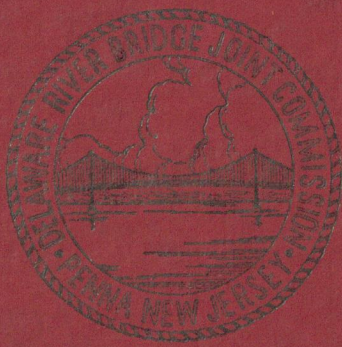


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REPORT
OF THE
DELAWARE RIVER BRIDGE
JOINT COMMISSION
OF
PENNSYLVANIA AND NEW JERSEY

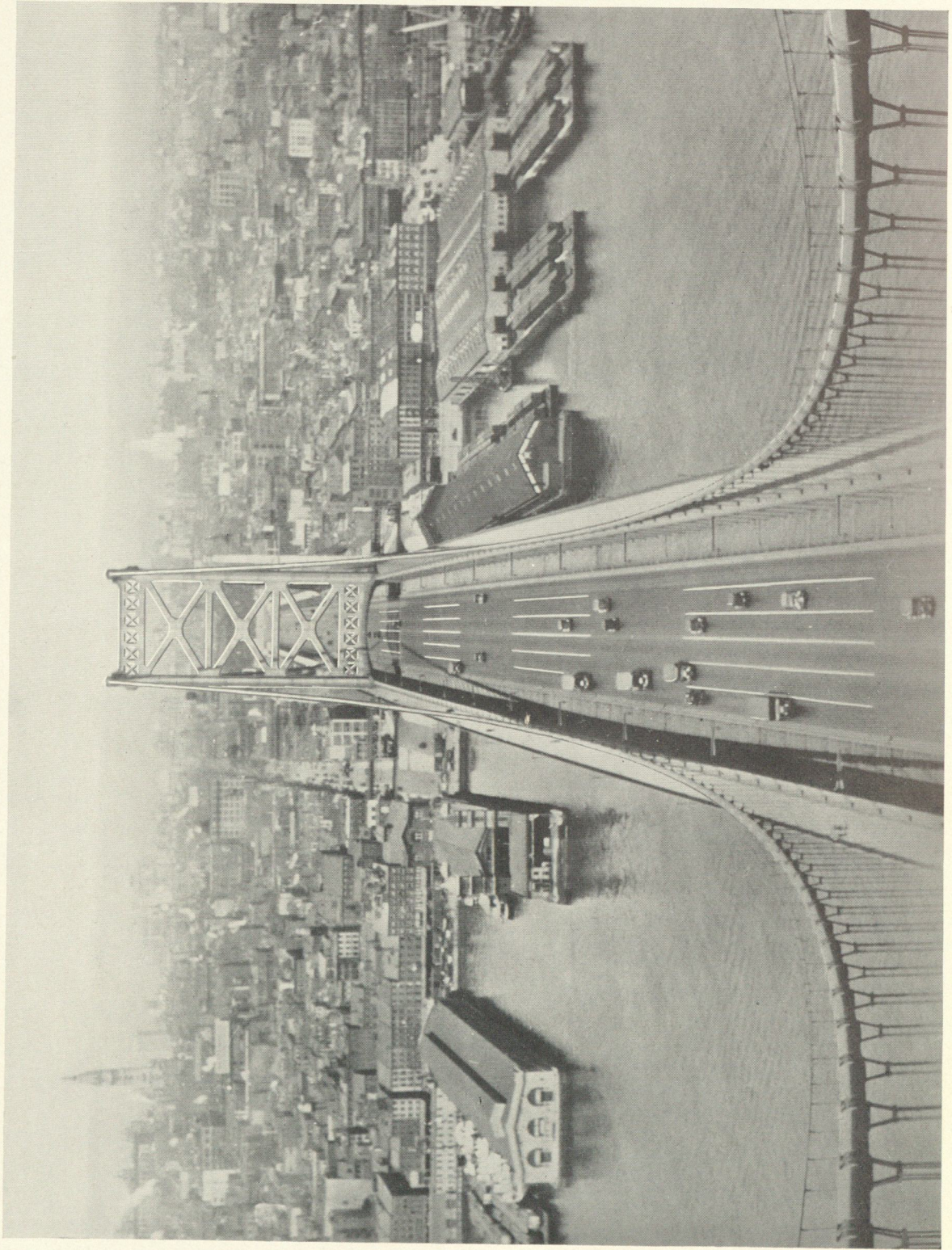


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VIEW FROM TOP OF TOWER
July 5, 1927

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REPORT

OF THE

Delaware River Bridge Joint Commission
of Pennsylvania and New Jersey

TO THE

Legislatures of the
Commonwealth of Pennsylvania

and the

State of New Jersey

and the

Council of the City of Philadelphia

PENNSYLVANIA

JOHN S. FISHER, *Chairman*
W. FREELAND KENDRICK
EDWARD MARTIN
SAMUEL S. LEWIS
THOMAS B. SMITH
RICHARD WEGLEIN
WILLIAM H. FOLWELL
SAMUEL D. LIT

NEW JERSEY

THEODORE BOETTGER
THOMAS J. S. BARLOW
JOHN F. BOYLE
WELLER H. NOYES
ISAAC FERRIS, JR.
JOHN B. KATES
ROBERT S. SINCLAIR
FRANK L. SUPLEE

