

**PENNSYLVANIA HISTORIC RESOURCE SURVEY FORM**  
 Bureau for Historic Preservation Box 1026  
 PA Historical & Museum Commission Harrisburg, PA 17120

9. HISTORICAL DATA

8. USGS QUAD. Bridgeport, PA

UTM's: Zone 18

E | 4 | 6 | 9 | 1 | 4 | 0 |

N | 4 | 4 | 1 | 0 | 3 | 8 | 0 |

E | | | | | | |

N | | | | | | |

Designer/Engineer:

James B. Long

Builder/Contractor:

Paul D. Kauffman

Bridge Company:

Unknown

Date(s): 1919; basis

Plaque on Bridge

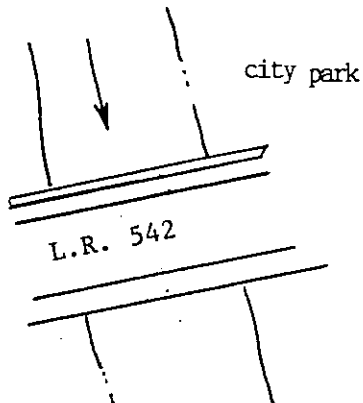
\_\_\_\_\_ ; basis

\_\_\_\_\_ ; basis

\_\_\_\_\_ ; basis

Use: Vehicular present; Vehicular original.

10. SITE PLAN



1

Date(s): 1919; basis

Plaque on Bridge

\_\_\_\_\_ ; basis

\_\_\_\_\_ ; basis

\_\_\_\_\_ ; basis

Use: Vehicular present; Vehicular original.

11. INTEGRITY

altered; \_\_\_\_\_

x unaltered; \_\_\_\_\_

moved; \_\_\_\_\_

Explain:

12. VIEW

no.

PHOTO

13. COMMENTS

Unusual features:

Concrete bow truss  
decorative parapet

Locale/environment:

City of Chester

Machinery (describe/identify type/  
equipment):

N/A

14. DIMENSIONS

spans: \_\_\_\_\_ no., \_\_\_\_\_ ft. O/A

main: 1 no., 84 ft.

secondary: \_\_\_\_\_ no., \_\_\_\_\_ ft.

approach: \_\_\_\_\_ no., \_\_\_\_\_ ft.

piers: \_\_\_\_\_ no.

towers: \_\_\_\_\_ no., \_\_\_\_\_ ft.

1. County Delaware	2. Municipality City of Chester	3. Structure No. 123456789010113684	4. Survey Code 112 C-15
5. Present Name Second Street Bridge	6. Other name (historic name if any) N/A	7. Crossing PA 291 Second St over Chester Creek	

15. TYPE

CHARACTERISTICS

Truss: continuous/cantilever:

webbing: \_\_\_\_\_  
 anchor span: \_\_\_\_\_  
 cantilever span: \_\_\_\_\_  
 suspended span: \_\_\_\_\_  
 thru/deck/low (pony): full-slope/half-hip.  
 connections: pin/riveted.  
 eyebars: loop welded/die forged.  
 railing: \_\_\_\_\_  
 columns: \_\_\_\_\_

Arch: masonry/metal:  
 Concrete Rainbow

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:	Concrete	Smooth	_____
towers:	_____	_____	_____
railings:	Concrete	Lattice design on parapets	_____
Substructure			
piers:	_____	_____	_____
abutments:	Masonry	Cut granite	_____
wings:	_____	_____	_____
intrados/ribs:	_____	_____	_____
voussiors:	_____	_____	_____

17. PHOTO NO's.  
 06-6 (16-20)

18. PREPARED BY:  
 AGENCY/ORGANIZATION: Dist. 6-0  
 ; DATE: 12-20-82

NATIONAL REGISTER

the arch extrados bars and with the bottom floor beam bars. Decorative railings were made of reinforced concrete in a star pattern.

Area of Significance:

Engineering

Boundary Description:

The nominated property consists of a 84 feet long by 53 feet wide rectangle whose vertices coincide with the outside corners of the bridge's railing's, and includes only superstructure and substructure.

Acreage of Nominated Property:

Less than one acre.

NATIONAL REGISTER

Survey Number: C-15

Bridge Name and Address: Second Street Bridge  
L.R. 542 over Chester Creek  
Delaware County

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

Statement of Significance: The Second Street Bridge is a concrete bowstring arch built by Delaware County in 1919. This tied-through arch represents an unusual use of concrete in a form typically associated with steel arches. This is the earliest known example of this type in Pennsylvania. Sometimes known as "Rainbow" or "Marsh" arches, concrete bowstring arches were built both as proprietary types and as independently designed bridges. Though not a commonly built concrete bridge type, they were popular in the early decades of the twentieth century. A known patented bowstring was the "Marsh" arch, patented by James B. Marsh and built by his Marsh Engineering Company of Des Moines, Iowa between 1912 and 1930. Paul Kaufman was the designer of the Second Street Bridge. James B. Long, later the designer of the Columbia-Wrightsville Bridge (C-19), was the engineer. In form and reinforcement it is a typical tied-through arch. Two arch ribs rise from the abutments; their lateral thrust is transmitted to the horizontal ties which are supported on masonry abutments. Hooked, radiating steel reinforcing bars join the arch rib to the horizontal tie. The deck is carried by floor beams which are connected to the arches by ten hangers. Encased in the concrete hangers, hooked steel reinforcement bars make direct contact at the top and bottom with

75°22'30"  
39°52'30"

2 670 000 FEET (PA.) 469000m E.

'70

'71

20'

Pennsylvania D.O.T. Owned Highway Bridges  
Second Street Bridge  
C-15



7A 291 - 20th St. over Chester Creek  
 C-15 Second Street Bridge  
 Delaware County  
 Zone 18 - Bridgeport Quad  
 E469140 N4410380

413000m N  
 412  
 200 000 FEET  
 (PA.)  
 410  
 50'  
 409  
 408

