

**10. NAME(S) OF STRUCTURE**

State Bridge Number 707

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

12B:6-25



12B:14

Mack, Warren W. "A History of Motor Highways in Delaware", in Reed, Henry Clay, Delaware: A History of the First State, vol.2, pp.535-550 (NY: Lewis Historical Publishing Co., 1947).

Delaware State Program. Delaware State Highways; The Story of Roads in Delaware... [Newark, Delaware: Press of Kells, 1919].

Federal Writers Project. Delaware: A Guide to the First State. (New York: Viking Press, 1938).

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

Hancock, Harold Bell. The History of Sussex County, Delaware. [s.l. : s.n.] 1976.

Delaware State Archives. Sussex County Road Papers 1875-1940.

Delaware DOT records: contract files.

Plans on file at Delaware DOT: Contract #532

**12. SOURCES**

**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 Number 707

## 2. LOCATION

Road 50 over Silver Lake  
Rehoboth Beach, Sussex County, Delaware

## 3. DATE(S) OF CONSTRUCTION

1938

## 4. USE (ORIGINAL/CURRENT)

Vehicular

## 5. RATING

TS

## 6. CONDITION

Good

Delaware State Highway Bridge 707, "Lake Bridge", is a thirteen span combination timber and concrete bridge 260'-2" long. The spans are equally spaced at 20'-0". The deck is a composite slab structure and the parapet is concrete. The parapet is decorated with rectangular shaped arched pointed openings between columns. These columns are spaced 6'-4" apart. A concrete fascia, with a broad segmental arch curve, also ornaments the bridge. The fascia is 1'-8" wide at the crown of the arch and 4'-0" above the water level. The concrete deck, parapet and fascia are supported by timber members. The substructure is timber with timber bents comprising 12" x 12" beams on pilings, and U-shaped timber wing walls. The bridge's timber bents are laterally braced with horizontal struts. Two joints and double piers support the structure at the fourth and ninth pier. The bridge is 30'-8" wide and carries two lanes of traffic and two sidewalks. There are four decorative lamps on the bridge's west elevation.

The records of the Delaware Department of Transportation state that Bridge 707 was built in 1938 under contract 532. Original drawings indicate that this bridge replaced a 1928 timber bridge. The drawings show construction details of the composite system: laminated wood flooring using "uplift spikes" and "shear developers" to be incorporated in a concrete roadway surface. Drawing notes indicate that "a similar bridge was constructed East of Smyrna" (Bridge 9A. Bridge 445 is also similar.) The bridge was designed to carry a 15 ton truck with impact. The construction of Bridge 707 was a component of Federal Aid Project 113 which involved the construction of a new road between Rehoboth and Bethany Beach, a distance of 12.65 miles. Project 113B provided for the construction of the Silver Lake Bridge. Specifications for the bridge including a detailed list of special provisions were available in April, 1936. The special provisions consisted of instructions relating to the composite timber and concrete superstructure, a new type of construction at the time. The construction bids were received in the spring of 1938. The State Highway Department awarded the bridge contract to E. F. Hammond of Delmar, Delaware. Hammond's proposal totaled \$16,882.60, but the final cost of the Lake Bridge amounted to \$20,213.74. Several factors contributed to this overrun. The construction of a sidewalk curb and concrete pavement on the Rehoboth approach was not included in the original plans. Four additional lamp posts were installed. Finally, the largest added expense occurred from increased length of the foundation piles because the piles as originally specified failed to develop adequate bearing. The project was plagued by slow delivery of materials, and encountered a brief setback when a heavy windstorm blew the contractor's pile driver into the lake. Nevertheless, the bridge was completed and opened to traffic on April 8, 1939.

This composite structure, comprising a multiple-span timber substructure and composite timber-concrete slab superstructure, has considerable technological significance, and exemplifies the receptiveness to innovation which characterized the bridge engineers of the State Highway Department during this period. This new type of structure offered the advantage of utilizing economical materials, and Department engineers were quick to test its merits. It is significant as one of only three composite timber-concrete bridges surveyed in Delaware. In addition, its relatively high degree of architectural elaboration may reflect the increasing economic importance of Delaware's seashore resorts in the late 1930s. The project of which the bridge construction was a part was intended to facilitate travel to and from the growing resorts of Rehoboth and Bethany Beach. The Federal Aid Program project statement also predicted that the route would "be greatly increased in importance by the location of a permanent inlet to Indian River which is now being considered by the U.S. Engineers, and this Bridge becomes necessary to adequately take care of the increased traffic." Upon completion of the project, the inspection report noted "there are real possibilities of growth in population along the project, particularly as to summer residents. The growth in population, will depend largely on the increase in popularity that beach life holds for the general public."