JOSEPH K. COSTELLO, *General Manager*

CHARLES R. BACON, *Assistant Secretary*

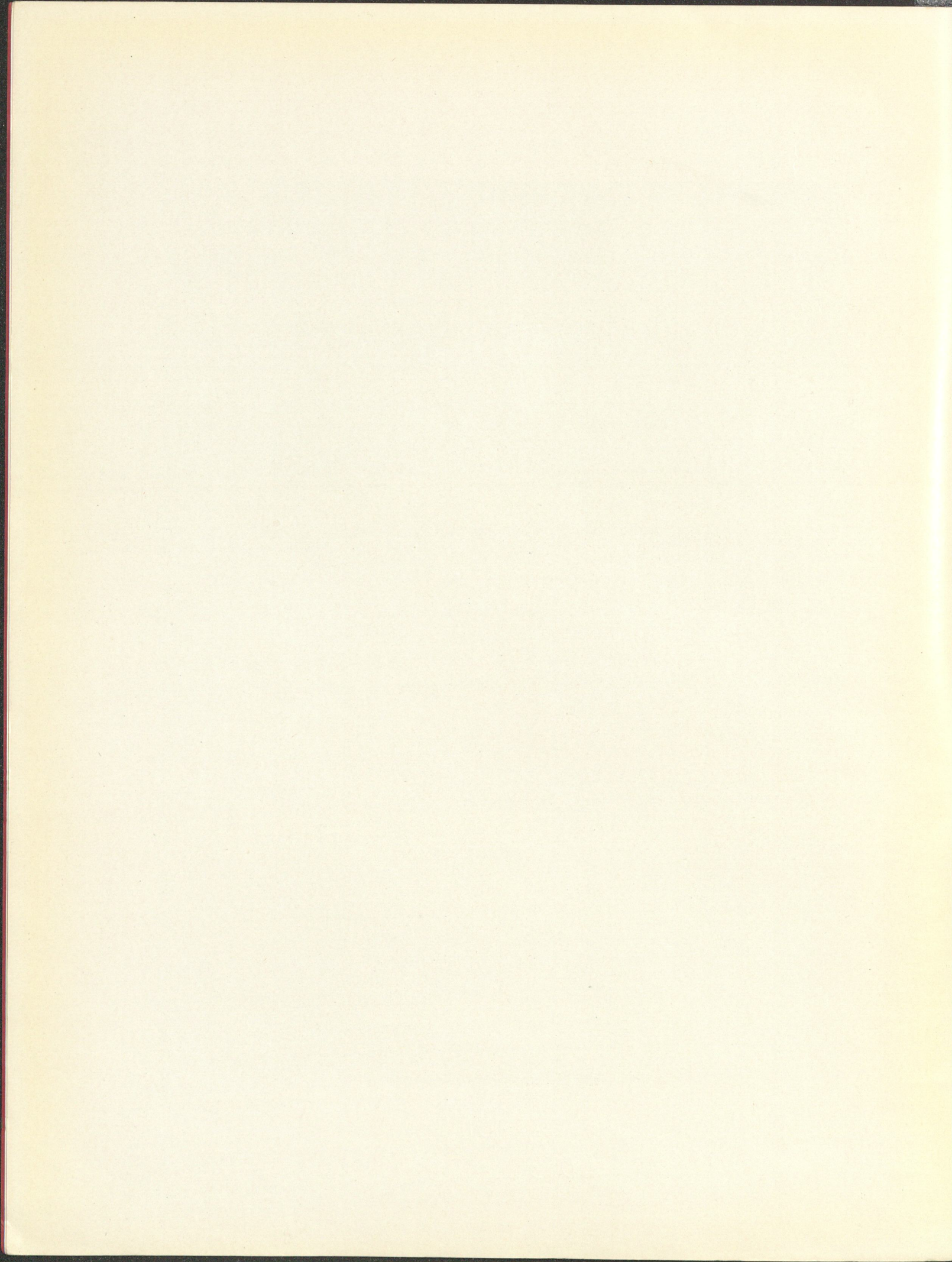
COUNSEL

DAVID J. SMYTH

T. HARRY ROWLAND

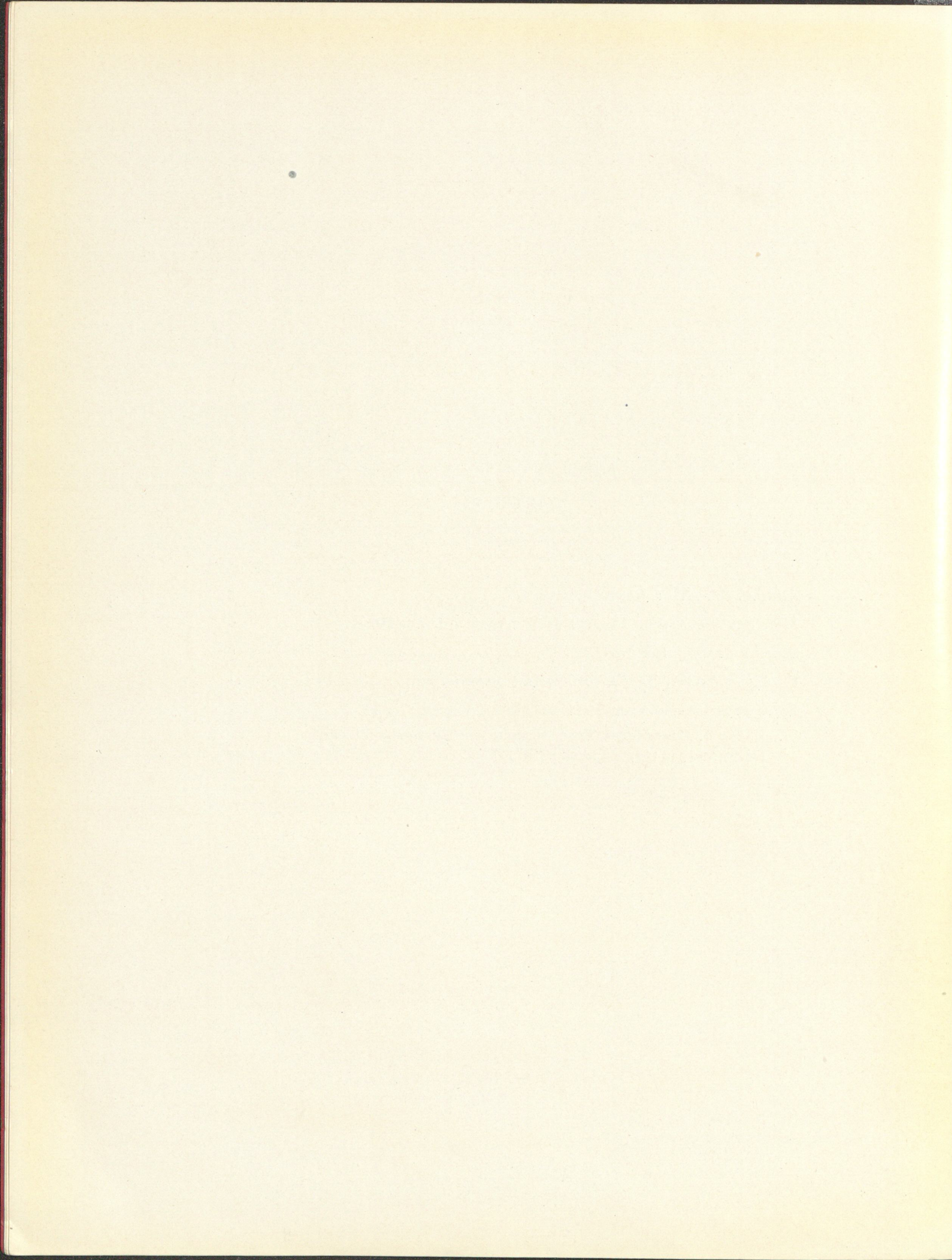
RALPH MODJESKI, *Chief Engineer*

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ANNUAL REPORT
OF THE
DELAWARE RIVER BRIDGE JOINT COMMISSION
OF
PENNSYLVANIA AND NEW JERSEY

TO THE HONORABLES, THE LEGISLATURES OF THE COMMONWEALTH OF PENNSYLVANIA AND OF THE STATE OF NEW JERSEY AND THE COUNCIL OF THE CITY OF PHILADELPHIA.

The Delaware River Bridge Joint Commission respectfully reports that the Delaware River Bridge had a most successful year in 1927 and after paying all expenses of maintenance and operation, the Joint Commission returned \$2,093,921.89 to the State of New Jersey, the Commonwealth of Pennsylvania and the City of Philadelphia. Of this amount New Jersey received \$1,046,960.95 and Pennsylvania and Philadelphia each \$523,480.47.

