

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT
DELAWARE CROSSING DIVISION
FOURTH ANNUAL REPORT
JANUARY 1952

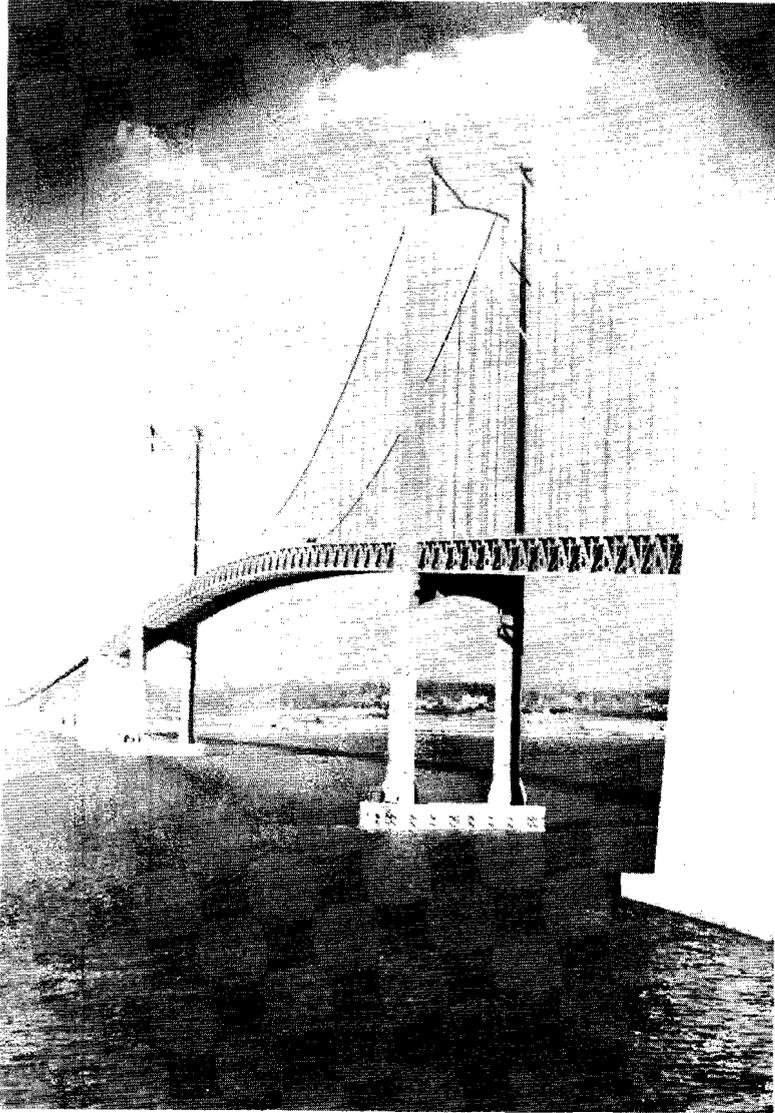
February 15, 1952

Honorable Elbert N. Carvel
Governor of Delaware
Dover, Delaware

Dear Governor Carvel:

In accordance with the Act authorizing the State Highway Department to construct a crossing over the Delaware River, the 1951 Annual Report of the activities of the Department in connection with the construction of The Delaware Memorial Bridge is respectfully submitted.

Very truly yours,
STATE HIGHWAY DEPARTMENT
J. Gordon Smith
Chairman



DELAWARE MEMORIAL BRIDGE

State of Delaware
State Highway Department
DELAWARE CROSSING DIVISION
FOURTH ANNUAL REPORT
January 1952

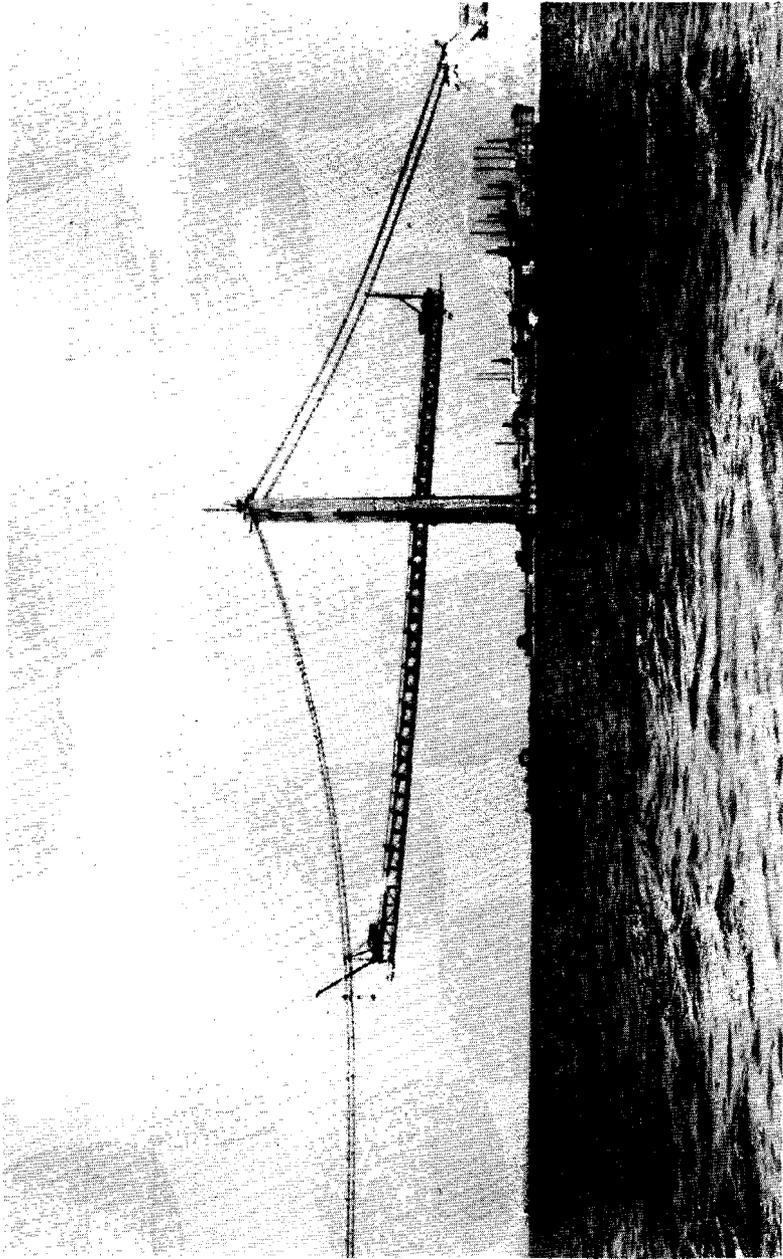
The construction of the Delaware Memorial Bridge was delayed considerably during the early part of 1951 due to continued high winds, rain and cold weather. However, as the result of considerable overtime work by the contractors under agreement with the State whereby certain excess costs were reimbursed by the State, it was possible to open the Bridge to traffic at 12:01 A. M., August 16. The soundness of this procedure was clearly verified by the unexpected large amount of traffic which has crossed the Bridge from the very beginning of its operation.

CONTRACT NO. 4—Towers and Suspended Steelwork

As previously reported, the work under this contract was carried out in two parts, separated by the construction of the cables and the placing of the suspenders. The main towers were completed in the Fall of 1950. Erection of the suspended steelwork began on February 16, 1951 and was substantially completed on June 1.

This steelwork was erected by starting at the towers and progressing simultaneously towards the center of the main span and towards the anchorages. The closing members of the main span were set in place on April 22. Guy derricks, rigidly mounted on the lower portal struts of the towers, were used to erect the steelwork adjacent to the towers and to assemble on this steelwork the travellers which were used to erect the balance.

