10. NAME(S) OF STRUCTURE
State Bridge Number 151

11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION

10A:33-36 11A:2-22

11A:22

12. SOURCES

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Carter, Dick. The History of Sussex County. (Georgetown, Delaware: Community Newspaper Corp., 1976).

Downs, Winfield S. ed. Who's Who in Engineering. (New York: Lewis Historical Publishing Co., Inc., 1931).

Spero, Paula A. C. Metal Truss Bridges in Virginia: Suffolk Construction District. (Charlottesville, Virginia: Virginia Highway & Transportation Research Council, 1981).

Delaware DOT records: Annual Reports; contract files.

Plans on file at Delaware DOT: Contract # 42B & C, 1043A, 67-10-005, 82-009-12

13. INVENTORIED BY: **AFFILIATION** **DATE**

P.A.C. Spero & Company with Kidde Consultants for Delaware DOT — April-November 1988

HABS/HAER INVENTORY

See "HABS/HAER Inventory Guidelines" before filling out this card.

1. NAME(S) OF STRUCTURE
State Bridge 151

2. LOCATION
Front Street over Nanticoke River
Seaford, Sussex County, Delaware

3. DATE(S) OF CONSTRUCTION
1924

4. USE (ORIGINAL/CURRENT)
Vehicular

5. RATING
Basc

6. CONDITION
Good

7. DESCRIPTION

The main span of the Seaford Bridge is a single leaf through plate girder trunnion bascule bridge, of the Chicago type. The total structure length is 224' with a main span length of 55'and a clear waterway of 40'-9". The approach spans are concrete T-beam spans measuring 33'. The roadway is 24'-0" wide with 5'-0" sidewalks on either side. Ornamental, open concrete balustrades run the length of the bridge (except at the bascule span) with four lamp posts on either side setting on slightly larger posts. The bridge is powered by a KHP motor and the counterweight consists of 305,000 pounds of composition concrete with 12,000 pounds of adjusting blocks. All machinery is concealed below the road in the bascule pier. There is an operators house at the north end of the bascule span.

8. HISTORICAL DATA

State Bridge 151 was constructed in 1924 and 1925, under Delaware State Highway Department contract number 42B (Federal Aid Project No. 18) and 42C. It was designed by the Chicago Bascule Bridge Company, of Chicago, patent holders for the Chicago type bascule. A. G. Livingston, Bridge Engineer, and C. Douglas Buck, Chief Engineer of the State Highway Department, approved all plans. Original drawings and notes, dated 1923 and 1924, indicate that the bridge construction was authorized by Congressional Act SB 4346 on February 15, 1923 and that a War Department permit was issued June 30, 1923. The need for federal approval is standard procedure for bridges over navigational waters. According to the drawings, the bridge was designed for a twenty ton truck.Bids for the substructure were received on December 19, 1923, and the contract was executed on January 8, 1924 with Imbach-Wozny-McCoy, Inc., of Baltimore, for the bid price of $69,447.00. Delaware records indicated that Henry G. Tyrell, noted bridge engineer and historian, was associated with this firm as consulting engineer at that time. Bids for the superstructure were received on April 9, 1924, and the construction contract was signed with Al. S. Fox on May 6 for $29,690.00. James Saunders Company of Dayton, Ohio, supplied the electrical equipment necessary for the operation of the bridge. The bascule bridge was designed by the Chicago Bascule Bridge Company, Hugh E. Young, President. Upon completion in 1925, it was inspected by C.L Keller, principal in the firm of Keller & Harrington; Keller wrote to A.G. Livingston that the construction was "well executed and is very satisfactory". Keller & Harrington designed the bascule bridges at Milford (Bridge 21A), and Newport (Bridge 159), both constructed in 1929. The Seaford Bridge replaced a steel and timber swing span on the same location; a temporary fixed timber bridge was erected to accommodate traffic during construction. The bridge was completed and recommended for acceptance in March 1925. Improvements were made in 1951; these included the replacement of the original wood deck with a steel floor.

9. SIGNIFICANCE

One of seven extant highway bascule spans in Delaware, State Bridge Number 151 (Seaford Bridge) is one of two bascule bridges inventoried in Sussex County. The Seaford Bridge is the only extant trunnion bascule of the patented Chicago type. In general, these patented bascule designs were either of a pivoting, or trunnion, variety or a rolling type. The trunnion bascule differs from the rolling lift in that the entire weight of the leaf and counterweight is carried by the trunnion and trunnion bearings, located approximately at the center of gravity of the mass; in some cases, the machinery and the counterweight are placed in a pit below the deck within the bascule pier.