Total expenses for the year were \$346,678.59, as detailed in the balance sheet appended to this report.

The earnings exceeded all estimates made prior to the opening of the bridge. The last six months of 1927 showed a marked increase over the corresponding months of 1926. The bridge opened to traffic on July 2, 1926 and on December 31st the Joint Commission distributed \$946,682.83. The net receipts for the same six months in 1927 amounted to \$1,229,925.85, an increase of more than 29 per cent.

In our last yearly report was included the agreement for the collection of tolls between the Pennsylvania Commission and the New Jersey Interstate Bridge & Tunnel Commission. Part of this agreement was a schedule of net receipts which might be anticipated. The estimate for the second year of operation called for \$1,281,250. Actually the bridge in its second year has reached the net earnings predicted for its sixth year.

During 1927 the sum of \$2,411,141.44 was collected as tolls. Interest upon deposits of toll receipts was \$15,886.22 and \$11,247.58 in miscellaneous receipts was derived principally from the lease of space under the Philadelphia Approach for the parking of automobiles and the lease of Pier No. 11 for the unloading of some barges of paving blocks.

The total number of vehicles was 8,593,201. Of these 7,253,760 were pleasure cars and pneumatic-tired light delivery trucks, paying 25 cents apiece. Next in importance were 1,181,183 passenger buses. Of the total bus receipts of \$509,669 the Pennjersey Rapid Transit Company paid \$263,500 and the independent companies \$246,169.

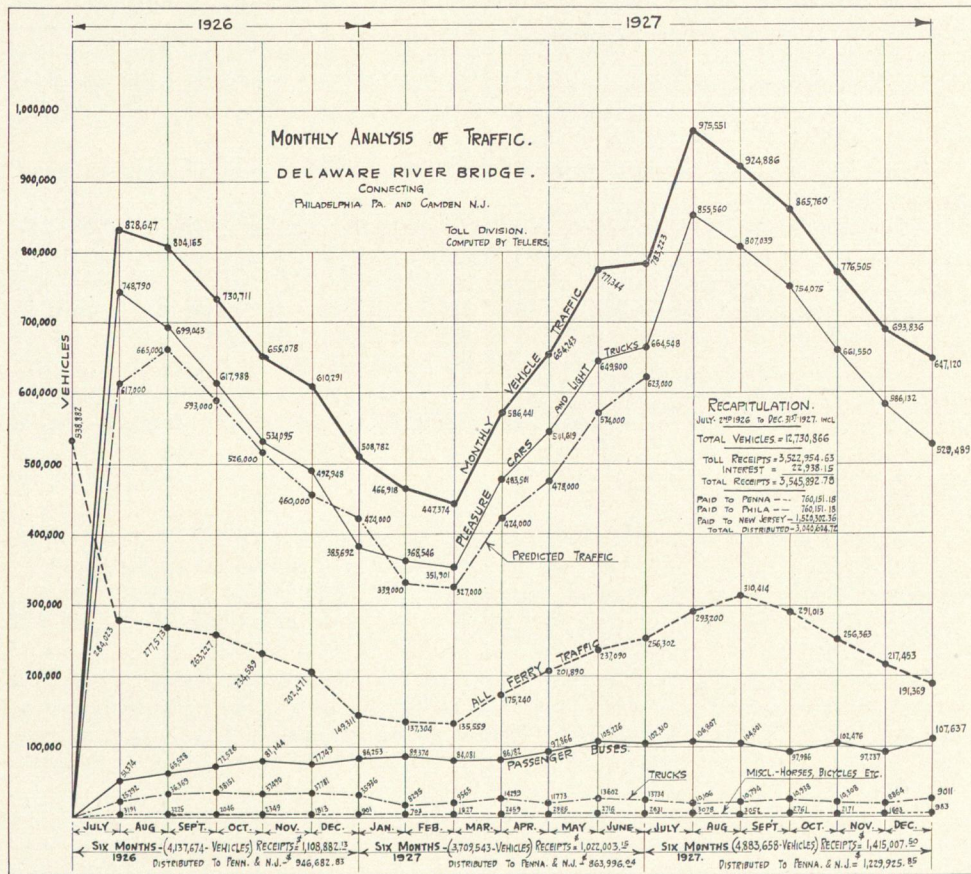
Approximately twenty independent bus companies are engaged in transporting passengers between Philadelphia and points in New Jersey. In addition the Pennjersey Rapid Transit Company, which is owned jointly by the Philadelphia Rapid Transit

Company and the Public Service Railway Company of New Jersey, operates between Philadelphia and the New Jersey suburbs. The Pennjersey Company also runs double-deck buses between Philadelphia and Camden.

When the bridge was opened no one foresaw the response of the travelling public to the attractions of the bus. The Pennjersey Company guaranteed \$100,000 for the first year and in return was permitted to pass single-deck buses for 25 cents and double-deck buses for 40 cents, while the independent companies, which offered no guarantee, paid 40 cents for toll on each single-deck bus. The agreement with the Pennjersey Company expired July 1st, 1927 and was not renewed by the Commission.

There was evidence on the bridge, particularly at the expansion joints, that the heavy vehicles were requiring the expenditure of considerable sums for roadway maintenance and repair. Accordingly the Joint Commission fixed the rate for solid-tired double-deck buses at 75 cents and all single-deck buses at 50 cents. No guarantee was asked from any operator. The bus business had reached a point where it supplied a great and growing demand of residents of New Jersey for transportation. That the number of buses may be expected to continue to increase is indicated by the figures for December, 1927, when 107,637 crossed the bridge, the record number for the year.

The attraction of the bridge has been greatest for vehicles capable of moving at a fair speed. The heavier trucks and the horse-drawn wagons continue to patronize the ferries. During the year 114,678 trucks crossed the bridge while the total return from wagons and led horses amounted to only \$425.40. Motorcycles and bicycles numbering 22,585 returned \$2,258.50.



The average daily traffic was 23,543 vehicles and the average daily return \$6,680.20. The greatest traffic for one day was 55,674, recorded on Sunday, July 17th. On several other Sundays during the summer more than 51,000 cars crossed. These figures are far below the capacity of the toll gates or the traffic lanes on the bridge. Most of the Sunday business was concentrated within a few hours when the rush homeward from the seashore was at its height. The bridge can pass 7000 cars an hour and 100,000 vehicles could be handled in a day without serious increase of overhead costs.

That the traffic is steadily growing cannot be disputed. Because the bridge has been open for eighteen months, it is possible to compare the period of July 1-December 31, 1926, when 4,137,674 vehicles passed, with the corresponding six months of 1927, when a record of 4,883,658 vehicles was established, an increase of more than 4000 vehicles a day.