In order to avoid excessive deflections which would have caused damage to the cables, only part of the steel was set in place as the travellers progressed outward and the balance erected as they retracted to the towers. This operation was expedited by assembling and riveting the floor beam trusses and units of the stiffening trusses at the Wilmington Marine Terminal, from which point all of the suspended steelwork was transported to the site on barges to locations directly under the erection travellers. Cooperation of the United States Coast Guard was obtained in the regulation of river traffic during this phase of the work, as the barges at times had to be anchored within the channel limits. The travellers



ERECTION OF SUSPENDED SPANS

consisted of standard stiff leg derricks mounted on steel frames, which were skidded along on the permanent steel-work. About 7,800 tons of steel were required for this portion of the work, which was fabricated and erected by the American Bridge Company.

CONTRACT NO. 5—Cables and Suspenders

At the beginning of 1951, the spinning of the cables was about 85% completed. This operation was entirely completed on January 16. As previously reported each cable contains 8,284 galvanized steel wires about 3/16" in diameter. 3,360 tons, or 12,725 miles of wire were required to construct the two cables. The wire was manufactured at the Trenton, New Jersey, plant of the American Steel and Wire Company. In the spinning operation, the cable wire was placed in nineteen groups or strands, each circular in cross section, which were adjusted to lie in a hexagonal formation with three strands on a side.

With all strands in place, the wires were then compacted to form a cylindrical cable by breaking up and reshaping the strands to fill up the voids between. This was done progressively along the cables by a compactor consisting of six hydraulic jacks mounted radially on a steel frame surrounding the cable. Each jack pressed against a concave faced shoe machined to the curvature of the compacted cable. The compactor was applied at about two foot intervals and a temporary siezing wire applied at each point to hold the wires in position until the wrapping wire was applied.

Cable bands consisting of steel castings machined on the inside to the diameter of the cables were bolted to the cables with high tensile steel bolts at the proper locations to form saddle supports for the suspender ropes, which loop over the cables.

After all of the suspended steel was erected and a substantial portion of the concrete deck was in place, the cables were wrapped between cable bands with annealed galvanized wire. This wire was applied under tension by machine to form a continuous protective jacket over the cable wires. At each cable band the wrapping wire terminates in a recess in the end of the band, which was caulked tight with lead. This form of protection is identical to that used on the Brooklyn Bridge cables, which upon recent inspection, after sixty years of service, was found to be entirely satisfactory. The usual field coats of paint were applied to the wrapping wire. The American Bridge Company was also the contractor for this part of the construction.



CABLE WRAPPING MACHINE, NORTH CABLE

CONTRACT NO. 7A—Anchorage Tops

This contract included the placing of the balance of the anchorage concrete and the steelwork to carry the roadways over the anchorages. Actual placing of concrete started on February 17 and was completed on August 11. 14,688 cubic yards of concrete and about 350 tons of structural steel were used.

For the West Anchorage, all concrete was mixed at the Warner Central Mix Concrete Plant at Wilmington and trucked to the site. The concrete for the East Anchorage was principally mixed at the site with the aggregates being batched at the Clemente Transit Mix Concrete Plant, located at Pennsgrove, New Jersey. The concrete was placed generally in lifts eight feet in height. The Contractor for this work was Lewis and Bowman, Inc. of Goldsboro, North Carolina. The American Bridge Company, as a sub-contractor, fabricated and erected the structural steel.

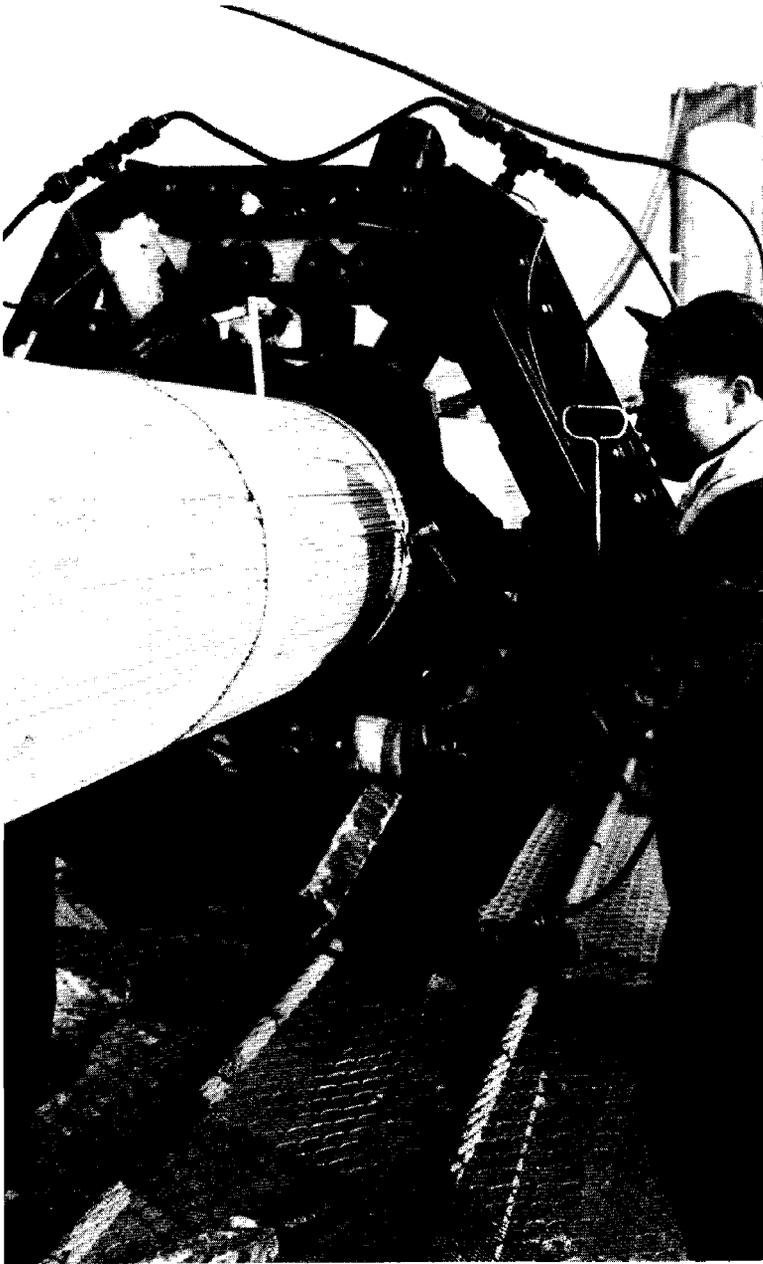
CONTRACT NO. 7B—Concrete Deck

The construction of the reinforced concrete roadways started in 1950 and at the year's end was about 42% completed. Upon the completion of one roadway on each approach, the work was discontinued until Spring. Actual placing of concrete on the suspended spans started on June 18 and was completed on July 22. All of this concrete was mixed at the Warner Central Mix Concrete Plant and trucked to the West Anchorage. From here it was transported in motorized buggies along a timber runway constructed over the South walkway. To avoid disruptive deflections of the steelwork, the concrete was placed at intervals along the structure. This procedure required working across the structure from East to West in four successive passes. Standard highway practice was used in finishing the roadway surfaces.

