

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Planning and Control of Public Works

Volume Author/Editor: Leo Wolman

Volume Publisher: NBER

Volume ISBN: 0-87014-016-7

Volume URL: <http://www.nber.org/books/wolm30-1>

Publication Date: 1930

Chapter Title: The Government of New York State

Chapter Author: Leo Wolman

Chapter URL: <http://www.nber.org/chapters/c5509>

Chapter pages in book: (p. 57 - 87)

CHAPTER III

THE GOVERNMENT OF NEW YORK STATE

In contrast to the variety of public works undertaken by American cities, the expenditures by state governments for permanent improvements go largely for the construction of buildings and roads. More than 90 per cent of the annual expenditures for public construction by the state governments of Ohio, Illinois, and California is used in the construction of highways and public buildings. To present a detailed conspectus of the course of permanent improvements financed and administered by one state government will most clearly illustrate the problem; the rest of this chapter is therefore concerned with a comprehensive description of the recent history of the public works programs of the government of the State of New York.

The Public Works Expenditures of the New York State Government.—The cost of permanent improvements undertaken by New York State increased from \$25,000,000 in 1919 to \$72,000,000 in 1928, a rate of increase not so rapid as the rise, during the same period, in the expenditures of New York City. Throughout the decade outlays for highways and public buildings have come to represent an increasing portion of the total expenditures of the state government. At the same time expenditures for canals and waterways which in 1919 accounted for more than one-third of the total had fallen by 1928 to a position of much lesser importance. Parks and reservations, on the other hand, involve much larger outlays now than they did at the beginning of the decade.

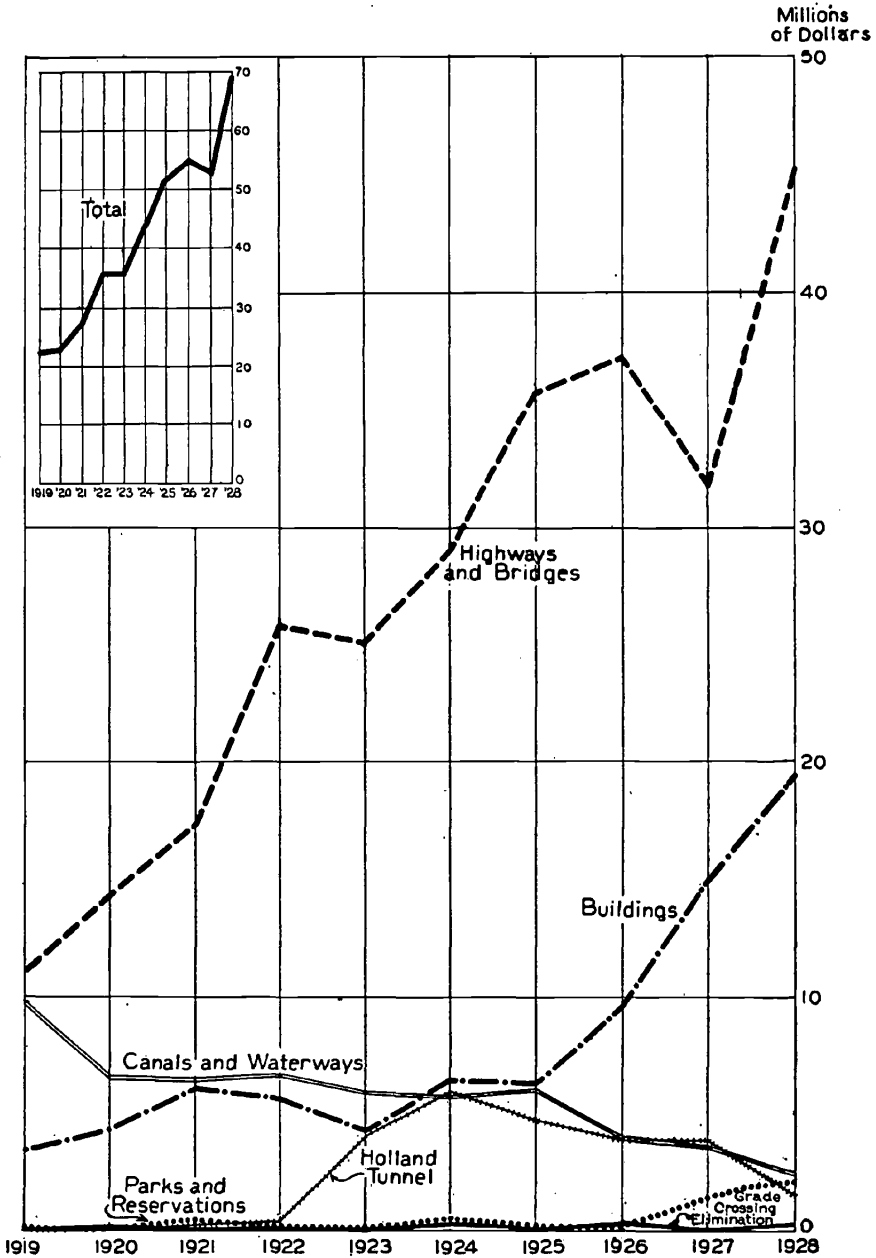
In the administration and financing of projects of permanent improvement, the government of the State of New York has no simple procedure. Expenditures are made by a variety of administrative agencies, some long established and others created for the purpose, and the funds are of diverse origin. The materials for understanding this condition are contained in Table 18, which gives a detailed statement of expenditures on permanent improvements, classified by administrative agency and by the source of expendi-

TABLE 17. — EXPENDITURES ON PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT,
1919-1928.^a
(In thousands)

Class	YEAR ENDING JUNE 30TH											
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928		
Buildings from tax receipts ^b	\$ 3,476	\$4,387	\$6,107	\$5,731	\$4,318	\$6,494	\$5,979	\$6,081	\$5,535	\$6,136		
Buildings from bond issues.....	.....	.....	.....	.....	.....	3	372	3,522	9,460	13,189
Total for buildings.....	\$3,476	\$4,387	\$6,107	\$5,731	\$4,318	\$6,497	\$6,351	\$9,603	\$14,995	\$19,325		
Highways and bridges from tax receipts ^b	8,945	10,385	12,203	19,085	21,083	26,341	34,524	36,563	31,403	44,771		
Highways and bridges from bond issues.....	2,114	3,978	5,117	6,686	3,939	2,659	1,342	716	428	448		
Total for highways and bridges.....	\$11,059	\$14,363	\$17,320	\$25,771	\$25,022	\$29,000	\$35,866	\$37,279	\$31,831	\$45,219		
Canals and waterways — maintenance and repairs.....	2,144	2,879	3,670	3,093	3,794	4,129	3,405	3,092	3,204	2,291		
Canals and waterways — barge canal construction.....	7,633	3,716	2,778	3,532	2,161	1,641	2,670	905	492	179		
Total for canals and waterways.....	\$9,777	\$6,595	\$6,448	\$6,625	\$5,955	\$5,770	\$6,075	\$3,997	\$3,696	\$2,470		
Public Works Department — miscellaneous outlays from general fund.....	79	56	68	59	25	54	1,742	2,515	33	707		
Parks and reservations, etc. from tax receipts.....	175	122	462	230	136	569	273	151	283	495		
Parks and reservations, etc. from bond issues.....	.....	.....	.....	.....	.....	.....	.....	77	1,103	1,568
Total for parks and reservations.....	\$175	\$122	\$462	\$230	\$136	\$569	\$273	\$228	\$1,386	\$2,063		
Holland Tunnel — from tax receipts.....	\$2	\$107	\$299	\$468	\$4,030	\$5,923	\$4,774	\$3,942	\$3,844	\$1,486		
Grade crossing eliminations — from tax receipts.....	68	135	99	134	56	315	70	302	.....	.....
Grade crossing eliminations — from bond issues.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	385
Total for grade crossing eliminations.....	\$68	\$135	\$99	\$134	\$56	\$315	\$70	\$302	.....	\$385	
Grand Total (excluding canal maintenance and repairs).....	\$22,492	\$22,886	\$27,133	\$35,925	\$35,748	\$43,999	\$51,740	\$54,774	\$52,619	\$69,374		
Grand Total (including canal maintenance and repairs).....	\$24,636	\$25,765	\$30,803	\$39,018	\$39,542	\$48,128	\$55,151	\$57,866	\$55,823	\$71,665		

SOURCE: New York State, Comptroller's Annual Reports.
^a All the figures omit expenditures for land. For composition of figures in each class, see Appendix F.
^b Includes prisons, hospitals, educational buildings, offices, etc.

CHART 8.—EXPENDITURES ON PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT, 1919-1928.



ture. The construction of both Tables 17 and 18, involving problems of reclassifying public accounts and the making of arbitrary decisions to include or exclude items requires further comments.