For the year the bridge has received 76 per cent of the total cross-river traffic, the balance being divided among the Reading and Pennsylvania Railroad ferries and the Tacony-Palmyra ferry, the latter soon to be replaced with a bridge. In June, 1926, just prior to the opening of the bridge, the ferries carried 538,882 vehicles. In June, 1927, the number was 256,302. There is no indication of the railroad ferries being compelled to suspend operation and it is probable that the bulk of the heavy truck and horse-drawn wagon business will continue to patronize them.

That the bridge has created its own business instead of diverting only the ferry traffic is shown by a comparison of June, 1926, and June, 1927. As against the 538,882 vehicles transported by the ferries in the former year, a total of 1,039,525 vehicles crossed the river in June, 1927, by means of the combined bridge and ferry facilities.

The chief problem facing the bridge today lies in the approaches. By virtue of its proximity to the central business district of Philadelphia, the bridge discharges and receives its daily traffic over streets which even prior to the bridge opening had been carrying about as many vehicles as could well be accommodated. Fifth and Sixth Streets, Race and Vine Streets were already well congested. No provision was made to take care of the additional vehicles the bridge would deliver.

Traffic was well taken care of at the eastern end of the bridge by the State of New Jersey constructing a belt highway around Camden, tapping the principal roads of South Jersey. Access to this highway was provided by reducing the width of the sidewalks on Penn and Linden Streets and throwing the space thus gained into the roadway. This expedient was of value because there is practically no traffic on these residential streets which is not to or from the bridge, differing greatly from the situation in Philadelphia where traffic which has no connection with the bridge is sufficient to fill the narrow streets. The City of Camden also opened an outlet south from the Bridge Plaza by cutting Broadway through from Market Street.

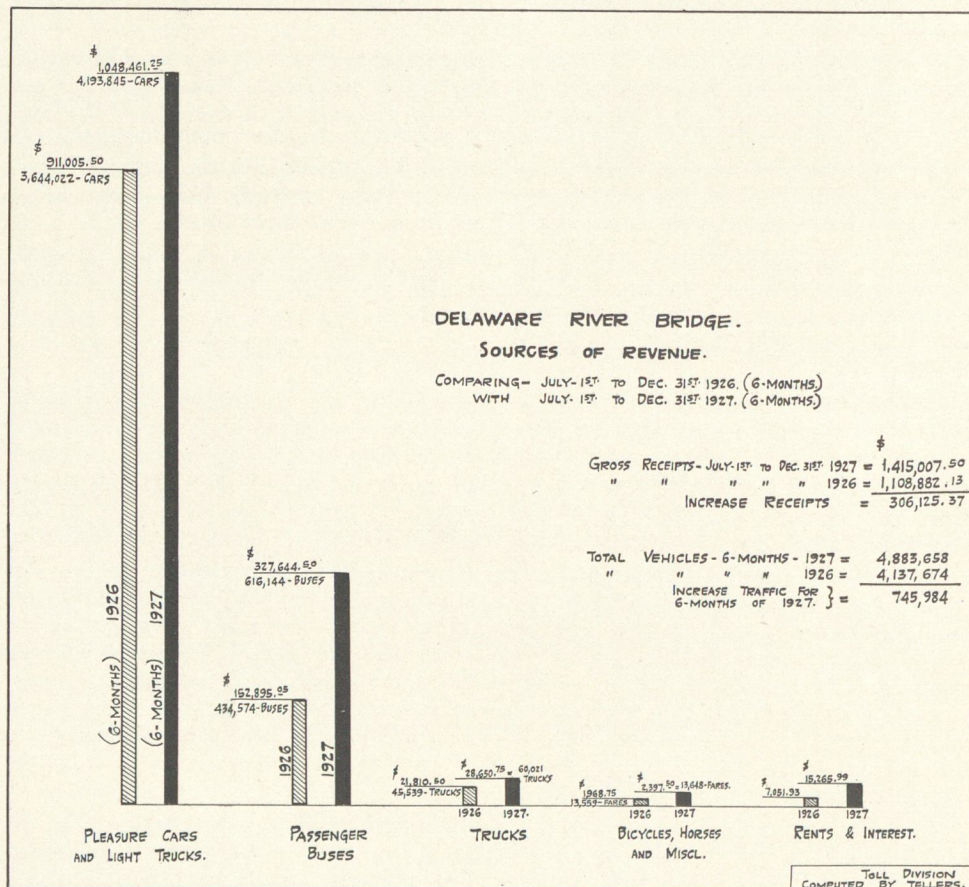
The first step toward relieving the situation in Philadelphia was taken when the City Council in 1927 placed upon the official plan a new street between Fifth and Sixth Streets. The Council decided that Fifth Street and Sixth Street, carrying respectively north and south-bound traffic, were so congested with trolley cars and through traffic that a new street giving access to Spring Garden Street was needed.

The problem of handling traffic in the vicinity of the bridge will grow steadily unless measures are taken to provide better outlets. There is a real danger that the ultimate usefulness of the bridge will be curtailed by the constricted approaches. Unquestionably the bridge loses potential patrons by reason of the inconvenience and delay caused by narrow streets. Additional patronage would mean that the bridge would be paid for faster and hasten the day when it will be free from tolls.

Serious consideration should be given without delay to the most vulnerable point in the continued growth of the bridge, the need of securing a better outlet from the Philadelphia Plaza.

It is gratifying to note that the police and toll bureaus, which are continually in contact with the public, have discharged their duties in a way to earn praise from the patrons of the bridge. Only 128 arrests were found necessary during the year and the majority were of persons driving while intoxicated.

The public has cooperated to a remarkable degree in expediting the collection of tolls. In eight cases out of ten the motorist has his quarter ready, thereby doing away with the necessity of making change. The system of collecting by means of the automatic hand registers has proved successful. A collector can pass from 450 to 550 machines per hour through his lane. At all times during the year the regular ten toll lanes proved sufficient and the auxiliary four lanes were not put in use.



Entrusted with the responsibility of administering a project costing approximately \$37,000,000, the Joint Commission has endeavored to keep the bridge in first-class condition, both structurally and for appearance. It was early realized that the bridge would be subject to a closer scrutiny in the matter of painting, general cleanliness and freedom from snow than any highway upon which no toll was charged. With 50,000 tons of steel exposed to the elements and eight million vehicles rolling over the roadway, the importance of quick elimination of rust and immediate repairs of defects in the paving was manifest. With its own maintenance forces the bridge has been kept in condition.

Early in the year the entire maintenance department was permanently housed in the garage constructed under the bridge approach at Fourth Street, Philadelphia.

There all the tools, machinery for cleaning and snow removal, electrical supplies and other material in constant demand for use upon the bridge are stored so that a careful check may be kept upon their use. A work shop is part of the equipment. Heat is obtained from a factory close by.