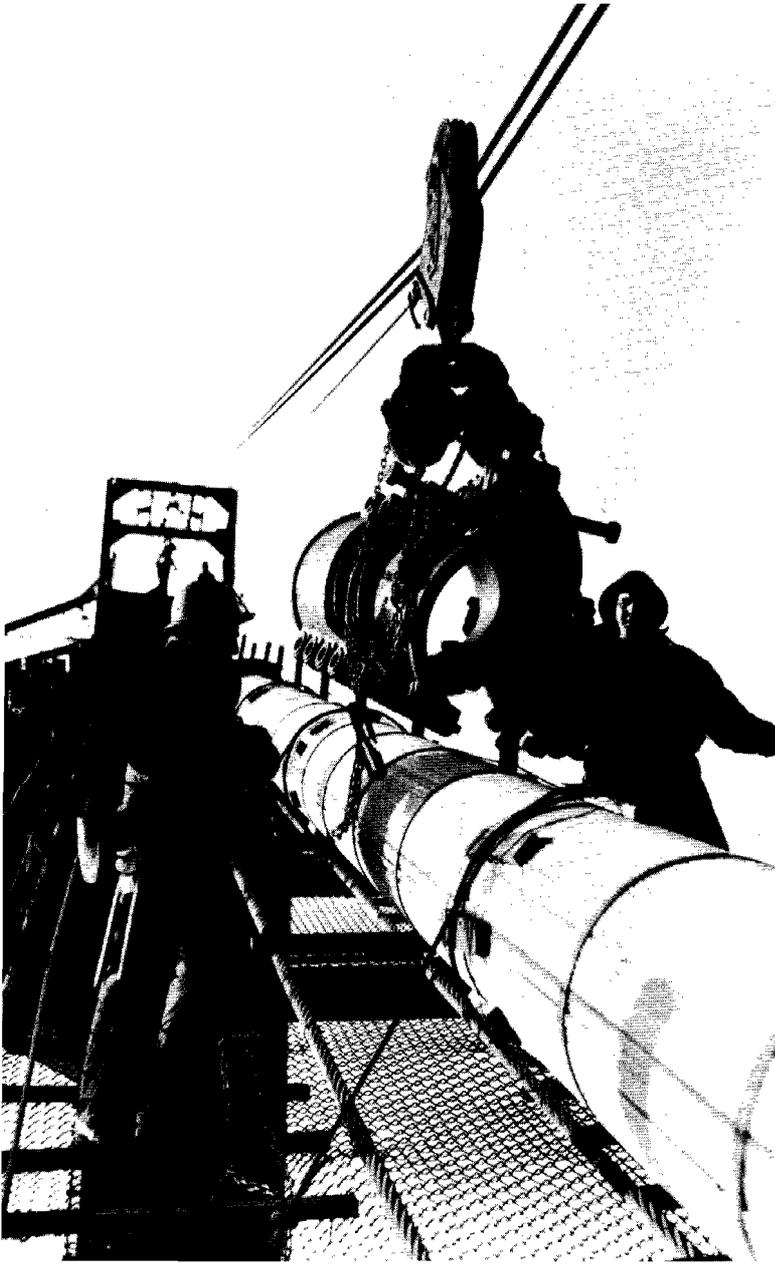
This contract required the placing of about 11,450 cubic yards of concrete and 1,300 tons of reinforcing steel. The work was performed by the Whiting-Turner Contracting Company of Baltimore, Maryland.

CONTRACT NO. 8—Field Painting

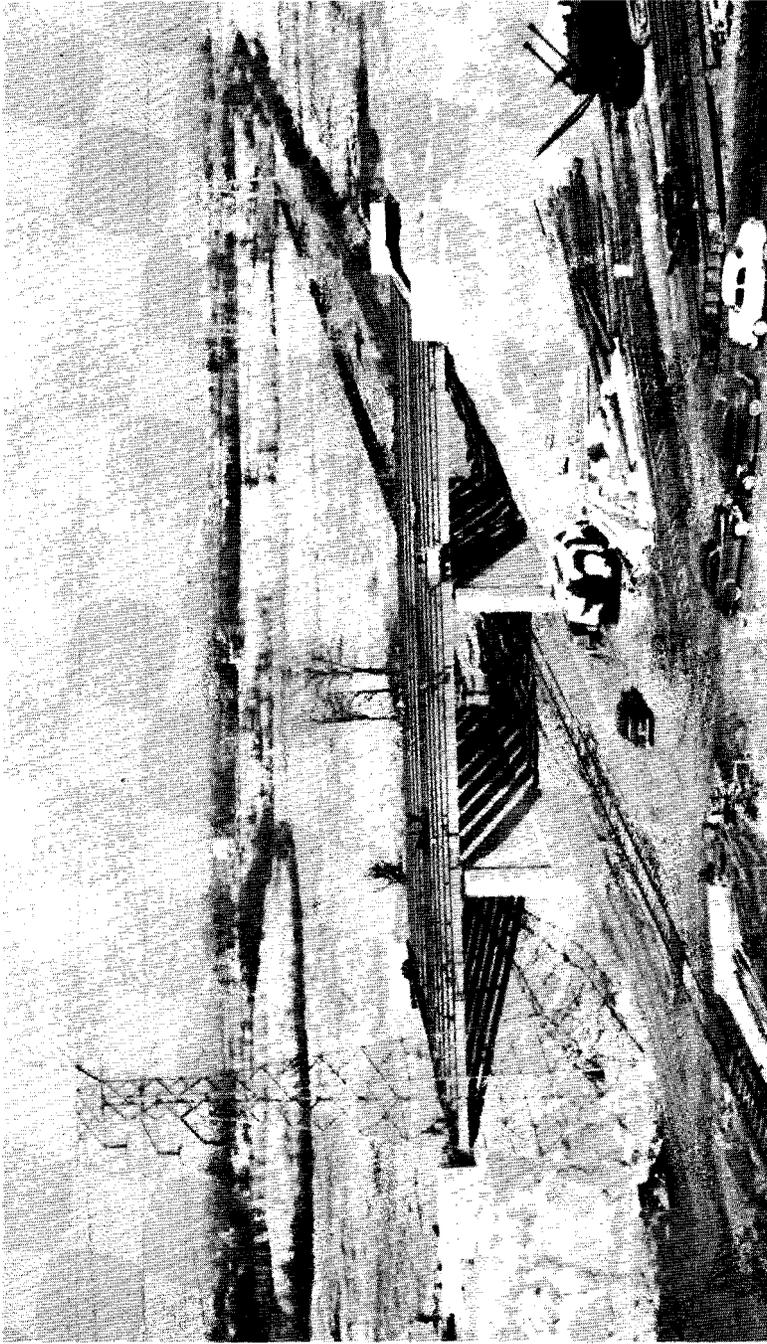
Bids for this work were received on March 29 and an award made to the Buffalo Sheeting and Painting Company, of Buffalo, New York, for a lump sum price of \$338,324. This work requires the application of three coats of paint, the final coat being grey-green in color. Work started promptly and by opening date all steelwork above the level



CABLE COMPACTION MACHINE



TRANSPORTING CABLE BANDS FROM TOWER TOPS



PENNSYLVANIA RAILROAD OVERPASS

of the roadways was essentially completed. Late in the year the work was discontinued until favorable weather this Spring. It is now approximately 60% complete.

CONTRACT NO. 9—Fenders

Bids for the main tower pier fenders were received on August 9 and the award made to Merritt-Chapman and Scott Corporation of New York City at an estimated cost of \$298,880. Due to the shortage of structural steel this work could not be started until the Spring of 1952.

CONTRACT NO. 10—Electrical Installations

Bids for the electrical work required for lighting the Bridge roadways and Toll Plaza were received on May 1, and an award made to the Garrett Miller & Company of Wilmington, Delaware, for a lump sum price of \$249,133. Work was slow in getting underway due to the difficulty in obtaining critical materials. At the year's end, the work was about 30% complete.