Throughout the tables here used, the cost of land has been excluded. Where it is an important item, the yearly expenditure for its acquisition by the given department has been calculated separately and is given in footnotes to Table 18. The cost of "maintenance and operation" has also been excluded. In most cases, as with schools, hospitals, prisons, etc., this item is very difficult to calculate correctly, but is relatively unimportant. In the Department of Public Works, however (especially in the Division of Highways) maintenance is an important expenditure which has been included along with repairs. In every other instance, where "maintenance" does not mean "operation" it means "repairs." The figures for repairs are also included in the tables. They are not given separately, however, because the expenditures on repairs are so small as to be of slight comparative importance—a few thousand dollars each year in each case, a few hundred thousand in the aggregate. To give these figures separately would also be misleading because only minor repairs carried out by regular force employees are listed as such. More important repair work, done by contract, is regarded as reconstruction, and is listed as capital outlay on permanent improvements. For the canals, two different figures are given; for new construction and for maintenance and repairs.

Expenditures on construction in all departments, except the Public Works Department, are listed as capital outlays. In the Public Works Department construction expenditures are distributed between personal service, fixed charges, and capital outlays. The outlays on permanent improvements of the Public Works Department have been separated into two classes, those made by the Highway Division, and all others made by the Department. The former are for the construction of highways and roads of one sort or another (largely rural post roads), the latter comprehend miscellaneous expenditures for public works (largely on bridges and waterways).

Expenditures for barge canal construction have come out of the Special Canal Fund over the entire period; that is, this work has been financed largely by means of bond issues. Expenditures for canal maintenance and operation until 1927 came out of the Gen-

TABLE 10. EXPENDITURES ON PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT, 1, 1919-1926

FROM THE GENERAL FUND^a

(In thousands)

DEPARTMENT ^b	YEAR ENDING JUNE 30TH										
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	
Executive ^c	\$175	\$122	\$462	\$230	\$136	\$569	\$273	\$151	\$166	\$167	
Conservation (Protective) ^d	541	731	1,193	1,275	503	297	305	434	283	495	
Correction (Penal) ^e	539	530	436	709	1,172	1,287	491	628	531	445	
Education (Ed. and Agric.) ^f	199	78	37	28	6	88	141	23	407	315	
Health (Regulative) ^g.....	.....	.....	.....	.....	.....	.....	.....	.....	117	84
Mental Hygiene ^h.....	.....	.....	.....	.....	.....	.....	.....	.....	3,145	2,893
New York Bridge and Tunnel Com- mission (Holland Tunnel).....	2	107	299	468	3,422	5,614	4,774	3,436	3,547	1,496	
Port of New York Authority.....	.....	.....	.....	.....	.....	7	52	528	488	1,024
Westchester County Park Com- mission.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
Lake Champlain Bridge Commission. Canals, maintenance, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120
Curtative.....	1,284	1,662	3,085	3,009	2,150	3,266	3,260	3,588	151	.....
Charitable.....	804	1,198	1,049	458	289	452	924	677	.....	.....
Defensive.....	109	188	307	252	198	245	198	132	.....	.....
Grade crossings (various depart- ments).....	68	135	99	134	56	315	70	302	.....	.....

SOURCE: New York State, Comptroller's Annual Reports, Exhibit 17, pp. 70-200.

^a Figures are for capital outlays, excluding cost of land, and repairs.

^b As a result of the Reorganization Act of 1926 the functions of the various government departments were redistributed. The summary figures for broad classes of expenditure through 1926 are consequently not strictly comparable with the figures for 1927 and 1928. So far as possible the figures in this table for the whole period, 1919-1928, have been reclassified and are here presented in substantially comparable form.

^c Executive under new classification includes armories and some camps (listed before under head of "Defensive") and some eight institutions, charitable schools, hospitals and homes, under the jurisdiction of the Division of Standards and Purchase. These before 1926 were included in "Charitable."

^d Parks, reservations, memorials, under the old classification listed as "Protective."

^e State prisons, reformatories, etc., designated "Penal" before 1927.

^f Under old classification schools of agriculture, experimental stations, etc., were listed under "Agriculture"; in 1927 included in "Education."

^g Includes only Division of Laboratories and Institute for Study of Malignant Diseases; before 1927 included under "Regulative."

^h Includes 16 hospitals for the insane and 6 institutions for mental defectives. Before 1927 these were listed largely in "Curative" and partly in "Charitable."

ⁱ In 1927 and 1928 no longer a separate department; included under "Mental Hygiene."

^j In 1927 and 1928 distributed between "Executive" and "Mental Hygiene."

^k In 1927 and 1928 included under "Executive."

TABLE 18. — EXPENDITURES ON PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT, 1919-1928
FROM THE GENERAL FUND^a—Continued

(In thousands)

DEPARTMENT OF PUBLIC WORKS	YEAR ENDING JUNE 30TH									
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Personal service										
Administration	.....	.....	.....	.....	.....	.....	\$161	\$274	\$321	\$399
Division of Canals and Waterways	.....	.....	.....	.....	.....	.....	.....	"	1,233	1,444
Division of Highways	.....	.....	.....	.....	.....	.....	132	529	525	436
Division of Public Buildings, maintenance and repairs, etc.	.....	.....	.....	.....	.....	.....	499	325	841	1,811
Maintenance of state and county highways, general	.....	.....	.....	.....	.....	.....	\$859	.....	.....	.....
Maintenance of state and county highways, special	572	657	\$6,923	\$5,535	\$7,350	10,800	13,550	15,443	7,380	8,071
Miscellaneous repairs, etc.	39	95	339	840	720	665	976	799	1,417	8,798
Fixed charges and contributions	.....	.....	4	29	11	107	49	46	28	257
Construction and improvement of highways, state aid to counties	.....	.....	1,451	2,705	2,299	2,385	2,412	2,375	2,380	2,376
Advances for federal rural post roads	100	100	213	2,863	3,704	4,384	5,890	4,808	4,755	5,146
Repairs to highways, county roads	20	20	60	30	30	30	30	25	20	20
Repairs to highways, state aid to towns	2,147	2,255	2,271	2,443	2,490	2,531	2,637	2,712	2,909	3,048
Outlays on permanent improvements ¹	79	56	68	59	25	54	1,742	2,515	33	707
Outlays on permanent improvements ²	153	217	735	4,206	4,395	5,331	8,796	9,298	11,534	16,152
Repairs to highways, Indian Reservation	78	38	73	48	46	101	.....	.....	.....	.....
Total expenditures from the General Fund	\$12,745	\$15,055	\$19,104	\$25,321	\$29,002	\$39,387	\$47,362	\$49,048	\$42,211	\$55,734

¹ Payment of Department of Public Works, exclusive of highway outlays.

² Payment of Bureau of Highways. (Highway Bureau consolidated with Department of Public Works after 1926.)

FROM SPECIAL FUNDS—(Continued)
(In thousands)

YEAR ENDING JUNE 30TH

FUND	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Highway Improvement Fund — construction.....	\$ 2,114	\$3,978	\$5,117	\$6,686	\$3,939	\$2,659	\$1,342	\$ 716	\$428	\$448
Palisades Interstate Park Fund ^o.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State Forest Preserve Fund ^p.....	.....	.....	.....	.....	.....	3	372	3,522	7,925	5,743
State Institutions Building Fund.....	.....	.....	.....	.....	.....	.....	.....	.....	1,535	7,446
General State Improvement Fund ^q.....	.....	.....	.....	.....	.....	.....	.....	77	1,103	1,568
State Park System Fund ^r.....	.....	.....	.....	.....	.....	.....	.....	.....	38	385
Grade Crossing Elimination Fund.....	.....	.....	.....	.....	.....	.....	.....	.....	7	22
Other funds — construction items.....	.....	.....	.....	.....	.....	202	769	15	4	128
Black River Regulating District ^s.....	.....	.....	.....	.....	.....	2	5	2	3	719
Hudson River Regulating District ^s.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canal Fund — barge canal construction.....	7,633	3,716	2,778	3,532	2,161	1,641	2,670	905	492	179
New York and New Jersey Tunnel Fund.....	.....	.....	.....	.....	608	309	.....	506	297	.....
Barge Canal Fund — maintenance and repairs.....	2,144	2,879	3,670	3,093	3,794	3,925	2,631	3,075	1,813	.....
Federal Rural Post Roads Revolving Fund.....	.....	137	134	386	38	.....	.....	.....	.....	.....
Total expenditures from Special Funds.....	\$11,891	\$10,710	\$11,699	\$13,697	\$10,540	\$8,741	\$7,769	\$8,818	13,645	\$16,638
Grand Total of all expenditures from General and Special Funds.....	\$24,636	\$25,765	\$30,803	\$39,018	\$39,542	\$48,128	\$55,151	\$57,866	\$55,856	\$72,372

^o Exclusive of acquisition of land, amounting to.....
^p Exclusive of acquisition of land, amounting to.....
^q Exclusive of acquisition of land, amounting to.....
^r Exclusive of acquisition of land, amounting to.....
^s Not in State Treasury.