Much effort was necessarily devoted to combating rust and corrosion. It was found essential to clean, scale and paint the roadway curbs over the entire bridge and approaches, the bases of the box columns along the Philadelphia approach, the hand railing on top of the top cord, practically all doors in the anchorages, both interior and exterior, the base castings of the cable bents and the main towers, the elevator machinery, tee rails and cars in the anchorages and main towers, the steel supporting the roadway in the interior of the Camden Anchorage, the corroded rivet heads and rust spots on top of the top cord and on top of the floor beams and diagonals over the main bridge.

Under the heavy traffic the expansion joints of the roadway sustained a steady pounding which necessitated attention and repairs. A total of 121 blocks at 17 expansion points were torn up and reset. At all the other points the cover plates were raised, steel shims placed beneath to afford an even bearing surface, the bolts renewed and tightened. The objectionable noise caused by loose and clanging plates was thus eliminated.

The main expansion joints at both towers were reshimmed to silence the noise and prevent the finger joints jamming.

Leakage of rain into the main steel towers threatened to be a problem, but this has largely been overcome by recaulking the interiors and the hoods on top of the towers wherever openings were noticed.

Traffic lines dividing the bridge into six lanes were repainted three times on the suspended structure and six times on the approaches. Without these lines it would not be possible to pass six lanes of traffic. Normally traffic flows along three lanes in each direction, the tides being divided by steel buttons inserted in sockets down the middle line. On Sunday nights during the summer when the movement of traffic was preponderantly westward, the markers were shifted to permit four lanes to carry west-bound vehicles. This shift was accomplished on ten successive Sundays without accident.

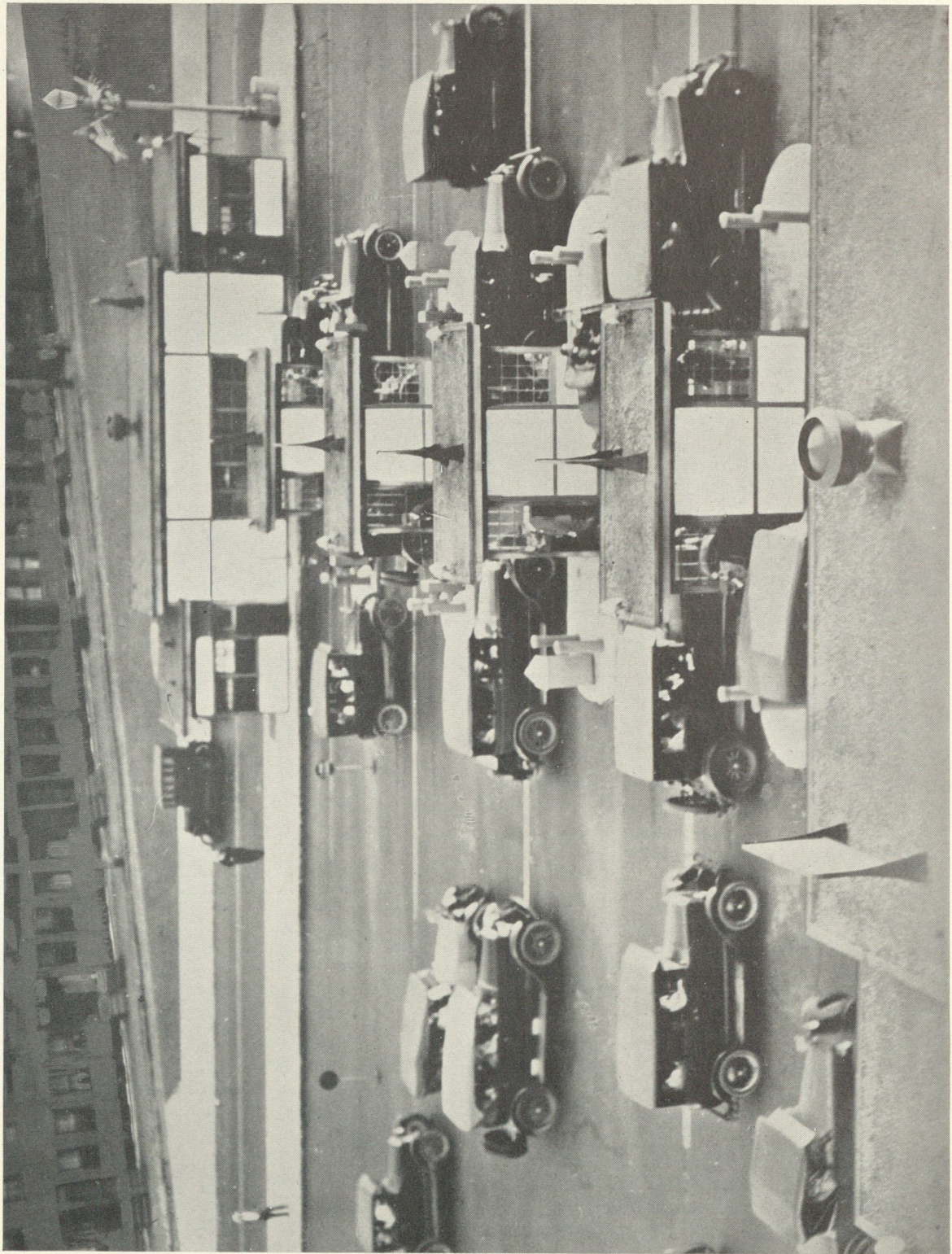
The roadway and plaza surfaces wore well during the year. All cracks in the asphalt were filled immediately upon discovery with hot oil.

The electrical equipment of the bridge has been kept to a high standard. Illumination of the main bridge, approaches, footwalks, plazas, driveways underneath and certain traffic signs is provided by 399 lamps of 1000, 600 and 400 candlepower capacities. Renewal of lamps over the entire property during the year cost \$1700.

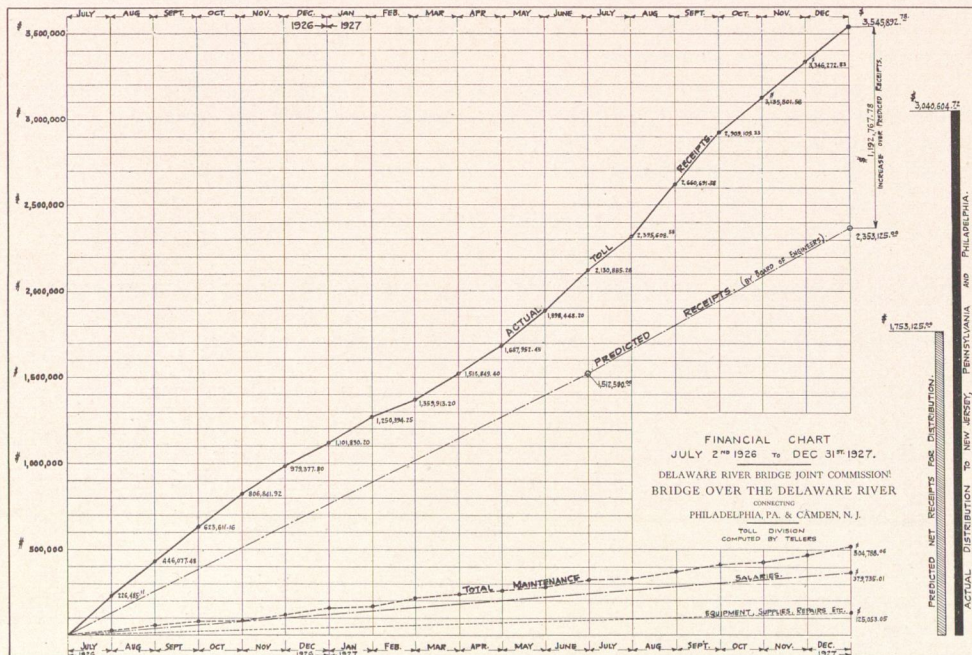
In order to permit the use of electrically-operated tools along the approaches and to provide temporary lighting facilities for emergencies, a power line with receptacles at every expansion joint was installed along both approaches from the anchorages. Flood lights were installed at the plazas to play upon policemen directing traffic, as a safety measure.