CONTRACT NO. 11—Tower Elevators

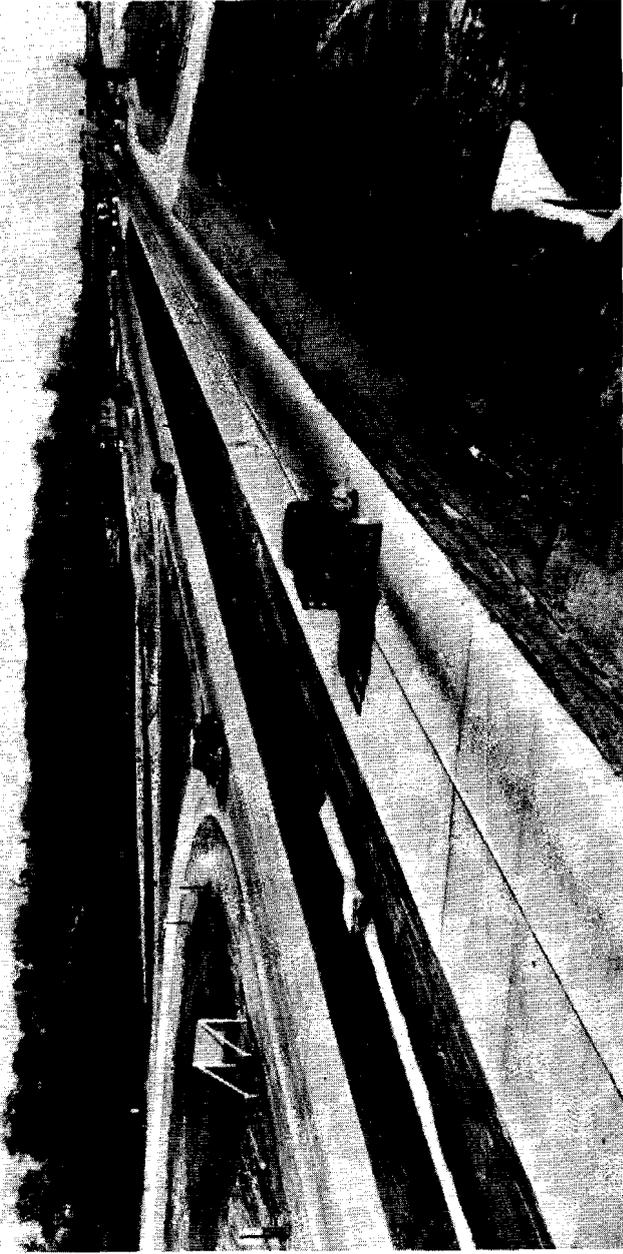
Work was continued on the installation of the elevators within the tower legs and was completed insofar as it is possible to do until the electric power is available, which is part of the work being done under Contract No. 10. At the year's end, the installation was 90% complete. The Otis Elevator Company is the Contractor.

CONTRACT NO. 13—East Approach Paving

Bids for this contract were received on March 19 and an award made to the Newark Construction Company of Newark, Delaware, at an estimated cost of \$243,368. Construction started on April 4 and was essentially completed on August 14. This contract was extended to include a considerable amount of extra work to connect with the construction performed by the New Jersey Turnpike Authority.

CONTRACT NO. 15—West Approach Paving

Bids for Contract No. 15 were received on February 20 and the award made to James Julian, of Elsmere, Delaware, at an estimated cost of \$322,602. Work started on April 11 and was essentially completed on August 4.



WEST APPROACH ROAD

CONTRACT NO. 16—Pennsylvania Railroad Overpass

At the beginning of the year, the work of this contract was about 73% complete. Work continued very slowly, but was essentially completed prior to the Bridge opening. The contract was performed by the Conduit and Foundation Corporation of Philadelphia, Pennsylvania.

CONTRACT NO. 17—Front Range Light Structure

The construction of the East Approach of the Bridge obstructs the range lights marking the "Deepwater Range," which extends about five miles South of the Bridge. Accordingly to comply with the requirements of the Coast Guard, it was necessary to construct a pier about 3,000 feet South of the Bridge to carry the new "Front Light." Bids for this work were received on July 19 and an award made to Thomas Earle and Sons of Philadelphia, Pennsylvania, at an estimated cost of \$57,004.00. Work started on October 19 and was essentially completed on December 14.

CONTRACT NO. 19—Toll Facilities and Administration Building

Work on this contract was started in 1950 and at the year's end was about 5% complete. By Bridge opening date it was essentially complete, including a substantial amount of extra work required to construct and equip toll lanes Numbers 7 and 8. Certain items of electrical equipment for these lanes, however, could not be delivered until late in the year, so that the contract is still not entirely complete. The contract was performed by the Cantera Construction Company of Wilmington, Delaware.

FUTURE CONTRACTS

The following contracts are scheduled for construction during 1952, which will complete the project.

CONTRACT NO. 18—New Castle Interchange

Includes construction of Northwest Quadrant and the widening of the toll plaza for toll lanes Numbers 9 and 10.

CONTRACT NO. 20—Maintenance Building

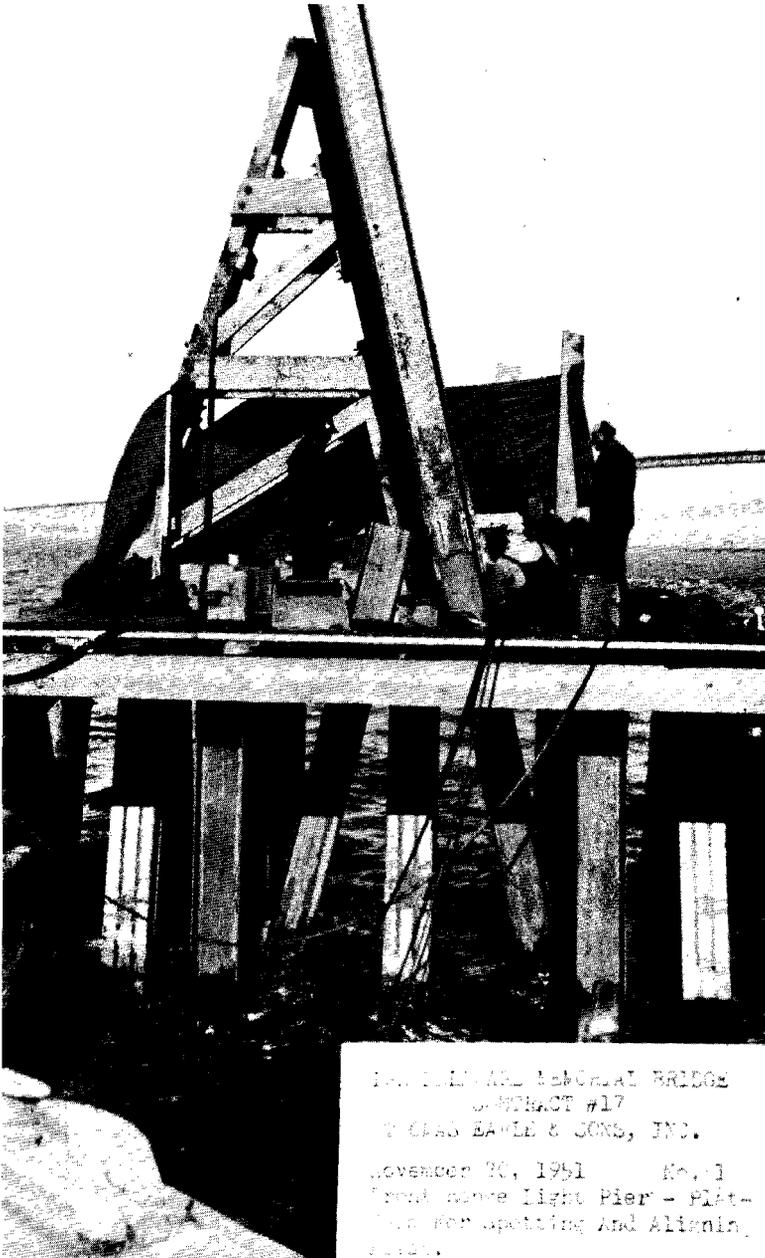
Will include the installation of the toll booths and equipment for toll lanes Nos. 9 and 10, unless it is decided to place this work under a separate contract.



TOLL PLAZA AND ADMINISTRATION BUILDING

**CONTRACT NO. 22—Landscaping and Toll Plaza
Improvement Area**

CONTRACT NO. 23—Fencing



FOR WILLIAMS MEMORIAL BRIDGE
CONTRACT #17
T. CLAS BAWLE & SONS, INC.