\$ 26	\$ 254	.....	\$ 19	.....	\$ 25	\$45	.....	.....	.....	.....
404	653	\$752	1,071	\$978	1,531	346	\$581	\$483	.....	.....
.....	.....	.....	.....	.....	.....	.....	879	1,438	.....	\$1,426
.....	.....	.....	.....	.....	.....	.....	302	1,189	.....	2,039

eral Fund. An appropriation was made annually for this purpose in the budget and the expenditures appear regularly as an item in the General Fund Statements of the Comptroller's *Annual Reports*. The money, however, was immediately transferred to the Special Canal Fund, unexpended balances being returned at the end of the year and figuring as an inter-se transaction in each case. But since the money comes out of the General Fund, it means that canal maintenance and operation (but not new construction) has been financed out of current revenue and from the proceeds of taxation.

By the Reorganization Act of 1926 a new system was introduced. The money for canal maintenance is no longer transferred to the Special Fund, but is expended instead by the Department of Public Works (Division of Canals and Waterways). This explains why no expenditures on canal maintenance in 1928 appear against "Barge Canal Fund Maintenance" and why the figure for 1927 is so much smaller than that for 1926. By 1928 these expenditures are all grouped under the Public Works Department.

All the other special funds (with only very minor exception) are financed out of bond issues exclusively. The Canal Fund has, as just pointed out, also been largely financed in this way for purposes of canal construction. Although the expenditures on maintenance and repairs come immediately out of the Special Canal Fund, they are tabulated with other expenditures financed out of taxes because they are derived from current revenue.

The data in these tables were extracted from the *Annual Reports* of the Comptroller, 1919-1928 and show all the expenditures of New York State, for whatever purpose and however raised. Several exceptional cases, where the money does not come directly or wholly out of the state treasury and which require some explanation are as follows:

1. Hudson River and Black River Regulating Districts.—This is a small item, included in Table 18, of expenditures which, though not out of the state treasury, are given in the Comptroller's reports, and are clearly for public construction.

2. Prison Capital Fund Expenditures.—The figures for the construction and maintenance of state prisons are included in Table 18 under the heading "Department of Correction" (before 1927, "Penal"). The Prison Capital Fund, however, gets its revenue from prison industries, and the expenditures therefrom are not subject to control by the state treasury, and do not figure in the

Comptroller's reports, but come under the jurisdiction of the prison authorities. Occasionally the funds are used for minor construction and repair work; but the figures are so small as not to be worth troubling about, and it is doubtful also whether they can be properly regarded as public expenditures.

3. Interstate Bridge Commission.—This is the authority charged with constructing the Lake Champlain Bridge, a New York-Vermont Interstate project which has just been completed. The Commission had authority to borrow money in the New York money market, the debt to be paid off from the proceeds of the tolls charged for the use of the bridge. The Commission received \$120,000 from the New York State General Fund in 1928.

4. Port of New York Authority.—This is a New York-New Jersey Interstate Commission, empowered to borrow money on its own authority, its bonds to be paid off from the proceeds of the tolls charged for the use of its facilities. The figures for the expenditures of New York State in connection with the Commission, appear yearly in the Comptroller's reports and have been included in the tables. The expenditures of the Port Authority itself, however, since they are strictly speaking, expenditures of neither the New York State nor the New York City government, have been tabulated separately.

5. Highways.—Federal aid for the construction of Federal Rural Post Roads is a regular item in the State's accounts of its expenditures. There are the following four types of road construction:

- a. State Highways for which the state pays the whole cost.
- b. County Highways of which state and county share the cost.
- c. County Roads whose cost is borne by the county alone.
- d. Town Highways whose cost is borne by the state and city.

The shares of the counties and towns in (b) and (d) do not appear in the state accounts or in the tables, though all the work is supervised by the state Department of Public Works. This is the reason why the Highway Division of the Public Works Department has very much larger figures for road construction expenditures in its annual reports than appear for the same item in the Comptroller's reports. The latter exclude money expended by counties and towns, whereas the Public Works Department reports include such expenditures as an indication of the volume of high-

way work done under state supervision, though they are not expenditures out of the state treasury.

In addition to bearing the entire cost of state highway work, and to sharing the cost of county and town highways with the various county and town authorities of the state, the state government also makes an annual grant for highway work to the counties

TABLE 19. — TOTAL EXPENDITURES ON PUBLIC CONSTRUCTION IN NEW YORK STATE, 1925-1928^a

(In thousands)

SPENDING AGENCY	1925	1926	1927	1928
State Government				
Including land	\$53,990	\$60,644	\$69,559	\$73,583
Excluding land	51,746	54,774	52,619	69,374
Excluding land and state aid ^b	46,697	48,687	47,330	63,950
All counties, cities, villages and towns, except New York City				
Including land	125,958	140,626	156,425	146,374
Excluding land (estimated) ^c	118,401	132,188	147,040	137,592
New York City: excluding land	132,871	131,394	143,545	132,721
All governmental units, excluding land				
State government ^b	46,697	48,687	47,330	63,950
Counties, cities, villages and towns, except New York City	118,401	132,188	147,040	137,592
New York City	132,871	131,394	143,545	132,721
Total expenditures in entire state, excluding land	\$297,969	\$312,269	\$337,915	\$334,263

SOURCE: New York State, Comptroller's *Annual Reports* for State Government, and for Municipal Accounts for Counties, Cities, etc.

New York City, Comptroller's *Annual Reports*.

^a It is impossible to carry this table back of 1925, as figures for counties, cities, etc., are not given for years prior to 1925 in utilizable form.

^b State highway aid to counties and towns excluded from State Government expenditures to avoid duplication.

^c Cost of land estimated on basis of expenditures for land by State Government.

and towns for their own use. These appear in the tables as "Construction and Improvement of Highways—State Aid to Counties" and "Repairs to Highways—State Aid to Towns." The tables for expenditures of the state government thus include only the expenditures on highways which come out of the state treasury.

Expenditures in the Area of New York State.—It is of interest, in comparison with the expenditures on public works of the City

of New York and of the New York State government, to venture an estimate of the expenditures on permanent improvements of all local governments in New York. A summary of such an estimate is given in Table 19, for each year from 1925 to 1928. It shows that while the state government spent on public construction, exclusive of state aid, \$63,950,000 in 1928; New York City, \$132,721,000; the remaining counties, cities, villages and towns expended for these purposes \$137,592,000. Of a total expenditure on public construction by all governments in the State of New York of \$337,915,000 in 1927, probably \$150,000,000 were spent for the construction of streets and highways, and probably \$50,000,000 for school construction, although this last figure apparently includes expenditures for the acquisition of sites.³²

The Initiation of Public Works by the New York State Government.—Making appropriations for the ordinary requirements of government and for permanent improvements is the function of the Governor and of the State Legislature. On or before the fifteenth of October, the head of each department of the state government submits to the Governor itemized estimates of proposed appropriations. The Governor, after hearings have been held, at which the attendance of heads of departments can be required, can revise such estimates. Representatives from the Committees of the Senate and the Assembly are invited to attend the hearings.

On or before the 15th of the following January, the Governor submits to the Legislature the budget containing a plan of proposed expenditures. This annual budget is referred to the Senate Finance and the Assembly Ways and Means Committees for consideration and is subsequently reported with recommendations to the Legislature. These committees also consider all bills introduced in the Legislature carrying appropriations or providing for the expenditures of public money.³³ The Governor may, before the Legislature finally votes upon the budget and not more than thirty days after it has been submitted, amend or supplement it. He may also, with the consent of the Legislature, submit amendments or a supplementary bill at any time before the Legislature adjourns.

The Governor and the departmental heads have the right to appear and be heard in respect to the budget while it is being con-

³² New York State Tax Commission, *Annual Report, 1927*, Table 36, pp. 534-590.

³³ New York State, *Laws of 1927*, Ch. 131. See also *Legislative Manual, 1929*, p. 641.

sidered. The Legislature cannot alter an appropriation bill submitted by the Governor except to strike out or reduce items in it, but it may add appropriation items if these are stated separately and distinctly from the original items of the bill and refer to some single object or purpose. When a bill has been passed by both Houses it immediately becomes a law without further action by the Governor.

Neither House can consider further appropriations until the appropriation bills proposed by the Governor have been finally acted upon by both Houses. Further appropriations have to be made by separate bills, each for a single object. The Governor, however, is at liberty to recommend that one or more of his proposed bills should be passed in advance of others to supply the immediate needs of government or to meet an emergency.

Debt-Incurring Procedure.—Short term debts may be contracted in anticipation of the receipt of taxes for the purposes and within the amounts of budget appropriations. Long term debts must be authorized by law for a specified piece of work or purpose. Such a law is not effective until it has been submitted to the people and approved by them at a general election. All debts contracted after January 1, 1920, are required to be in the form of serial bonds, with a maximum period of redemption of fifty years.

Long term debts may also be authorized by constitutional amendment.³⁴ The state debt for the elimination of railroad grade crossings was created by this procedure. The debt, also, for the construction of public buildings and works was authorized by constitutional amendment in November, 1925.

