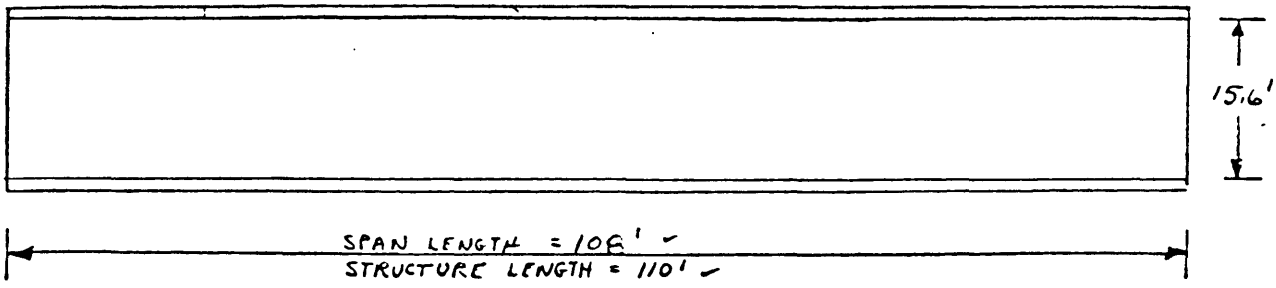
[9]Spero, op. cit., p. 12.

CONSULTING ENGINEERS
Owings Mills, Maryland 21117

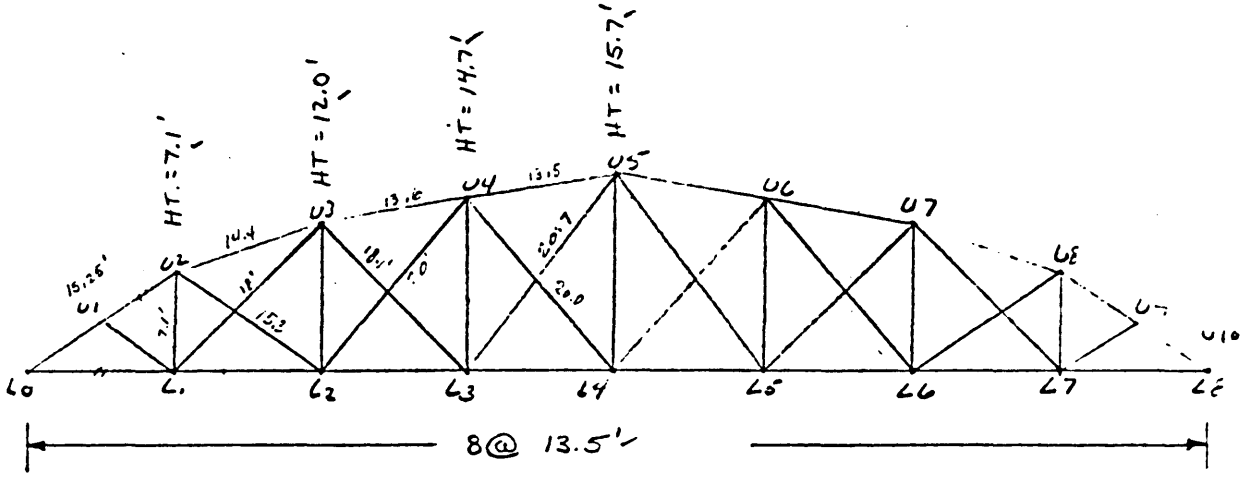
SUBJECT [illegible] A-120 SHEET NO. 1 OF

BY LFGORE ✓ KELLY DATE 11/3/8[illegible]

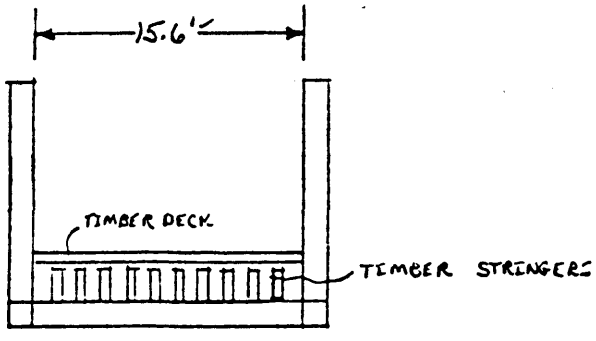
WAVERLY RD OVER GEORGES CREEK BUILT 1892 (EST)
(WESTERNPORT)