November 20, 1951 No. 1
Grand Avenue Light Pier - Plat-
form for lighting and Altimeter
stand.

DEDICATION CEREMONIES

A dedication committee, with J. H. Tyler McConnell, a member of the State Highway Department, as its chairman, prepared the program for the dedication ceremonies. Members of this committee are shown in the official program illustrated elsewhere in this Report.

The Committee, working in close cooperation with the Director of the Delaware River Crossing Division, Colonel W. A. McWilliams, and the Engineers, Howard, Needes, Tammen and Bergendoff, selected the date of August 15 for the dedication ceremonies.

The Honorable Elbert N. Carvel, Governor of Delaware, made the official dedication and the response was given by the Honorable Alfred E. Driscoll, Governor of New Jersey.

Governor Carvel in his dedication address, stressed the memorial aspect of the Bridge in the following words:

“We are here today to dedicate this Bridge. It was built in memory of all of those from Delaware and New Jersey who gave their lives in World War II. Many states and communities have erected statues and plaques in memory of their fallen heroes. How much more fitting it is that this Bridge be a memorial to the valiant men and women who have made the supreme sacrifice so that liberty and justice and the American way might prevail on this earth. Such a Bridge, the result of this American system, will serve and benefit daily the relatives and neighbors of those brave ones as well as the people of the nation for whom they gave their lives.

“Let us pause today as we dedicate this Memorial Bridge in honor and in remembrance of those brave dead who made the supreme sacrifice for us so that we might enjoy the blessings of our American way. Let us pause to rededicate our own lives to the cause of liberty, freedom, and justice, and let us pray that God will give us the humility and the courage to understand and overcome the many barriers of ignorance, prejudice, hate, and pride which stand as obstacles to our fulfillment of the American destiny.”

Governor Driscoll, in his response, emphasized the principal spirit of the dedication in the following words:

“It is appropriate that a massive structure, designed to provide for the pleasure and commerce of the citizens of many states, including particularly the two states joined anew by this Bridge, should be dedicated as a memorial to



SPEAKERS' PLATFORM, DEDICATION CEREMONIES



DEDICATION CEREMONIES



CUTTING THE RIBBON, GOVERNOR DRISCOLL, OF NEW JERSEY
AND GOVERNOR CARVEL, OF DELAWARE

the men and women who gave their lives in the armed forces of the United States of America during World War II.

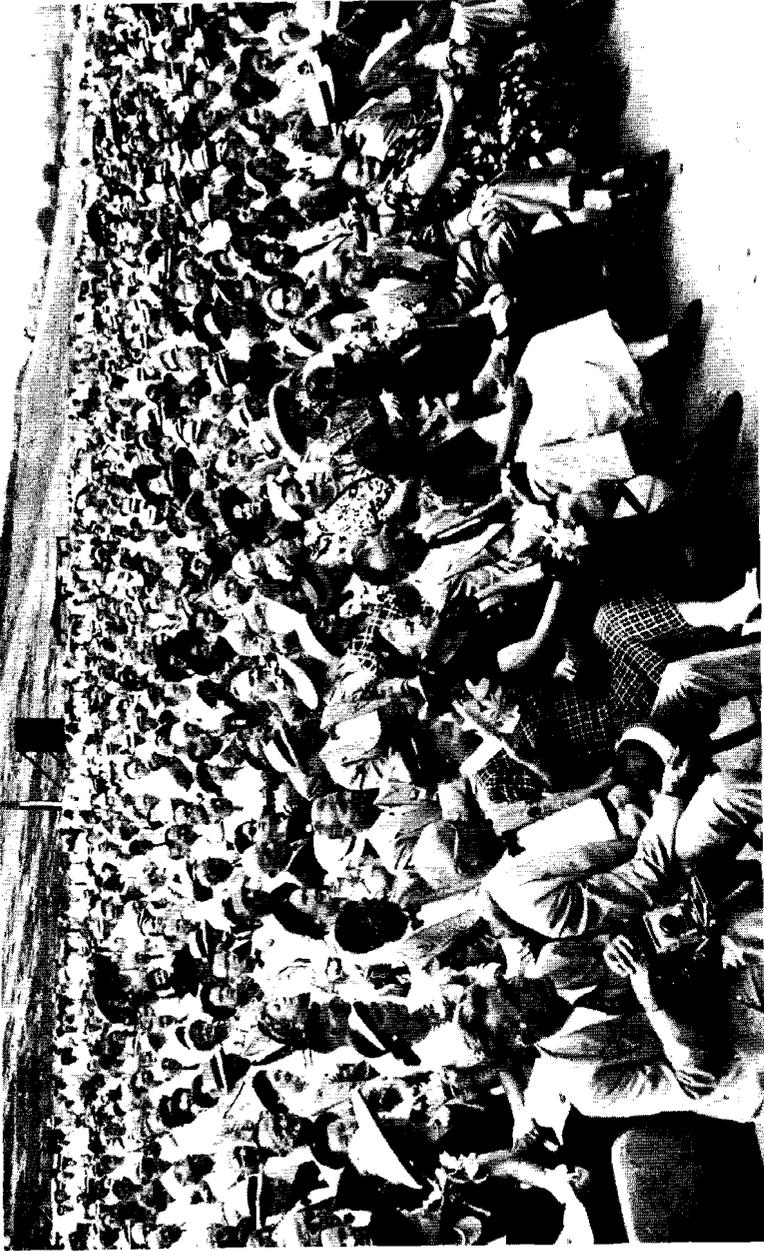
“Compared, however, to their sacrifice, their devotion to country and the principles of our republic this Bridge, the sixth longest suspension span in the world, is a puny thing. Nonetheless, the concept of the Bridge, its design, construction, and completion, represents a great achievement. To the extent, therefore, that it is possible for the living to commemorate, in stone, mortar and steel, the memory of those who have paid the supreme sacrifice in their country’s cause, this Bridge stands as tangible evidence of our awareness of the debt that we owe to those who have contributed their lives that we may remain a free people.”

The dedication ceremonies were concluded with an “In Memoriam” service at which two Veterans of World War II, Medal of Honor Winners, James P. Connor of Delaware and Carlton Rouh of New Jersey placed a wreath at the foot of the Dedication Plaque in memory of those brave citizens of the States of Delaware and New Jersey who gave their lives in the service of their Country.

The dedication ceremonies having been completed, the Bridge was opened to the public for inspection, and at 12:01 Midnight, the first official toll paying vehicles began to use the Bridge.

DELAWARE-NEW JERSEY FERRY COMPANY

The Delaware Crossing Division has, of course, always been aware of the provisions of Section 10 of Chapter 274, Volume 45, Laws of Delaware, directing The State Highway Department to acquire, either by negotiated purchase or by condemnation, any ferry or ferries in operation across the Delaware River within ten miles North or twenty miles South of The Delaware Memorial Bridge. At no time since the commencement of the Bridge up to the beginning of 1951 had the Crossing Division been assured of sufficient funds to complete the Bridge and to carry out the direction of Section 10. This matter was considered at the regular session of the General Assembly held in 1951, and, as a result thereof, an Act was passed and approved May 3, 1951 directing the Department to commence condemnation proceedings prior to the opening of The Delaware Memorial Bridge for traffic and, in any event, not later than ninety days after the passage of said Act. Section 2 of said Act, being Chapter 67, Volume 48, Laws of Delaware, expressed the Legislative intent that after a final award in condem-