The following tabulation shows the borrowings by the government of New York State for permanent improvements between 1919 and 1928.³⁵

Year	Long Term Bonds	Temporary Loans	Total
1919	.....	\$ 600,000	\$ 600,000
1920	.....	2,200,000	2,200,000
1921	\$31,800,000	6,500,000	38,300,000
1922	.....	.....	.....
1923	.....	.....	.....
1924	.....	25,000	25,000
1925	12,500,000	35,000	12,535,000
1926	.....	1,305,000	1,305,000
1927	28,475,000	833,000	29,308,000
1928	22,500,000	3,450,000	25,950,000

³⁴ New York State Constitution, Article VII, secs. 14 and 15; also Article XIV.

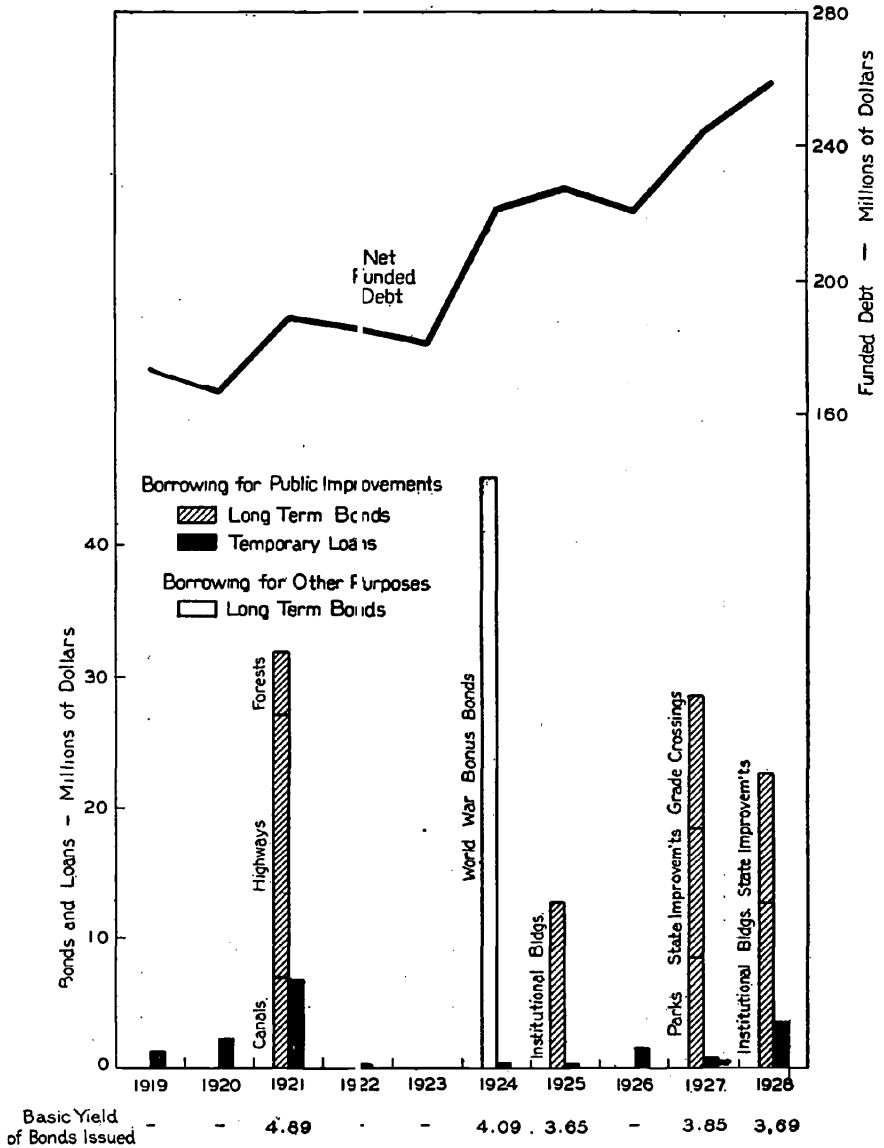
³⁵ New York State, Comptroller's *Annual Reports*.

TABLE 20. — LONG TERM BOND ISSUES BY NEW YORK STATE GOVERNMENT, 1921-1928
 GIVING INTEREST RATES AND BASIC YIELDS

Date	Purpose	Interest Rate Per Cent	Term of Years	Amount (In thousands)	Price	Basis Per Cent
June 9, 1921.....	Highways Forest preserves Barge canal	5	25¼ av.	\$20,000 5,000 6,800	\$101.212	4.89
June 9, 1921.....		5	25¼ av.			
June 9, 1921.....		5	26⅙ av.			
Total fiscal year 1920-21.....				\$31,800	\$101.212	4.89
April 8, 1924.....	Soldiers' bonus	4½	1-25 Ser.	45,000	101.4657	4.09
Total fiscal year 1923-24.....				\$45,000	\$101.4657	4.09
Sept. 24, 1924.....	State institutions and construction	4	1-25 Ser.	12,500	103.41	3.65
Sept. 24, 1924.....				\$12,500	\$103.41	3.65
Total fiscal year 1924-25.....						
Sept. 1, 1926.....	Grade crossings elimination	4	1-50 Ser.	10,000 1,650	101.9289	3.85
Sept. 1, 1926.....	General state improvement—land	4	1-50 Ser.			
Sept. 1, 1926.....	General state improvement—construction	4	1-25 Ser.			
Sept. 1, 1926.....	State park system—land	4	1-50 Ser.	8,350 5,000 3,475	101.9289	3.85
Sept. 1, 1926.....	State park system—development	4	1-25 Ser.			
Total fiscal year 1926-27.....				\$28,475	\$101.9289	3.85
March 6, 1928.....	State institutions—building	3½	1-25 Ser.	12,500 7,600 2,400	100.0799	3.6921
March 6, 1928.....	General state improvements	4	1-25 Ser.			
March 6, 1928.....	General state improvements	3¾	1-50 Ser.			
Total fiscal year 1927-28.....				\$22,500	\$100.0799	3.6921

Source: New York State, Comptroller's Annual Reports and Municipal Bond Buyer, 1918-1928.

CHART 9.—ANNUAL ISSUES OF LONG TERM BONDS AND TEMPORARY BORROWING BY NEW YORK STATE, 1919-1928.



Figures for fiscal year ending June 30'

Source: New York State Comptroller's Annual Reports and The Bond Buyer, Municipal Bond Sales.

Between April 5, 1917, when \$25,000,000 of state bonds were sold, and June 1921, there were no long term state loans because of the unsettled conditions of war and the attempt to restrict borrowing for capital purposes to absolute necessities.³⁶ The long term bonds issued by the New York State Government, from 1921 to 1928, are listed in Table 20, which describes in detail the amount, the dates of issue, purposes and terms of these borrowings.

The Financing of Public Works.—Permanent improvements are in New York State financed out of the General Fund, that is from tax receipts, and out of Special Funds, which are mainly bond issues. Recourse to these two sources of expenditure has shifted considerably during the history of the public works undertakings of the government of the State of New York. In 1926 it was possible to write that "since 1916 there has been a very marked change in the percentage of permanent improvements financed from bonds and from current revenues. In 1916, over 89 per cent of the money going into improvements came from borrowed funds. In 1925 this had shrunk to 8.1 per cent, though the total amount spent had risen from sixteen to over thirty millions of dollars. The current revenue devoted to permanent improvements has suddenly jumped from a few million dollars to an average of over twenty million dollars for the last four years [1922-1925]. This represents some 15 per cent of the general fund expenditures for these years. This is a remarkable fiscal achievement and indicates the capacity of New York [State] to pay for improvements from current revenues."³⁷