PLAN

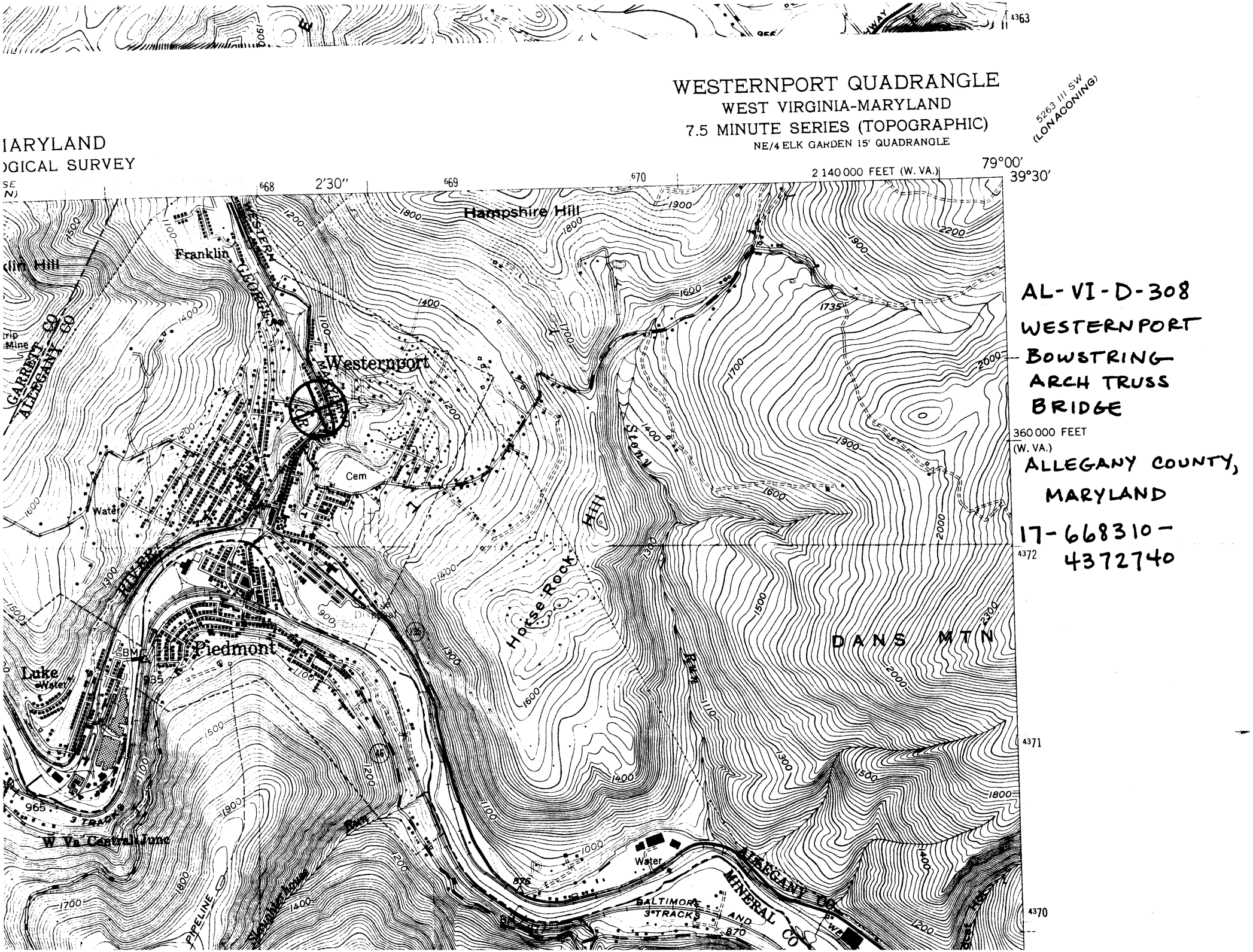


ELEVATION



SECTION

AL-VI-D-308
Westernport Bowstring
Arch Truss Bridge
ALLEGANY COUNTY, MARYLAND


WESTERNPORT QUADRANGLE
WEST VIRGINIA-MARYLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 ELK GARDEN 15' QUADRANGLE
5263 III SW
(LONACONING)
IARYLAND
)GICAL SURVEY
79°00'
39°30'
2 140 000 FEET (W. VA.)
2'30"
668
669
670
Hampshire Hill
Franklin
WESTERN
Westernport
Cem
Water
Stony
Horse Rock
DANS MTN
Piedmont
Luke
Water
W Va Central Junc
PIPELINE
Water
ALLEGANY CO
MINERAL CO
BALTIMORE AND
3 TRACKS
360 000 FEET
(W. VA.)
4372
4371
4370
AL-VI-D-308
WESTERNPORT
BOWSTRING-
ARCH TRUSS
BRIDGE
ALLEGANY COUNTY,
MARYLAND
17-668310-
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