GUESTS' DEDICATION CEREMONIES

State of Delaware
State Highway Department



Official Program

The
Delaware Memorial
Bridge

Dedication Ceremonies

August 15, 1954



For Free Distribution Only

Delaware Memorial Bridge

Dedication Committee

EXECUTIVE COMMITTEE

J. H. Tyler McConnell, *Chairman*

Elbert N. Carvel, *Governor*

Alexis I. duPont Bayard, *Lieutenant Governor*

E. Ennalls Berl
J. Draper Brown, Jr.
R. Allen Cannon

Samuel N. Culver
Vernon Derrickson
John C. Hazzard

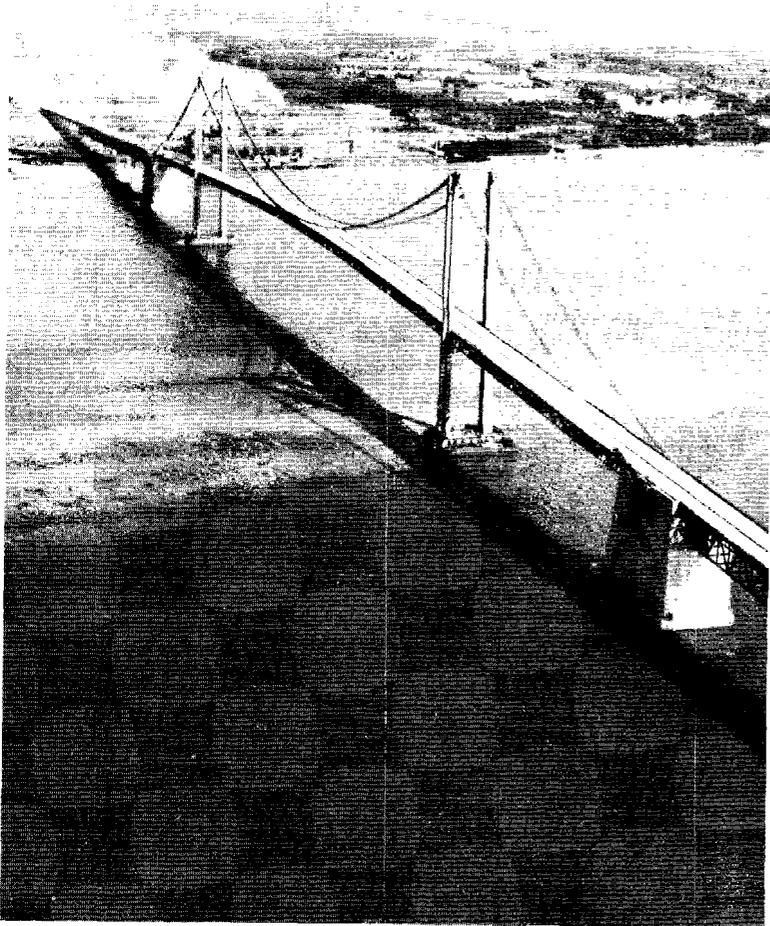
Harris B. McDowell, Jr.
Benjamin F. Shaw, II
J. Gordon Smith

COMMITTEE MEMBERS

Howard Abbott
Lawrence E. Allen
William H. Ayres
Walter W. Bacon
Fred S. Bailey
James W. W. Baker
E. Ennalls Berl
J. Caleb Boggs
David Braunstein
J. Draper Brown, Jr.
C. Douglass Buck
Clayton A. Bunting
John I. Cahalan
R. Allen Cannon
Walter S. Carpenter, Jr.
George A. Casey
William T. Chipman
George R. Clark
Henry T. Claus
John M. Conway
Stuart Cooper
Lammot duPont Copeland
Dallas D. Culver
Samuel N. Culver
G. Lester Daniels
Vera G. Davis
William D. Denney
Vernon Derrickson
Howard H. Dickerson
Arthur W. Dobberstein
Francis V. duPont
Ralph Emerson
Daniel Enterline, Jr.
Samuel Fox
J. Allen Frear
Charles H. Gant
Gerrish Gassaway
Charles S. Garland

Hyland P. George
Clarence Grace
Henry T. Graham
Henry Graves
Frank Gregson
Richard A. Haber
Watson W. Harrington
Leroy F. Hawke
Ewing B. Hawkins
John C. Hazzard
James E. Heal
James F. Hearn
Charles A. Higgins
Clayton M. Hoff
James H. Hughes
Andrew J. Kavanaugh
H. Harold Keller
John J. Kerrigan
Ernest E. Killen
Charles W. Lawson
Harvey H. Lawson
D. Preston Lee
Howard E. Lynch, Jr.
Raymond H. Lynch
Leland Lyon
Isaac J. MacCollum
Warren W. Mack
Canby C. Mammele
J. Warren Marshall
Joseph Martin
Josiah Marvel, Jr.
Fred C. Maull
Paul B. Messick
Harry H. Mulholland
Harris B. McDowell, Jr.
J. Carl McGuigan
Richard McMullin
William A. McWilliams

Enoch R. Needles
Lester C. Newton
Allen B. Parsons
William K. Paton
G. Burton Pearson
Walter Phillips
John J. Pierce
John F. Porter
William S. Potter
Robert S. Quillen
Charles L. Reese, Jr.
George W. Rhodes
Robert H. Richards, Jr.
William P. Richardson
Richard I. Rinard
Joseph J. Scannell
Carlton B. Shaffer
Margaret Sharpless
Benjamin F. Shaw, II
Harry S. Shew
Daniel F. Shields
J. Gordon Smith
Oscar N. Smith
Abraham N. Spanel
Earl Sylvester
George I. Sylvester, Jr.
Isaac A. Thornton
Chester V. Townsend, Jr.
John G. Townsend, Jr.
Philip Traynor
James M. Tunnell
J. Gorman Walsh
Charles Warner
Jacob O. Williams
John J. Williams
W. Emerson Wilson
Henry McC. Winchester
J. Wallace Woodford



Delaware Memorial Bridge

ORDER OF DEDICATION CEREMONY

WEDNESDAY, AUGUST 15, 1951—11:00 A.M.

THE NATIONAL ANTHEM Delaware National Guard Band

INVOCATION Colonel Park W. Huntington, Chaplain, U.S.A.R.
Minister, St. Stephen's Lutheran Church, Wilmington

PRESENTATION OF DISTINGUISHED GUESTS J. H. Tyler McConnell
Chairman

DEDICATION The Honorable Elbert N. Carvel
Governor of Delaware

RESPONSE The Honorable Alfred E. Driscoll
Governor of New Jersey

IN MEMORIAM: HONOR GUARD Veterans of Foreign Wars
Atterbury Post No. 3420 of Wilmington

PLACING OF THE WREATH—

FOR DELAWARE: James P. Connor
Congressional Medal of Honor

FOR NEW JERSEY: Carlton Rouh
Congressional Medal of Honor

BENEDICTION Father Joseph A. Enright
Pastor, St. Mary's Church, Wilmington

Immediately following the Benediction, the Formal Opening and Official Inspection of The Delaware Memorial Bridge by Governor Elbert N. Carvel and Official party will take place. Only cars bearing "Official" markers will be allowed on Bridge at this time.

Delaware Memorial Bridge

AFTERNOON EVENTS

WEDNESDAY, AUGUST 15, 1951

Noon to
7:00 p.m. Free Public Inspection of Bridge by Pedestrian Traffic
and by Special Bus only.

The public is cordially invited to inspect the Bridge and free transportation will be provided. Buses will leave the Toll Plaza Area on continuous runs across the Bridge and return, stopping at the East Tower Pier and the West Tower Pier where visitors may alight from the buses and inspect the structure. The return trip will pick up visitors and discharge them at the Toll Plaza Area. Ample free parking space for the public is available near the Toll Plaza. There will be no charge for the bus service. No cars other than the free Official Buses will be permitted on the Bridge during this public inspection period.

7:00 p.m. to
11:59 p.m. Bridge closed to all traffic.

12:01 a.m.
August 16. Bridge Open for Business at Regular Toll Rates.