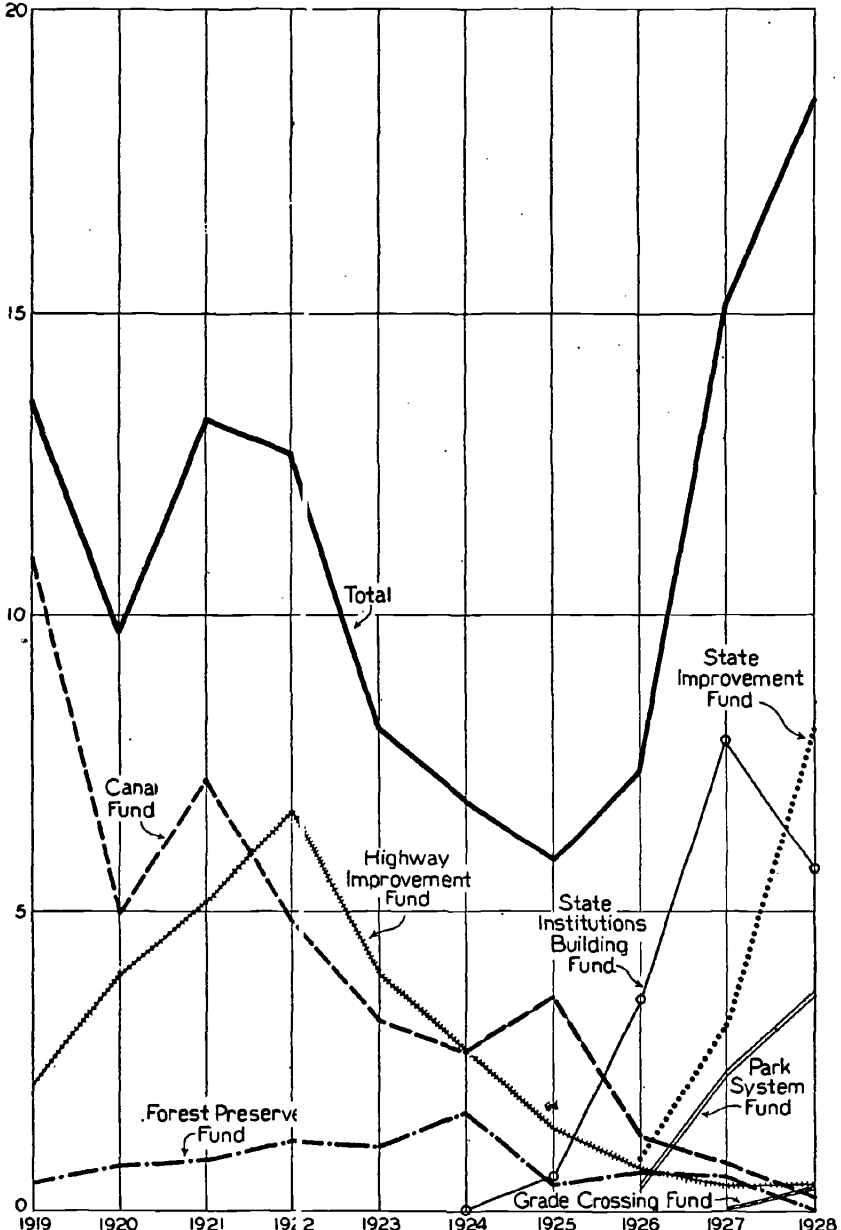
It is seen, however, in Table 21 that since 1925 there has again been a striking shift in the financing of public works from bonds and from current revenue. The percentage financed by borrowing rose sharply from 8 per cent in 1925 to 40.5 per cent in 1928 and the increase of more than 50 per cent in total expenditures between 1925 and 1928 was met largely out of the proceeds of bond issues. This has been due to the adoption of a new financial policy by the state government, carrying with it the creation of special bond funds for the elimination of grade crossings, buildings, and other state improvements.

³⁶ New York State, Comptroller's *Annual Report*, 1920, p. XIV.

³⁷ New York State *Legislative Document*, 1926, No. 70; Report of Special Joint Committee on Taxation and Retrenchment, *The Debt of the State of New York*, pp. 79, 81.

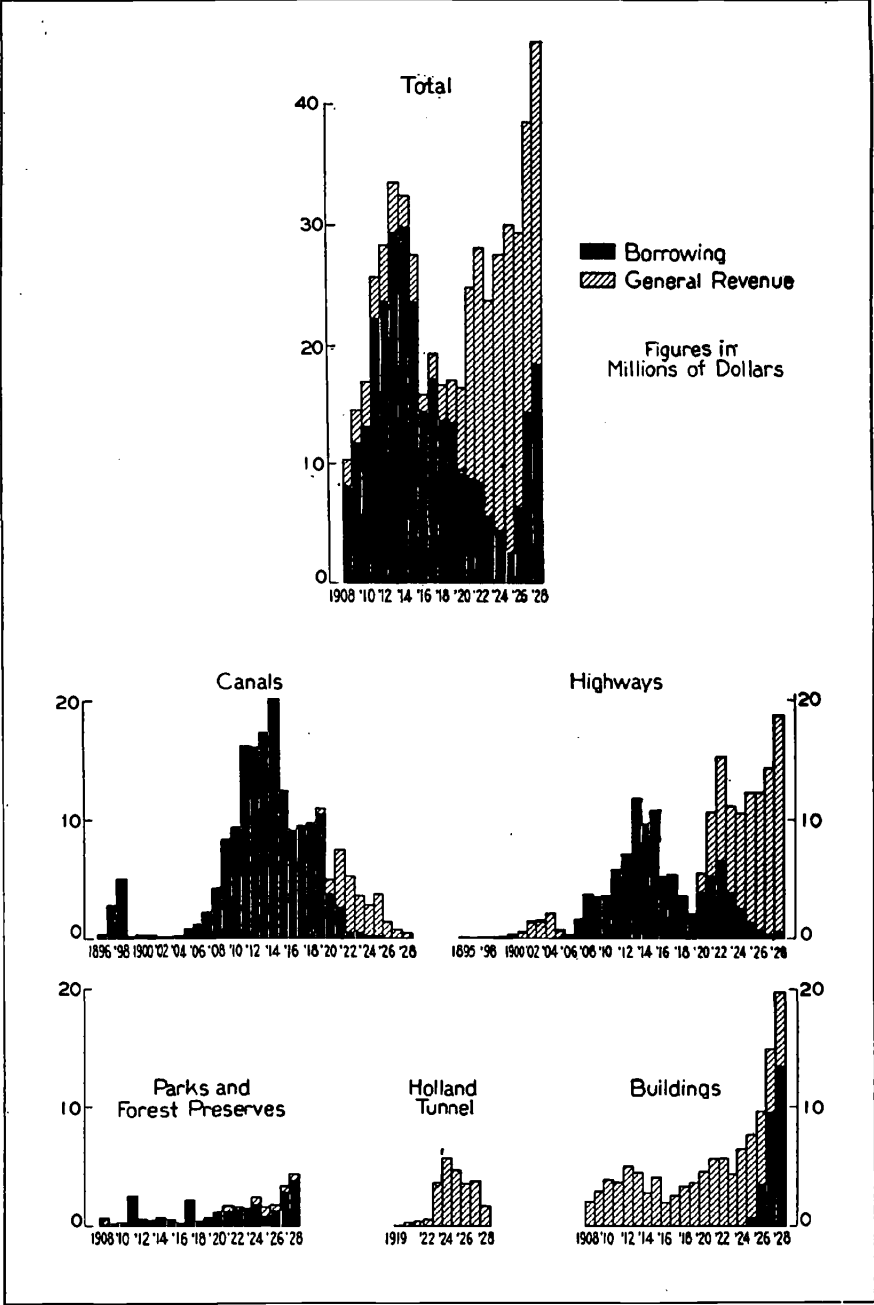
CHART 10.—EXPENDITURES ON PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT, 1919-1928
FROM SPECIAL FUNDS

Millions of Dollars



Source: New York State Comptroller's Annual Reports.

CHART 11.—EXPENDITURES ON DIFFERENT TYPES OF PUBLIC CONSTRUCTION BY NEW YORK STATE GOVERNMENT FROM GENERAL REVENUE AND FROM BORROWING.



Source: New York State Comptroller's *Annual Reports*.

TABLE 21. — TOTAL EXPENDITURES ON PERMANENT IMPROVEMENTS
BY NEW YORK STATE GOVERNMENT, 1908-1928 *

(In thousands)

FISCAL YEAR	TOTAL EXPEN- DITURES FROM THE GENERAL FUND ^b	EXPENDITURES FOR PERMANENT IMPROVEMENTS				TOTAL DEBT SERVICE		
		FINANCED FROM CURRENT REVENUE		FINANCED FROM BORROWING		TOTAL	AMOUNT	PER CENT OF TOTAL EXPEN- DITURES (Col. 2)
		Amount	Percent of Col. 2	Amount	Percent of Col. 7			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1908	\$34,279	\$2,220	6.5	\$8,108	78.5	\$10,328	\$5,675	16.6
1909	39,138	2,786	7.1	11,875	81.0	14,661	6,275	16.0
1910	38,235	3,845	10.1	13,061	77.3	16,906	2,097	5.5
1911	38,035	3,611	9.5	22,091	85.9	25,702	2,655	7.0
1912	44,702	4,878	10.9	23,327	82.7	28,205	4,157	9.3
1913	49,836	4,419	8.9	29,274	86.9	33,694	6,789	13.6
1914	53,563	2,686	5.0	29,792	91.7	32,478	9,669	18.1
1915	57,034	3,952	6.9	23,557	85.6	27,510	7,681	13.5
1916	52,497	1,720	3.3	14,267	89.2	15,987	9,589	18.3
1917	60,881	2,263	3.7	17,105	88.3	19,368	10,548	17.3
1918	73,143	3,212	4.4	13,587	80.9	16,799	13,168	18.0
1919	78,341	3,865	4.9	13,212	77.4	17,077	13,330	17.0
1920	93,924	7,717	8.2	8,732	53.1	16,449	13,592	14.5
1921	135,608	16,196	11.9	8,671	34.9	24,866	15,585	11.5
1922	126,669	19,450	15.4	8,488	30.4	27,939	10,441	8.2
1923	131,869	18,036	13.7	5,549	23.5	23,585	12,079	9.2
1924	146,457	23,066	15.8	4,396	16.0	27,462	11,679	8.0
1925	161,587	27,663	17.1	2,422	8.1	30,084	15,150	9.4
1926	173,192	23,312	13.5	6,144	20.9	29,456	15,759	9.1
1927	184,184	24,130	13.1	14,310	37.2	38,440	15,243	8.3
1928	212,626	26,915	12.7	18,302	40.5	45,217	17,379	8.2

Source: New York State, Legislative Document 1926, No. 70, *The Debt of the State of New York*, p. 80, for years up to 1925. Figures for 1926-1928 calculated directly from Comptroller's Annual Reports.