The bridge has been kept under constant daily inspection and throughout is in first-class condition.

The year was marked by the retirement of Mr. Samuel M. Vauclain, a member of the Joint Commission for more than six years, who on August 20th, 1927, forwarded his resignation to Governor John S. Fisher, of Pennsylvania. Mr. Vauclain had given his time and business experience to the building of the bridge without stint. His duties as president of the Baldwin Locomotive Works demanded his attention and he felt that after the bridge had been in operation for a year he could retire from the Commission. The Governor appointed Mr. William H. Folwell, of Philadelphia, to fill the vacancy.



CAMDEN PLAZA—TOLL HOUSES
5 P. M., July 4, 1927



The Administration Building on the Camden Plaza was occupied by the Joint Commission June 1st, 1927. Previously the offices were in the Widener Building, Philadelphia, while the police force made its headquarters in a rented building in Camden. The Commission meets regularly in the Administration Building, where all the details attending the operation of the bridge are transacted.

Facilities for trolley cars and high-speed electric lines still await utilization by the transportation companies. In April, 1927, representatives of the Philadelphia Rapid Transit Company presented to the Commission a proposal that the bridge be equipped with tracks and a barn be built under the Camden Approach, at a cost to the Commission of approximately \$600,000. In return for the exclusive privilege to operate trolley cars, the company proposed to pay a toll of one-half cent per passenger.

The company announced its intention to operate a line from the subway station under the Philadelphia Plaza, across the bridge and to Fourth and Mickle Streets, Camden. At a hearing on July 13th, 1927, before the Executive Committee of the Joint Commission, the company's representatives declined to guarantee a lump sum return for the franchise beyond assuring the interest and sinking-fund upon the investment of \$600,000.

After careful deliberation the Commission concluded that this proposal would not add to the net revenues of the bridge, inasmuch as the operating costs would be increased by approximately \$30,000 annually if the anchorage and subway station were put in commission for trolley service. It would be necessary to request the Legislature of New Jersey to appropriate \$300,000 for half the cost of the trackage. Pennsylvania and Philadelphia have unexpended balances from the construction account appropriations to meet their share of the cost.

The Commission decided that the company's offer would not warrant the installation of tracks at this time.

Detailed balance sheets of both the operation and construction accounts as of December 31st, 1927 are appended.

The Joint Commission records its appreciation of the spirit of the Legislatures of Pennsylvania and New Jersey and the City Council of Philadelphia which have always acted for the best interests of the Delaware River Bridge.

Respectfully submitted,

PENNSYLVANIA COMMISSION

JOHN S. FISHER,
Governor
W. FREELAND KENDRICK,
Mayor of Phila.
EDWARD MARTIN,
Auditor General
SAMUEL S. LEWIS
State Treasurer
THOMAS B. SMITH
RICHARD WEGLEIN
WILLIAM H. FOLWELL
SAMUEL D. LIT

