

Survey Number: T-25

Bridge Name and Address: Marion Bridge
L.R. 451 over Monongahela River
Green County and Fayette County

Owner: Commonwealth of Pennsylvania
Department of Transportation
Transportation & Safety Building
Harrisburg, Pennsylvania 17120

Statement of Significance: The Marion Bridge is an unusual multiple span bridge consisting of Warren trusses constructed as a typical cantilever through truss bridge. This bridge is the only example of a Warren through truss, and the only cantilever through truss bridge included in this nomination. This cantilever bridge appears to be of the "suspended span cantilever truss" type which began to be built in the United States about 1885. This type of structure looks like a three span bridge with two towers at the central piers. It functions structurally with the two outside spans acting as anchor spans, and the inner, pier-side two portions of the center span acting as cantilever arms; these cantilever arms support the central portion of the middle span, which is thus a floating or suspended span. In the last decade of the nineteenth century and the early decades of the twentieth century, the cantilever truss was frequently used in the United States for major river crossings. This structure type made it possible to span greater distances than was generally possible with simple span trusses.

Area of Significance: Engineering.

Boundary Description: The nominated property consists of a 810 feet long by 28 feet wide rectangle whose vertices coincide with the outside corners of the bridge's abutments, and includes only bridge superstructure and substructure.

Acreage of Nominated Property: Less than one acre.

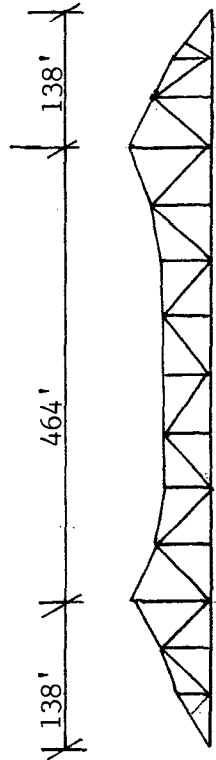
15. TYPE

CHARACTERISTICS

Truss: continuous/cantilever:

- webbing: lattice, 31 Pannels span
- anchor span: _____
- cantilever span: _____
- suspended span: _____
- thru/deck/low (pony): full-slope/half-hip.
- connections: pin/riveted.
- eyebars: loop welded/die forged.
- railing: latticed/applied guardrail
- columns: channels/lacing bars

Arch: masonry/metal:



- thru/deck/1/2-thru.
- fixed (hingeless) /1/2/3-hinged.
- ribs: solid/braced; crescent/parallel.
- spandrels: open/solid/braced.
- intrados/vault; ribbed/solid.
- shape: semi-circular/elliptical/segmental; stilted.
- skew

Suspension:

- stiffening: braced-chain (1/2/3-hinged) /suspended truss.
- wire cable: twisted/parallel.
- eyebar chain.
- back-stay: straight/curved.

Bascule:

- single/double leaf.
- rolling lift: Schertzer.
- trunnion: simple (Chicago) /multiple (Strauss).
- counterweights: heel/overhead.
- Page/Rail.
- semi-lift/direct lift.

Swing:

- bearing: center/rim/combination.
- (see Truss above).

Vertical Lift:

- (see Truss above).

Other:

- other: _____

16. MATERIALS (primary)

Superstructure	type	treatment/finish	source
main span:	<u>steel</u>	_____	<u>Carnegie</u>
towers:	<u>steel</u>	_____	<u>Carnegie</u>
railings:	<u>steel</u>	_____	<u>Carnegie</u>
Substructure			
piers:	<u>conc.</u>	<u>smooth</u>	_____
abutments:	<u>conc.</u>	<u>smooth</u>	_____
wings:	_____	_____	_____
intrados/ribs:	_____	_____	_____
voussoirs:	_____	_____	_____

17. PHOTO NO's. 12-04 (20-37)
Proof Sheet GR-3A

18. PREPARED BY: D. Piccolomini & M. Francis
AGENCY/ORGANIZATION: PA DOT/12/20
DATE: 7/82

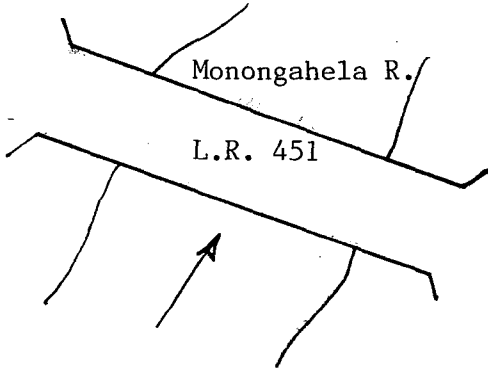
9. HISTORICAL DATA

1. County Greene & Fayette
 2. Municipality Dunkard & Pt. Marion
 3. Structure No. 1301 11101 101415111 101 1010101010101
 4. Survey Code 12-310 T-25
 5. Present Name Marion Bridge
 6. Other name (historic name if any) N/A
 7. Crossing L.R. 451 over Mon River

8. USGS QUAD. Morgantown, W.VA
 UTM's: Zone 17 (north)
 E 5 9 3 8 0 0
 N 4 3 9 9 1 9 0
 E
 N

Designer/Engineer:
Unknown
 Builder/Contractor:
Unknown
 Bridge Company:
Pittsburgh & Maines Steel Company

10. SITE PLAN



Date(s): 1930; basis bridge file
 _____; basis _____
 _____; basis _____
 _____; basis _____
 Use: vehicular present; vehicular original.