* Expenditures on the acquisition of land have been included throughout. The figures for total expenditures on permanent improvements in this table do not agree with the totals in the detailed tables for expenditures on public construction. The figures here are for new construction alone, and do not include expenditures for maintenance, repairs or reconstruction; nor for operation or administration; nor state aid to localities and federal aid to state. The composition of these figures, however, is consistent throughout the table, thus making the relative percentage accounts financed by tax receipts and borrowing from year to year strictly comparable.

^b Figures in this column are for total expenditures of all kinds except capital expenditures financed from borrowing.

1. The Elimination of Railroad Grade Crossings.—In 1925 the people of New York State voted to amend the Constitution by approving in a referendum a state bond issue of \$300,000,000, for the purpose of eliminating dangerous crossings. This bond issue was authorized to meet the state share and to provide for loans to the railroads and the local communities to cover their share of the cost of the work.

By the Grade Crossings Elimination Act (Chap. 233, *Laws of 1926*, April 5, 1926) all crossings at grade, outside of the cities of New York, Syracuse and Buffalo, come under the jurisdiction of the state Public Service Commission. The City of Syracuse has its own grade crossing commission and the City of Buffalo its grade crossing and terminal commission. In New York City such work falls within the jurisdiction of the Transit Commission (not to be confused with the Board of Transportation). Although the elimination of grade crossings in these three cities lies outside the jurisdiction of the Public Service Commission of New York State, the work is financed out of the bond issue of \$300,000,000.

Operations were begun by the Commission in June, 1926. It soon developed, however, that many of the local communities whose assessed valuations were low, were unable to finance their portion of the cost. In 1927, therefore, a second amendment to the Constitution was passed (Chap. 445, *Laws of 1927*) whereby the city or county instead of the local community was, with the state and the railroads to share in the cost of elimination. The Constitution, at that time, provided that the railroads should pay 50 per cent, the state, 25 per cent and the local community, 25 per cent. In order to lighten the burden of the county or city, the new constitutional amendment while leaving the railroads' share at 50 per cent, allowed the Legislature to increase the state's share and lower that of the county or city. Under this provision, in 1928, the share of the state was increased to 40 per cent and the share of the city or county reduced to 10 per cent. Even this apportionment left too heavy a burden on the local governments, so that in 1929, the law was once more amended³⁸ and the respective shares of the state, the county and the railroads were fixed at 49, 1, and 50 per cent of the cost of elimination.³⁹

³⁸ New York State, *Laws of 1929*, Ch. 645.

³⁹ New York State, *The Highway Law, 1929*, p. 385.

TABLE 22.—EXPENDITURES FOR HIGHWAY CONSTRUCTION
BY NEW YORK STATE GOVERNMENT, 1895-1928 ^a

(In thousands)

Year	Total Expenditures (Cols. 3 & 4)	Expenditures from Bonds for State Highways	Total Expenditures from General Revenues (Cols. 5 & 6)	Expenditures from Revenues for State Highways	State Aid to Counties from General Revenues	Percentage of Total Highway Expenditures Provided from General Revenues ^b
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1895	\$5	....	\$5	\$5	....	100.0
1896	8	....	8	8	....	100.0
1897	12	....	12	12	....	100.0
1898	53	....	53	3	\$50	100.0
1899	85	....	85	....	85	100.0
1900	316	....	316	112	204	100.0
1901	658	....	658	171	487	100.0
1902	1,362	....	1,362	465	897	100.0
1903	1,578	....	1,578	702	876	100.0
1904	2,150	....	2,150	648	1,502	100.0
1905	891	....	891	891	....	100.0
1906	220	....	220	220	....	100.0
1907	1,704	\$1,704	....	....	....	0.0
1908	3,859	3,859	....	....	....	0.0
1909	3,565	3,565	....	....	....	0.0
1910	3,703	3,649	53	53	....	1.4
1911	5,904	5,897	7	7	....	0.1
1912	7,110	7,105	5	5	....	0.1
1913	11,885	11,808	77	77	....	0.6
1914	9,465	9,439	26	26	....	0.3
1915	10,861	10,841	20	20	....	0.2
1916	5,173	5,173	....	....	....	0.0
1917	5,530	5,507	23	23	....	0.4
1918	3,784	3,758	26	26	....	0.7
1919	2,267	2,114	153	153	....	6.7
1920	5,710	3,978	1,732	1,732	....	30.3
1921	10,500	5,132	5,368	3,917	1,451	51.1
1922	15,318	6,710	8,608	5,903	2,705	56.2
1923	11,192	3,939	7,253	4,953	2,300	64.8
1924	10,563	2,659	7,904	5,509	2,395	74.8
1925	12,590	1,343	11,247	8,862	2,385	89.3
1926	12,389	716	11,673	9,298	2,375	94.2
1927	14,342	428	13,914	11,534	2,380	97.0
1928	18,976	448	18,528	16,152	2,376	97.6

SOURCE: New York State, Legislative Documents 1928, No. 70, *The Debt of the State of New York*, pp. 70-71, for years 1895-1925; years 1926-1928 calculated directly from Comptroller's *Annual Reports*.

^a These figures are for new construction only. They do not include expenditures for maintenance, repairs or administration; nor for state aid to towns for repairs, nor federal aid to the state for rural post roads. Composition of these figures up to 1925 not exactly the same as that of figures in Tables 17 and 18. The difference, however, is on the whole so slight as to be negligible.

^b The percentage represented by expenditures for state highways alone (col. 5) was 37.3 in 1921, 38.5 in 1922, 44.5 in 1923, 52.2 in 1924, 70.4 in 1925, 75.1 in 1926, 80.4 in 1927 and 85.1 in 1928.

Prior to the enactment of the Grade Crossings Elimination Act of 1926, all such work was done under the authority of the existing Railroad Law. Alterations to existing structures which carry the highway over or under a railroad still come under the provisions of this law and the state's share of such alterations must come out of the funds available for highway construction.⁴⁰ Before 1926, therefore, the state had no long-time policy for the elimination of grade crossings.

2. The Financing of Highway Construction.—Prior to 1898 the building and maintenance of public roads in New York State was the function of local governments. A large-scale program by the state government began in 1905 with the authorization, by popular vote, of a \$50,000,000 bond issue for highway construction. In 1907 the state adopted a plan for the improvement of 14,000 miles of roads. By 1912, when bond issues were exhausted and no current revenue was available for road building, the project of 1907 was little more than half-completed. In 1912, therefore, the state legislature was empowered again to contract for a further bond issue of \$50,000,000. "Although the two bond issues, totaling \$100,000,000, have furnished the bulk of the funds for highway construction, current revenues are contributing an increasingly important share . . . [and] the present trend indicates that borrowing [for this purpose] will [in the future] be unnecessary."⁴¹

3. Expenditures for Public Buildings.—The first substantial expenditures on public buildings, derived from borrowings, began in 1925. Before then all buildings erected by the State of New York were paid for without the issue of special bonds. In 1925 "the first bonds were sold for building construction," when "\$12,500,000 was borrowed under the \$50,000,000 authorization of 1923."⁴² Thereafter the amounts spent out of borrowings increased until they constituted in 1928 more than two-thirds of the total expenditures.

⁴⁰ New York State, Department of Public Works, *Annual Report of the Superintendent*, 1928, pp. 76, 80-81.

⁴¹ New York State, *Legislative Document*, 1926, No. 70, *ibid.*, pp. 69, 72.

⁴² New York State, *Legislative Document*, 1926, No. 70, *ibid.*, p. 77; see also Laws of New York State, Ch. 591.