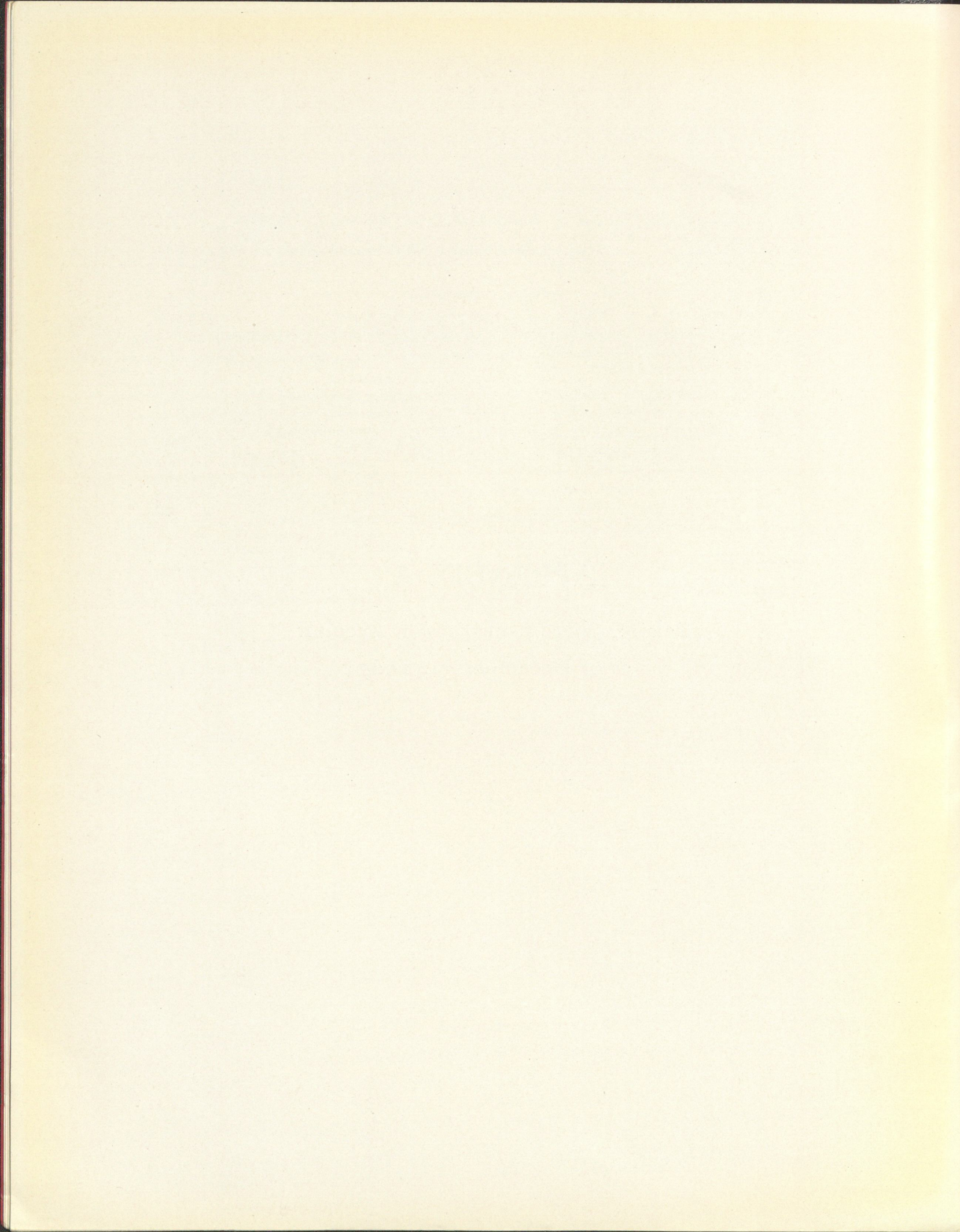
NEW JERSEY INTERSTATE
BRIDGE AND TUNNEL
COMMISSION

THEODORE BOETTGER
THOMAS J. S. BARLOW
JOHN F. BOYLE
WELLER H. NOYES
ISAAC FERRIS, JR.
JOHN B. KATES
ROBERT S. SINCLAIR
FRANK L. SUPLEE

December 31st, 1927.

APPENDIX A

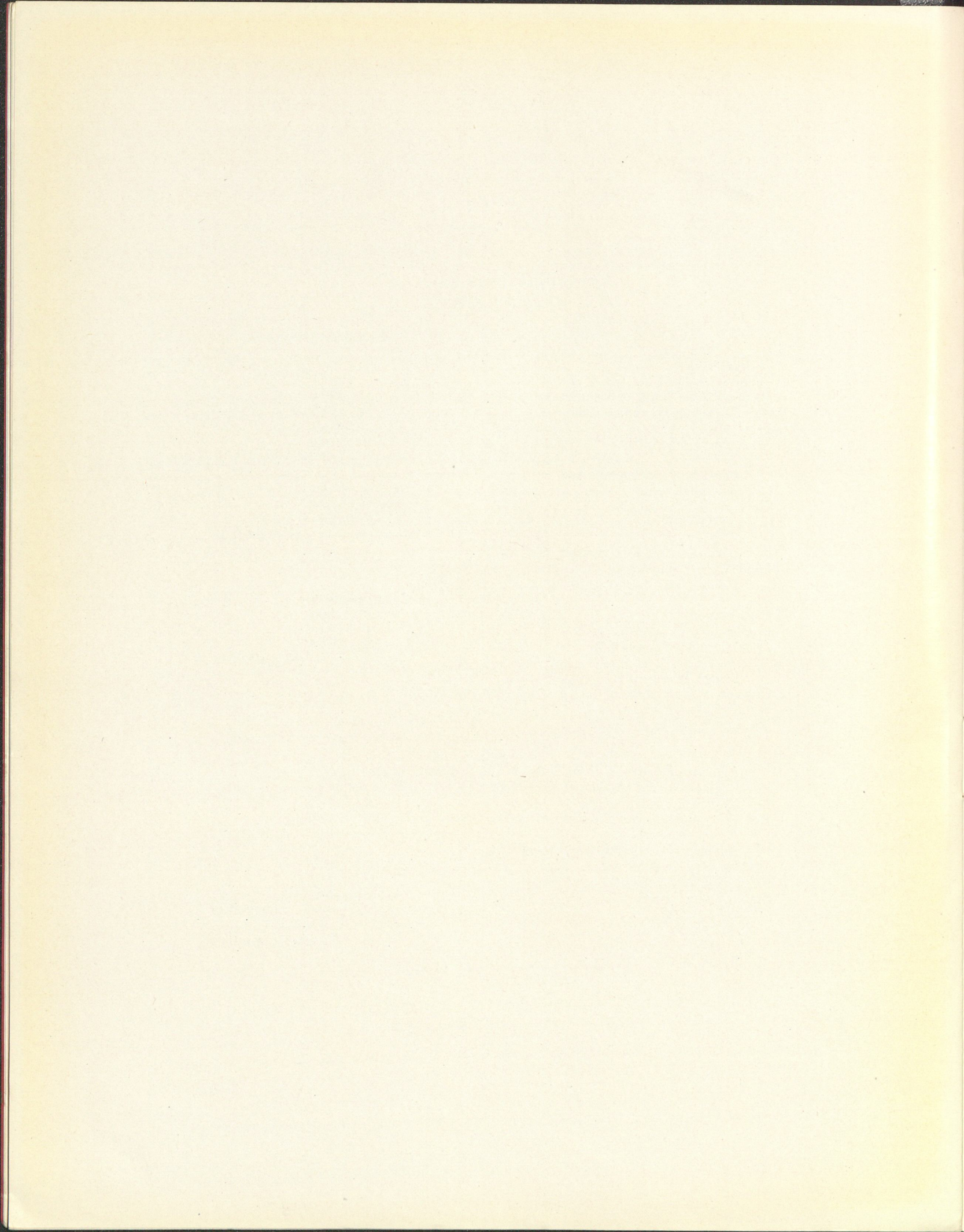
Balance Sheet Construction Account
as of December 31, 1927