The Delaware Memorial Bridge

The Delaware Memorial Bridge, containing the sixth longest suspension span in the world, is the culmination of two and one-half years of dramatic marine and highway construction which was preceded by many years of careful planning and study. It involved the expenditure of some \$44,000,000 and for the first time physically connects the states of Delaware and New Jersey. By connecting these great states with a four lane divided highway of concrete and steel, it affords a vital and much-needed link in their respective highway systems and greatly strengthens the transportation network of the nation.

Pleasure, business and commercial vehicles traveling along the Atlantic seaboard, whether between the great industrial areas such as Boston, New York, Philadelphia, Wilmington, Baltimore and Washington, or from any of the metropolitan areas of the east to Florida or the southeast, will find that the use of the bridge will save them at least one-half hour and frequently many times that in crossing the Delaware River. When used in conjunction with the soon-to-be-completed New Jersey Turnpike, a saving of several hours can be realized. During the first year of operation it is anticipated that the average daily traffic over the bridge will be 13,000 vehicles and that on peak days over 30,000 vehicles may use the bridge. The bridge is designed to accommodate any vehicle regardless of size or weight which could legally operate over the highways of the state, even though such vehicles were lined bumper to bumper over the four lanes of the bridge.

The Delaware Memorial Bridge will keep alive and improve those American habits of industry and pleasure which have so inalterably committed this country to highway transportation. In order that these benefits may be enjoyed at once, the bridge is being opened to traffic immediately upon its structural completion even though such use is in advance of the final completion of painting, lighting and other finishing work.

The bridge, including its approaches, extends for a distance of three and one-half miles with the bridge itself measuring more than two miles from abutment to abutment. It has a suspended span of 2,150 feet in the center with side suspended spans of 750 feet each. The clearance under the center span is 190 feet above mean highwater which is sufficient to permit the channel underneath to accommodate the largest Naval and commercial vessels afloat. This is a necessary requirement since the Delaware River alone affords access to the Port of Philadelphia, its large Navy Yards and the other shipping centers which crowd its shore.

The piers of the two main towers of the bridge extend 89.5 and 118.5 feet, respectively, below the average river level to a foundation of stiff marine clay. The cables over the tops of these towers are 440 feet above the water, giving to the structure a maximum overall height of 558.5 feet, which is roughly equivalent to the height of a 45-story office building.

The huge anchorages which hold the ends of the cables on which the actual bridge floor is suspended have overall heights of 233 and 257 feet, respectively. Two hundred and twenty automobiles could be parked on the area of clay covered by one of these anchorages, the lowest portion of which rests under water in a 32-foot thick layer of 27,000 cubic yards of concrete which required seven and one-half continuous days to pour. The concrete in one anchorage alone is sufficient to have paved a 24-foot wide concrete highway for a distance of 23 miles, and contains over 5,000 tons of steel.

The clay beneath the major foundations was compressed during construction and will continue to consolidate at a decreasing rate until final stability is attained. During the construction period, these massive supports have settled an average of three inches which is actually less than was predicted. An additional downward movement of about four inches is anticipated before they come to final position after some 50 or more years of use.

The towers, cables, suspending and suspended structure contain over 20,000 tons of steel and enough pencil-sized wire in the cables to measure 50 times around the state of Delaware. The total amount of structural steel used throughout the entire project is approximately 43,000 tons. Notwithstanding this, the structure is necessarily designed to perform in a flexible manner. Under various conditions of loading, winds and temperature, the tops of the towers are expected to move as much as 14 inches toward the shoreline and up to 15 inches toward the main span. The accompanying up and down motions at the center of the main span will raise the roadway 4.4 feet or lower it 6.6 feet. Under the greatest anticipated wind velocity, the main suspended span may move as much as 8.9 feet from its normal position. All such movements, however, occur so slowly and cover such a period of time as to render it imperceptible except with instruments.

The entire planning and construction of the project was carried on under the direction of the Delaware State Highway Department and was financed on a self-amortizing basis by bond issues authorized by the Legislature of the State of Delaware. The completed project is dedicated as a magnificent memorial to those men and women of the State of Delaware and of the State of New Jersey who gave their lives in the Armed Forces of the United States of America during World War II.

Wilmington, Delaware
August 1, 1951

J. H. T. McC.
W. A. McW.

DELAWARE MEMORIAL

1948 **BRIDGE** 1951

THIS BRIDGE IS DEDICATED TO THOSE MEN AND WOMEN OF THE STATE OF DELAWARE AND THE STATE OF NEW JERSEY WHO GAVE THEIR LIVES IN THE ARMED FORCES OF THE UNITED STATES OF AMERICA DURING WORLD WAR II

Its successful completion was contributed to by many including the following

MEMBERS OF THE GENERAL ASSEMBLIES OF 1945, 1947, 1949 and 1951 AND OF THE 79TH CONGRESS

Governor
ELBERT N. CARVEL

State Highway Commission
J. GORDON SMITH Chairman
J. DRAPER BROWN JR. J. H. TYLER MCCONNELL
CLAYTON A. BUNTING WILLIAM P. RICHARDSON
SAMUEL N. CULVER BENJ. F. SHAW II

Former Governor
Walter W. Bacon

Former Commissioners
F. V. duPont Chairman

Charles D. Abbott	Conby C. Mammela
Dallas D. Culver	Donald P. Ross
Robert N. Downs SM	William H. Speer
Ralph W. Emerson	Charles R. Sexte Jr.

DEDICATORY PLAQUE

nation had been made a Special Session of the Legislature should be called to consider the authorization of the sale of sufficient bonds to pay such an award. Pursuant to the provisions of said last mentioned Act, The State Highway Department filed a petition of condemnation on August 1, 1951 seeking to acquire by condemnation certain real and personal property of the Delaware-New Jersey Ferry Company, being the only ferry in operation across the Delaware River within the limitations of Section 10 of Chapter 274, Volume 45, Laws of Delaware. A condemnation commission was appointed and on October 29, 1951 the commission returned an award assessing the damages suffered by the Delaware-New Jersey Ferry Company by reason of the taking of their property at \$2,500,000. The State Highway Department considered this award fair and determined not to take an appeal from it. No appeal from the award was taken by the Delaware-New Jersey Ferry Company. On December 10, 1951, the Legislature of Delaware met in Special Session, one of the avowed purposes of which was to consider the authorization of the issuance of sufficient revenue bonds to pay an award of \$2,500,000 to the Delaware-New Jersey Ferry Company. No action was taken by the Legislature on this subject up to December 31, 1951.

FINANCIAL STATEMENT

Attached are copies of the Secretary's Financial Statements as of January 1, 1952, as follows:

1. Balance Sheet
2. Construction Cost in Progress Statement
3. Statement of Unfinished Contracts, Sheets 1 and 2
4. Statement of Finished Contracts

Respectfully submitted,

J. GORDON SMITH, Chairman
State Highway Department

BALANCE SHEET
DELAWARE MEMORIAL BRIDGE
DELAWARE CROSSING DIVISION

As of January 1, 1952

(EXHIBIT A)

ASSETS	
CURRENT ASSETS	
Equitable Trust Company (Trustee)	\$ 3,319,913.56
Investments (Cost Value)	\$3,270,806.53
Cash	49,107.03
Delaware Memorial Bridge Revolving Fund	366,984.77
TOTAL CURRENT ASSETS	\$ 3,686,898.33
CAPITAL ASSETS	
Construction Cost in Progress	41,710,385.37
TOTAL ASSETS	\$45,397,283.70
LIABILITIES AND CAPITAL	
CAPITAL LIABILITIES	
Bonded Debt and Authorization	\$43,900,000.00
CAPITAL	
Profit on Sale of Bonds	\$ 473,000.00
Receipts from Utilities	12,471.10
Trustee's Income Account (Earnings Net)	26,171.11
Earnings Transferred to Principal Account	985,641.49
TOTAL CAPITAL	1,497,283.70
TOTAL LIABILITIES AND CAPITAL	\$45,397,283.70
NOTE: Contractual Liability	\$1,439,181.42