78 PLANNING AND CONTROL OF PUBLIC WORKS

TABLE 23.—EXPENDITURES FOR BUILDINGS BY NEW YORK STATE GOVERNMENT, 1908-1928 ^a

(In thousands)

YEAR	EXPENDITURES FROM CURRENT REVENUE	EXPENDITURES FROM BONDS	PERCENTAGE EXPENDITURES FROM CURRENT REVENUE
1908.....	\$1,843	....	100.0
1909.....	2,780	....	100.0
1910.....	3,777	....	100.0
1911.....	3,598	....	100.0
1912.....	4,791	....	100.0
1913.....	4,244	....	100.0
1914.....	2,571	....	100.0
1915.....	3,900	....	100.0
1916.....	1,720	....	100.0
1917.....	2,219	....	100.0
1918.....	3,081	....	100.0
1919.....	3,300	....	100.0
1920.....	4,578	....	100.0
1921.....	5,423	....	100.0
1922.....	5,637	....	100.0
1923.....	4,127	....	100.0
1924.....	6,163	\$3	99.95
1925.....	6,912	577	92.3
1926.....	6,081	3,522	63.3
1927.....	5,535	9,460	36.9
1928.....	6,136	13,189	31.8

SOURCE: New York State, Legislative Document 1926, No. 70, p. 77, for years 1908-1925; years 1926-1928 calculated directly from Comptroller's *Annual Reports*.

^a Composition of figures up to 1925 not exactly the same as that of figures in detailed Table 17 but the difference is on the whole so slight as to be negligible. Expenditures on the acquisition of land have been included throughout, except in 1926, 1927 and 1928 when this item has been excluded in both columns, thus making the percentage comparable for all years.

4. Canal and Park Construction.—These declining items in the state budget for permanent improvements have a contrasting history since 1919. Expenditures for the rebuilding of canals are now financed wholly out of current revenue and the cost of parks and forest preserves apparently increasingly out of loans. The sources of expenditures for each purpose are shown in the following tabulation:

Year	Percentage of Total Expenditures Derived from Current Revenue ^a	
	Canals	Parks and Forest Preserves
1919	3.6	3.1
1920	25.7	0.5
1921	65.3	23.6
1922	88.2	9.8
1923	84.6	8.9
1924	96.6	28.4
1925	98.9	68.0
1926	100.0	35.8
1927	100.0	10.7
1928	100.0	13.0

^a New York State, *Legislative Document*, 1926, No. 70, pp. 66, 75. The figures for 1926-1928 are obtained directly from the Comptroller's *Annual Reports*.

5. Financing Through Special Agencies.—The device is from time to time used in New York, as well as elsewhere, of placing the financing and construction of revenue-producing public works under the jurisdiction of a quasi-public agency, usually created for the specific purpose. The Port of New York Authority is an important agency of this character. It is an Interstate New York-New Jersey Commission created in 1921 as the agent of these states to conceive and administer plans, approved by the states, for the improvement of terminal facilities, the relief of confusion at shipping centers, and the construction of bridges, tunnels and belt-line railroads. In 1926 the Port Authority was directed by the legislatures of New York and New Jersey to erect two bridges between Staten Island and New Jersey, commonly known as the Arthur Kill Bridges. Later the Port Authority was further directed to build the Kill Van Kull Bridge between Staten Island and Bayonne, New Jersey, and the Hudson River Bridge between Washington Heights and Fort Lee.

In financing these projects, the Port Authority is required to raise funds on its own credit. It is not limited as to the amount of securities it issues, except that it must meet debt charges and administration and maintenance costs out of the earnings of its facilities. The agreement between the two states expressly forbids the Port Authority to pledge the credit of either.

Unexhausted Bond Issue Authorizations.—Bond authorizations are not usually issued immediately after authorization or even within a short period of time. Knowledge, therefore, of the volume of bonds authorized is no index of the probable schedule of expenditures. The condition of authorized bond issues for state institutions and buildings, the state park system, general state im-

TABLE 24. — CONDITION OF UNEXHAUSTED BOND ISSUES AUTHORIZED BY NEW YORK STATE GOVERNMENT AT END OF FISCAL YEAR 1928
(In thousands)

	STATE INSTITUTIONS BUILDING FUND	STATE PARK SYSTEM FUND	GENERAL STATE IMPROVEMENT FUND	GRADE CROSSINGS ELIMINATION FUND
Date of authorization...	Nov. 6, 1923	Nov. 4, 1924	Nov. 3, 1925	Nov. 3, 1925
Law or constitutional amendment.....	1923 ^a , Ch. 591	1924 ^a , Ch. 622	Art. ^b 7, Sec. 15	Art. ^b 7, Sec. 14
Amount of issue authorized.....	\$50 000	\$15,000	\$100,000	\$300,000
Amount appropriated up to June 30, 1928..	50 000	15,000	20,000	70,000
Total of bonds issued up to June 30, 1928..	25 000	8,475	20,000	10,000
Expenditures from bond funds up to June 30, 1928.....	17 779	6,279	12,057	436
Authorized bonds still unissued on June 30, 1928.....	25 000	6,525	80,000	290,000

Source: New York State, Comptroller's *Annual Reports*, Laws of the State of New York and Constitution of the State of New York.

^a New York State, *Laws*.

^b New York State, *Constitutional Amendment*.

provement, and for grade crossings elimination, shown in Table 24, indicates the considerable lag between authorization to borrow and actual outlays.

Future Projects.—The preparation of a time schedule for the public works already in the main planned and for which arrangements for financing have in large part been made is again the difficult problem. Much is known regarding the future permanent improvements of the government of the State of New York and of such a body as the Port of New York Authority, but the conver-

sion of these known plans into forecasts of annual expenditures can be regarded only as approximate estimates. Such estimates of future projects, made as of November, 1929, are contained in the following tabulation:

1. State institutions, planned, but not yet begun.....	\$ 44,500,000
2. State institutions actually under construction. Contracts amounting to \$67,000,000 have already been let. It is estimated that half of this work has been completed, leaving contracted expenditures for the future.....	33,500,000
3. Highways and bridges, probable minimum annual expenditures in future	43,000,000
4. Elimination of grade crossings, planned, minimum estimate..	30,000,000
5. Canals, approximate annual expenditure not more than.....	1,000,000
6. Port Authority, program for next 2¼ to 2½ years involves estimated expenditure of \$56,000,000 or an annual expenditure of	23,200,000
Total.....	\$175,200,000

This total of \$175,200,000 which is, of course, far in excess of the annual expenditures of both New York State and the Port of New York Authority during the past years is no forecast of what will actually be spent during any of the next years. It is at the best an estimate of the amount that could be spent in any year, if an emergency dictated maximum expenditures and if the usual obstacles to the swift execution of public works were minimized.

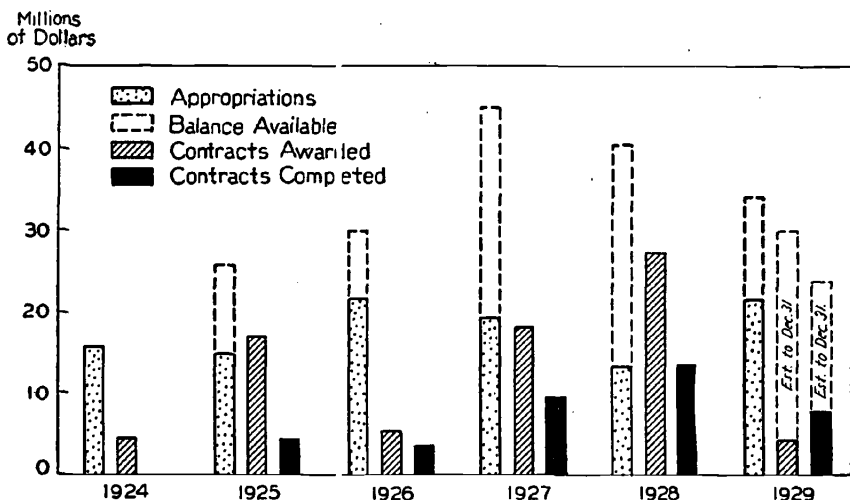
The Planning and Control of Permanent Improvements.— Viewed historically, the program of permanent improvements of the New York State government suffered what may be described as a natural retardation because of the reluctance of the authorities to finance public works by long-term loans and because of their inability to pay for larger projects out of current income. Acceleration has thus been achieved in these latest years by a change in financial policy and the financing of many projects through borrowings. Aside from unfavorable conditions in the money market, there is still a substantial lag between the time when additional funds become available or can be made so and the time when a specific project is planned, initiated, and completed. The experience of individual state departments indicates that projects can frequently be accelerated, even in the face of what are normally regarded as limiting factors.

The State Division of Highways normally supervises 350 miles of new construction a year and 400 miles of reconstruction. It is conservatively estimated that there are about 4,000 miles of high-

ways of the state system which require reconstruction and widening within the next four years. At the rate prevailing in the past, it would take ten years to complete this amount of work. It is believed that decided economy would be achieved if the work were done in four years.⁴³

It is not difficult to increase highway construction at short notice. The chief factor which holds up construction work is the

CHART 12.—APPROPRIATIONS FOR BUILDING, BALANCES AVAILABLE FROM PREVIOUS YEARS, CONSTRUCTION CONTRACTS AWARDED AND COMPLETED, NEW YORK STATE GOVERNMENT, 1924-1929.