CONSTRUCTION ACCOUNT
BALANCE SHEET

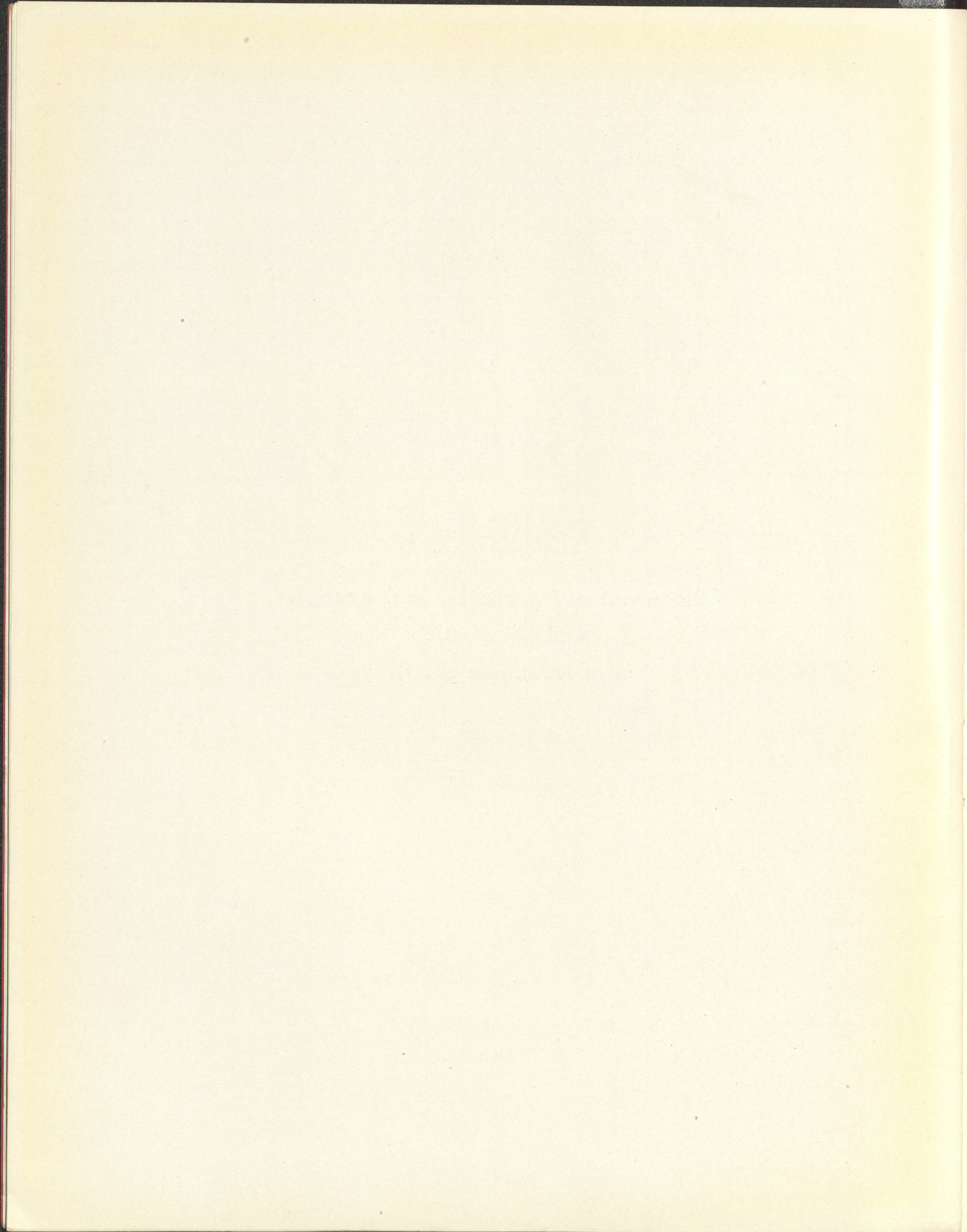
December 31st, 1927.

Cash in Banks:		
Commonwealth Title Ins. & Trust Co.....	\$ 910.84	
National State Bank of Camden.....	2,768.31	
Corn Exchange National Bank.....	4,933.78	
Petty Cash	1,236.19	
Miscellaneous Income	6,536.04	
	\$	16,385.16
Amount of Appropriations:		
City of Philadelphia.....	\$10,784,662.00	
State of Pennsylvania.....	10,784,662.00	
State of New Jersey.....	15,865,822.92	
		37,435,146.92
Disbursements to December 31st, 1927:		
Land: For Pennsylvania.....	\$7,197,778.01	
For New Jersey.....	3,437,080.34	
	\$10,634,858.35	
Construction	23,517,702.65	
Engineering Expenses	1,649,834.53	
Administration Expenses	452,348.60	
		36,254,744.13
Bridge Investment:		
City of Philadelphia.....	\$10,192,214.78	
State of Pennsylvania.....	10,192,214.75	
State of New Jersey.....	15,870,314.60	
		\$36,254,744.13
Amount of Appropriations Unspent but Applied:		
For Engineering and Administration Budget.....	\$ 1,581.34	
For Contracts, including No. 31.....	67,238.48	
For Condemnation and Purchase of Land.....	681,674.55	
		750,494.37
Amount of Appropriation Unapplied:		
City of Philadelphia.....	\$ 214,337.87	
State of Pennsylvania.....	214,337.91	
State of New Jersey.....	1,232.64	
		429,908.42
		\$37,435,146.92



APPENDIX B

Statement of Operations, Toll Receipts
and Distribution
as of December 31, 1927



STATEMENT OF OPERATIONS FOR YEAR ENDED DECEMBER 31st, 1927.

GROSS RECEIPTS—	January 1st, 1927 to December 31st, 1927 (Per Bank Deposits).....	\$2,422,389.02
Add:—	Interest received on Bank Balances.....	15,886.22
		\$2,438,275.24
Add:—	Undistributed Balance carried over from December 31st, 1926.....	3,796.81
		\$2,442,072.05
Less:—	Counterfeit and Mutilated Coins.....	127.76
	Adjustments of Expense Credits (Not Income).....	843.81
		\$ 971.57
	Expenses:	
	Salaries	\$265,302.80
	Equipment	19,514.78
	Supplies	14,143.94
	Repairs	3,961.23
	Miscellaneous Expenses	43,755.84
		346,678.59
		347,650.16
		\$2,094,421.89
Less:—	Undistributed Balance, December 31st, 1927.....	500.00
		\$2,093,921.89
	DISTRIBUTION	
	City of Philadelphia.....	\$ 523,480.47
	State of Pennsylvania.....	523,480.47
	State of New Jersey.....	1,046,960.95
		2,093,921.89



STATEMENT OF TOLL RECEIPTS DISTRIBUTION AS OF DECEMBER 31st, 1927.

BANK BALANCES, December 31st, 1927		DISTRIBUTED TO:				
BANK	Total	Deposits	Interest	City of Philadelphia	State of Pennsylvania	State of New Jersey
Broadway Merchants Trust Company	\$543,759.05	\$539,410.67	\$4,348.38	\$73,550.83	\$130,902.54	\$339,305.68
Corn Exchange National Bank.....	164,926.81	163,750.00	1,176.81	164,926.81	.....	.....
Jefferson Title & Trust Company...	131,574.61	130,000.00	1,574.61	65,814.32	65,760.29	.....
Quaker City National Bank.....	142,772.01	141,750.00	1,022.01	142,772.01	.....	.....
Glassboro Title & Trust Company...	63,253.63	62,500.00	753.63	.....	.....	63,253.63
First Camden National Bank and Trust Co.	204,945.99	203,375.00	1,570.99	.....	.....	204,945.99
Northern Trust Co.....	142,868.63	141,750.00	1,118.63	27,391.38	115,477.25	.....
Franklin Trust Co.....	142,742.40	141,750.00	992.40	.....	124,708.13	18,034.27
First National Bank of Glassboro....	107,368.65	106,750.00	618.65	.....	.....	107,368.65
Burlington County Trust Co.	91,754.96	91,250.00	504.96	.....	.....	91,754.96
Moorestown Trust Co.....	69,784.03	69,250.00	534.03	.....	.....	69,784.03
Pitman Title & Trust Company.....	55,311.33	55,000.00	311.33	.....	.....	55,311.33
Kensington Trust Co.	50,356.07	50,000.00	356.07	.....	25,098.65	25,257.42
Northwestern Trust Company.....	75,453.53	75,000.00	453.53	49,025.12	26,428.41	.....
Girard Avenue Title & Trust Company	85,472.19	85,000.00	472.19	.....	35,105.20	50,366.99
Merchantville Trust Company.....	21,578.00	21,500.00	78.00	21,578.00
	\$2,093,921.89	\$2,078,035.67	\$15,886.22	\$523,480.47	\$523,480.47	\$1,046,960.95

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