CONSTRUCTION COST IN PROGRESS STATEMENT
DELAWARE MEMORIAL BRIDGE
DELAWARE CROSSING DIVISION
As of January 1, 1952

(EXHIBIT B)

	Previous Transactions	Month of December Transactions	Totals to Date
DISBURSEMENTS AND OTHER DEBITS			
SALARIES AND WAGES			
Salary of Director	\$ 37,499.94	\$ —	\$ 37,499.94
Engineering Services			
Howard, Needles, Tammen & Bergendoff	2,000,614.08	—	2,000,614.08
Aero Service Corp.	3,770.00	—	3,770.00
Coverdale and Colpitts	18,500.00	—	18,500.00
The Haller Testing Lab., Inc.	14,788.01	—	14,788.01
Pittsburgh Testing Lab.	28,028.11	—	28,028.11
Delaware State Highway Dept. ..	3,567.50	—	3,567.50
E. I. duPont de Nemours	11,020.25	—	11,020.25
Sprague & Henwood	1,724.00	—	1,724.00
Raymond Concrete Pile Co.	742.50	—	742.50
Legal Fees	80,181.81	50,514.91	130,696.72
Accountant Fees	10,580.00	—	10,580.00
Appraiser Fees	16,095.45	1,350.35	17,445.80
Equitable Trust Co. (Trustee)	115,979.21	3,224.05	119,203.26
Public Relations Fees	—	166.66	166.66
Miscellaneous	71,634.01	1,404.38	73,038.39
Total Salaries and Wages	\$ 2,414,724.87	\$ 56,660.35	\$ 2,471,385.22
OFFICE EXPENSE	60,606.23	375.68	60,981.91
TRAVEL	1,958.40	—	1,958.40
OPERATION	24,028.57	2,506.24	26,534.81
REPAIRS & REPLACEMENTS	3,177.56	802.38	3,979.94
EQUIPMENT	87,733.34	1,888.88	89,622.22
OTHER COSTS			
Interest on Bond Issue	\$ 4,800,000.00	\$ —	\$ 4,800,000.00
Acquisition of Property	264,999.71	—	264,999.71
Contracts	33,706,774.15	63,258.98	33,770,033.13
Insurance	60,714.64	160,445.86	221,160.50
Miscellaneous Recoveries	(270.47)	—	(270.47)
Total Other Costs	\$38,832,218.03	\$223,704.84	\$39,055,922.87
TOTAL CONSTRUCTION COST TO DATE	\$41,424,447.00	\$285,938.37	\$41,710,385.37

() Denotes Deduction.

STATEMENT OF UNFINISHED CONTRACTS

DELAWARE MEMORIAL BRIDGE

DELAWARE CROSSING DIVISION

As of January 1, 1952

(EXHIBIT C)

Contract Number		Contract Amount	Payments	Balance Outstanding
None	Pittsburgh Testing Laboratories	\$ 27,196.00	\$ 27,196.00	\$ —
	Extra Work Orders	832.11	832.11	—
None	The Haller Testing Labs., Inc.	20,100.00	14,788.01	5,311.99
2	Merritt-Chapman & Scott Corp.	11,494,586.00	11,452,592.71	41,993.29
	Extra Work Orders #1 to #8	62,814.42	62,814.42	—
3B	The Conduit & Foundation Corp.	609,520.00	523,507.50	86,012.50
	Extra Work Orders #1 to #2	431.39	388.25	43.14
4	The American Bridge Company	6,119,300.00	6,119,300.00	—
	Allowance for Additional Work at Unit Prices	65,960.75	15,960.75	50,000.00
	Flame Cleaning	68,700.00	68,380.00	320.00
	Openings in Tower Portal Struts	340.00	340.00	—
	Transformer Cages	22,000.00	22,000.00	—
	Revision to Sidewalks	169.00	169.00	—
	Allowance for Overtime	132,774.21	132,774.21	—
5	The American Bridge Co.	2,311,985.00	2,238,056.37	73,928.63
	Flame Cleaning	316.00	316.00	—
6	The American Bridge Co.	5,299,805.00	5,188,142.47	111,662.53
	Flame Cleaning	60,600.00	59,788.00	812.00
	Adjusting Steel Work	700.63	700.63	—
	Steelwork for Range Lights	4,260.00	4,260.00	—
7A	Lewis & Bowman	1,132,550.00	1,021,625.08	110,924.92
	Allowance for Materials, Labor and Overtime	77,690.84	69,921.76	7,769.08
7B	Whiting Turner Contracting Company	\$ 1,043,329.00	\$ 948,342.87	\$ 94,986.13
	Allowance for Materials, Labor and Overtime	96,336.14	86,702.53	9,633.61
8	Buffalo Sheeting & Painting Co.	338,324.00	192,109.72	146,214.28
	Recondition Shop Coat	36,474.00	27,902.61	8,571.39
9	Merritt-Chapman & Scott Corp.	298,880.00	—	298,880.00
10	Garrett Miller Company	249,133.00	41,603.48	207,529.52
	Farnhurst Interchange Lighting	35,160.00	7,911.00	27,249.00
11	Otis Elevator Company	32,985.00	26,717.85	6,267.15
13	Newark Construction Co.	243,368.75	243,368.75	—
	Allowance for Additional Work at Unit Prices	106,600.00	76,796.85	29,803.15
	Extension of Paving	7,867.35	7,867.35	—
	Work on Railroad Track	12,794.00	12,794.00	—
	Work on Access Road	7,933.59	7,933.59	—
15	James Julian	322,602.40	296,402.89	26,199.51
	Retaining Wall & Pipe	473.99	426.59	47.40
16	The Conduit & Foundation Corp.	194,455.00	146,598.95	47,856.05
17	Thomas Earle & Sons, Inc.	57,004.00	29,133.00	27,871.00
19	Cantera Construction Co.	278,445.00	273,452.32	4,992.68
	Extra Work Order-Toll Islands and Utility Tunnel	30,620.00	30,620.00	—
	Depository	337.50	337.50	—
	Power Service	10,295.00	10,295.00	—
	Lead Sheating for Cables	361.26	361.26	—
	Additional Toll Lanes & Booths	46,137.00	31,834.53	14,302.47
TOTALS		\$30,962,547.33	\$29,523,365.91	\$1,439,181.42

STATEMENT OF FINISHED CONTRACTS
DELAWARE MEMORIAL BRIDGE
DELAWARE CROSSING DIVISION
As of January 1, 1952

(EXHIBIT D)

Contract Number		Contract Amount	Payments	Underrun or Overrun**
21	Citro & Sons, Inc.	\$ 22,500.00	\$ 21,965.06	\$ 534.94
1	Sprague & Henwood, Inc.	33,400.00	33,206.28	193.72
None	E. I. duPont de Nemours	32,000.00	31,450.50	549.50
None	Delaware Power & Light Co.	4,882.98	4,882.98	—
None	Deepwater Light & Power Co.	51,263.54	51,263.54	—
3A	Merritt-Chapman & Scott Corp. ..	1,291,240.00	1,223,394.60	67,845.40
	Extra Work Order #1	402.26	402.26	—
3C	Lewis & Bowman	709,650.00	697,406.63	12,243.37
	Extra Work Orders #1 to #7 ..	154,151.50	154,151.50	—
	Claim for Delay to Contract Work	10,000.00	10,000.00	—
3D	Merritt-Chapman & Scott Corp. ..	1,830,000.00	1,854,638.10	24,638.10**
	Extra Work Orders #1 & #2 ..	2,308.32	2,308.32	—
12	Henry C. Eastburn	56,210.00	55,125.64	1,084.36
14	Henry C. Eastburn	134,101.00	147,116.02	13,015.02**
	Extra Work Orders #1 to #4	1,178.26	1,178.26	—
None	A. Clemente, Inc.	993.65	993.65	--
TOTALS		\$4,334,281.51	\$4,289,483.34	\$44,798.17