11. INTEGRITY

altered; 1954-61-69.
 unaltered; _____.
 moved; _____.

Explain:

repairs

12. VIEW

no.

PHOTO

13. COMMENTS

Unusual features:

N/A

Locale/environment:

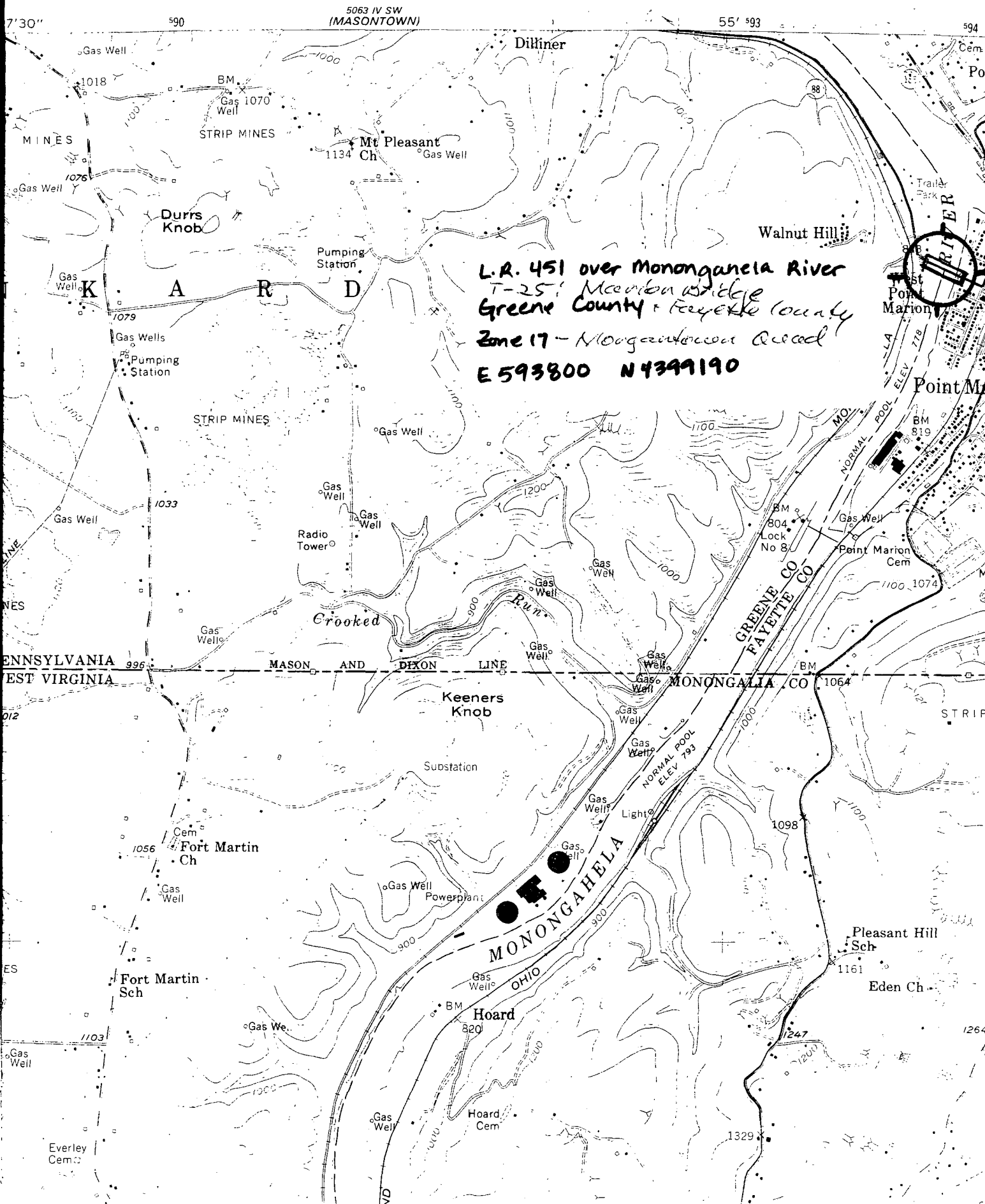
Rural Residential - Connects Greene & Fayette Counties

Machinery (describe/identify type/equipment):

NA

14. DIMENSIONS

spans: 5 no., 464 ft. O/A
 main: _____ no., _____ ft.
 secondary: _____ no., _____ ft.
 approach: _____ no., _____ ft.
 piers: _____ no.
 towers: _____ no., _____ ft.



L.R. 451 over Monongahela River
T-25 Marion Bridge
Greene County & Fayette County
Zone 17 - Monongahela Road
E 593800 N 4399190