Source: New York State Department of Public Works; *Report to the Governor on Progress of Building Construction, August, 1929.*

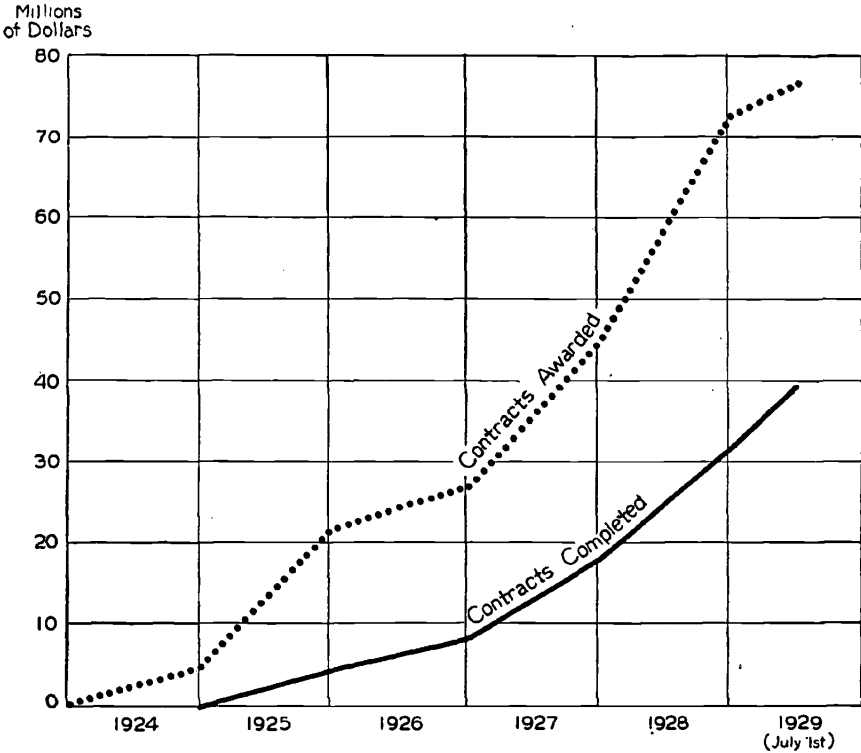
necessity of acquiring the right of way from the counties. Were it not for this, the Division of Highways would be ready to let all its contracts as soon as funds become available. Contracts in various stages of completion are held up for one reason or another, but the plans for all of them are complete and much work is on the books of the Division, at any moment. If, also, emergency funds become available, plans could be drawn very rapidly, since planning of this type of work is largely standardized.

The counties have to acquire the right of way for the state. The Public Works Department submits its plans and other relevant

⁴³ Interview with C. C. Ahles, Senior Assistant Engineer, Division of Highways, Department of Public Works.

material to the county authorities for their approval. This could be rapidly obtained were it not for the fact that the authorization lies in the hands of the supervisors who are not permanent officials. The necessity of acquiring the right of way in this manner often involves the greatest delays in the progress of the construction

CHART 13.—RELATION BETWEEN TOTAL VALUE OF BUILDING CONTRACTS AWARDED SINCE JANUARY 1, 1924, AND CONTRACTS COMPLETED SINCE JANUARY 1, 1925, NEW YORK STATE GOVERNMENT.



Source: New York State Department of Public Works; Report to the Governor on Progress of Building Construction, August, 1929.

work. It often takes as much as six to nine months to acquire the right of way in any given instance.

In the elimination of grade crossings, also, retardation of the projects is due partly to joint administration by the state and the railroads and partly to extended, quasi-judicial procedures that

necessarily precede the ordering of any specific elimination project. In the fall of 1927, the Department of Public Works submitted to the Public Service Commission a program covering 202 elimination projects recommended for consideration during 1928. At the close of 1928, however, the projects ordered during the year numbered only 122 at an estimated cost of less than \$18,000,000, while the number placed under construction during the year was 65, at an estimated cost of a little more than \$2,500,000. The number completed during the year was 34 and their estimated cost was \$852,000.⁴⁴

For any major elimination project, it is estimated that about two years of negotiation and preparation are required before construction work is begun.⁴⁵ About one year on the average is consumed with hearings, decisions, the issuing of instructions and the like; a second year is required for making detailed plans, specifications and organizing the work. Hearings on a project are held, after the Public Service Commission has placed the particular project on the official program for consideration. The railroads, the state represented by the Public Works Department, and the local authorities appear before the Commission. The Public Works Department or the railroad is then authorized to prepare surveys and preliminary estimates of cost. Each elimination project is thus considered separately and the procedure described is involved in the consideration of each one of them.

At later hearings the plans are presented before the Commission. The railroads, the local authorities, and the Public Works Department then have an opportunity to criticize one another's plans, either in their engineering or financial aspects. At times as many as ten different plans have been presented to the Commission. Finally the Commission closes the hearings. It then chooses one of the plans, with such changes as it deems necessary, and directs either the railroad or the Public Works Department to proceed with the project in accordance with the provisions of its order. After this, either the railroad or the Public Works Department proceeds with the preparation of detailed plans, specifications and the letting of contracts.

⁴⁴ New York State, Department of Public Works, *Annual Report of the Superintendent*, 1928, p. 67.

⁴⁵ Interview with H. O. Schermerhorn, Engineer of Bridges and Grade Crossings, Division of Engineering, Department of Public Works.

TABLE 25.—COURSE OF EMPLOYMENT ON STATE HIGHWAYS
IN NEW YORK STATE, 1923-1929

DATE ^a	NUMBER EMPLOYED BY CONTRACTORS	MAINTENANCE FORCE EMPLOYED BY STATE	TOTAL
<i>1923</i>			
July	7,078	5,298	12,376
August	6,928	4,263	11,191
September	5,879	3,965	9,844
October	5,006	3,389	8,395
<i>1924</i>			
May	4,093	4,728	8,821
June	7,112	4,844	11,956
July	7,827	5,097	12,924
August	8,396	4,776	13,172
September	7,837	4,584	12,421
October	6,575	4,595	11,170
November	4,970	3,994	8,964
<i>1925</i>			
May	6,680	4,997	11,677
June	7,735	5,368	13,103
July	7,932	5,327	13,259
August	8,148	5,422	13,570
September	7,381	5,039	12,420
October	5,166	4,521	9,687
November	3,585	2,633	6,218
<i>1926</i>			
May	5,444	4,958	10,402
June	6,831	5,596	12,427
July	7,908	5,868	13,776
August	8,048	5,699	13,747
September	8,174	5,416	13,590
October	6,463	4,803	11,266
November	4,589	3,658	8,247
<i>1927</i>			
May	6,662	5,506	12,168
June	8,866	6,150	15,016
July	10,104	5,861	15,965
August	10,628	5,539	16,167
September	9,653	5,014	14,667
October	7,809	4,865	12,674
November	5,531	3,770	9,301

TABLE 25. — COURSE OF EMPLOYMENT ON STATE HIGHWAYS
IN NEW YORK STATE, 1923-1929—(Continued)

DATE *	NUMBER EMPLOYED BY CONTRACTORS	MAINTENANCE FORCE EMPLOYED BY STATE	TOTAL
<i>1928</i>			
May.....	6,445	6,098	12,543
June.....	7,762	6,103	13,865
July.....	9,173	6,193	15,366
August.....	10,635	6,246	16,881
September.....	9,856	5,572	15,428
October.....	7,773	4,919	12,692
November.....	5,700	3,250	8,950
<i>1929</i>			
May.....	7,006	5,709	12,715
June.....	8,785	5,771	14,556
July.....	9,517	5,813	15,330
August.....	10,316	5,843	16,159
September.....	9,248	5,373	14,621
October.....	7,548	4,991	12,539
November.....	5,345	3,200	8,545

SOURCE: New York State, Department of Public Works, Division of Highways.

* Covers last week of month indicated. No data available, December through April.

By the terms of the Grade Crossings Elimination Act,⁴⁶ the difficulties in acquiring right of way required for grade crossing elimination work are not as great as they are in the case of highway construction. Under present conditions possession can be taken of property, as soon as a map is filed, whereas the outright purchase of land or the conduct of condemnation proceedings formerly delayed the work for three or four months. Now the land is taken first and disputes and settlements adjusted later.

These two illustrations of important and expensive permanent improvements, projected by the government of the State of New York, do not reveal any inherent obstacles to the acceleration of the enterprises at times when sound public policy would appear to dictate speed. The significant fact is that these improvements are normally retarded, and not necessarily on account of insuperable financial problems or because of the unimportance of the project.

⁴⁶ New York State, *The Highway Law*, 1929, p. 379 ff.

The Numbers Employed on Public Works.—A large part of the public works of the government of New York State and of special enterprises, like those of the Port Authority of New York, is farmed out to contractors and no record of contractors' payrolls is available. It is for this reason impossible to estimate the total numbers employed on such projects. Judged by the experience of New York City, it is probable that the New York State government employed on the average in 1929, directly and indirectly, some 20,000 persons. The record of employment in the construction and maintenance of state highways, given in Table 25, shows an average employment, during seven months from May to November, of more than 13,000, with very decided seasonal fluctuations.