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VIII

CONSTRUCTION EXPENDITURES OF NEW YORK CITY

Construction Expenditures and Contracts Awarded

New York City's capital expenditures increased with great rapidity during the five or six years after the World War. Per capita figures (based on Table 59) rose from $5.42 in 1919 to $19.64 in 1924. During the next four years the annual figure remained almost constant around $20. In 1929, however, a sharp increase occurred, followed by further increases in 1930 and 1931 to a peak, in the latter year, of little under $29. The decline during the next two years was precipitous. By 1933, when the figure was $8.70, the public improvement program was virtually at a standstill. Between 1931 and 1933 total construction expenditures fell no less than 70 per cent.

The increase in 1930 and 1931 does not, however, reflect successful efforts to expand construction work deliberately for the purpose of affording unemployment relief. This is revealed by the course of construction awards, presented in Table 58, which shows that these reached their peak in 1928. Between 1928 and 1931, while expenditures increased 50 per cent, contracts awarded fell 40 per cent. In 1932 their volume was, in comparison with previous years, negligible.

Because figures of contracts awarded indicate activity about to be initiated rather than current operations,[1] any deliberate

[1] For a discussion of the difference between the two series and an analysis of their relation, see *Planning and Control of Public Works*, pp. 120–3.

TABLE 58

NEW YORK CITY
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings[1]	$6,429	$13,440	$9,464	$22,368	$39,088	$46,982	$17,215
Hospitals and institutions	3,239	7,199	8,266	14,647	6,516	10,790	13,711
Military and naval buildings	3,382	1,658	108	128	214	29	1,351
Public buildings	304	7,475	1,329	2,551	1,078	7,407	4,774
Waterfront developments	3,205	839	4,535	1,216	1,641	1,000	323
Bridges	...	2,227	21	434	23	75	5,908
Incinerators	102	232	...	17	170	1,247	25
Lighting systems	131	1,730	1,150	2,371	1,736	715	1,207
Docks and piers	1,811	21,691	821	602	570	14	548
Subways and tunnels	254	650	.	21,524	4,309	...	60,281
Sewage systems	7,300	5,468	297	1,057	142	35	850
Street paving and road construction	8,824	15,863	6,756	6,593	1,047	35	44
Water supply systems	491	886	93	744	178	529	60
Parks (public)	42	162	70	...	277	20	...
Total public construction	$35,514	$79,520	$32,913	$74,252	$56,989	$68,878	$106,297

PURPOSE	1926	1927	1928	1929	1930	1931	1932
Educational buildings [1]	$26,387	$27,186	$40,967	$42,491	$40,673	$25,645	$2,863
Hospitals and institutions	17,049	16,838	19,434	19,408	22,125	12,976	1,176
Military and naval buildings	632	566	1,743	581	475	2,624	489
Public buildings	1,364	3,597	5,872	6,183	16,322	21,257	3,474
Waterfront developments	950	2,515	955	2,624	2,869	9,578	1,672
Bridges	13,637	27,082	3,646	2,529	4,130	4,265	697
Incinerators	150	1,104	1,261	362	3	118	1,431
Lighting systems	10,330	1,426	1,308	81	520	746	248
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	54,702 [3]	77,943 [3]	86,603 [3]	91,342 [3]	78,453 [3]	28,426 [3]	6,452 [3]
Sewage systems	5,000	8,066	5,212	4,357	4,899	10,940	2,614
Street paving and road construction	7,189	24,184	19,711	22,810	15,158	20,235	9,342
Water supply systems	833	2,424	45,393	3,168	2,350	3,309	103
Parks (public)	100 [4]	399 [4]	374 [4]	585 [4]	431 [4]	594 [4]	1,994 [4]
Total public construction	$138,323	$193,330	$232,479	$196,521	$188,408	$140,713	$32,555

Source: F. W. Dodge Corporation, Statistical Division

[1] Private schools, which were subtracted from the figures for educational buildings in earlier years, are included since 1926. In 1919 they amounted to $963,000; 1920, $854,000; 1921, $2,895,000; 1922, $5,324,000; 1923, $3,483,200; 1924, $13,849,000; 1925, $8,301,000.

[2] Not reported in these years.

[3] New York City Board of Transportation figures of contracts awarded for subway construction.

[4] Estimated as one-half total parks.

TABLE 59

NEW YORK CITY
EXPENDITURES ON PUBLIC CONSTRUCTION, 1919–1933 [1]
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Subways	$11,795	$7,764	$6,965	$4,224	$5,927	$8,641	$18,583
Streets, roads and parkways [2]	8,306	10,257	13,759	12,738	15,747	23,828	29,982
Buildings [3]	3,346	5,791	12,227	14,500	25,155	59,441	48,831
Water supply systems, etc.	2,096	2,430	6,365	10,704	14,501	12,145	8,919
Docks and ferries, etc.	339	6,465	17,277	6,101	4,546	4,436	9,766
Borough presidents [4]	3,816	5,135	12,405	6,330	6,927	8,952	14,425
Parks and park buildings	61	1,200	1,445	1,895	2,860	3,501	2,275
Miscellaneous	15	166	24	143	106	...	90
Total expenditures	$29,774	$39,208	$71,467	$56,635	$75,769	$120,944	$132,871

PURPOSE	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*
Subways	$50,849	$64,356	$57,636	$79,125	$84,100	$79,785	$48,561	$16,219
Streets, roads and parkways [2]	32,808	36,677	31,170	32,307	36,731	29,115	18,093	5,282
Buildings [3]	22,373	22,003	24,201	39,239	38,948	37,320	25,247	7,821
Water supply systems, etc.	7,833	7,701	6,215	9,853	19,034	27,251	9,683	2,421
Docks and ferries, etc.	5,755	3,768	5,807	4,883	6,482	8,621	4,769	2,530
Borough presidents [4]	9,663	6,765	4,663	5,058	4,367	8,699	8,297	6,302
Parks and park buildings	1,763	1,775	1,970	2,304	3,779	4,458	2,833	492
Miscellaneous	350	500	1,059	1,244	1,077	7,803	16,725	21,699
Total expenditures	$131,394	$143,545	$132,721	$174,013	$194,518	$203,052	$134,208	$62,766

Source: New York City, Comptroller's *Annual Reports*

[1] The figures include all expenditures, however financed, for new construction and reconstruction, but omit maintenance and operation costs. Expenditures for the acquisition of land are excluded throughout.

[2] Includes expenditures by borough presidents from special revenue bonds, all of which were for paving and repaving streets and avenues.

[3] Expenditures mainly for school construction.

[4] Excludes expenditures by borough presidents from special revenue bonds included in note 2. This class represents miscellaneous building to some extent but the greater part is for repaving and resurfacing streets.

attempts to accelerate public construction, or at least the degree of success attending such efforts, would be better reflected in the former than in the latter. Comparison of the projected programs authorized or prepared in detail for the great spending agencies in 1928 and 1929 with the actual expenditures in 1930 and 1931 shows that the increase in construction expenditures represented in the main the normal execution of work planned and contracted for prior to the depression.

Table 59, which presents a classified summary of all expenditures by New York City, however financed, for new construction and reconstruction yearly, 1919–33, shows that the items mainly responsible for the increase between 1929 and 1931 were water supply systems, docks and ferries, Borough Presidents, and miscellaneous. The increases in the first two categories reflect little deliberate acceleration for relief purposes; the sharp rise in the last-mentioned class is explained chiefly by large 'work relief' expenditures.

In Table 60 the same comprehensive categories are used but the classification is also in terms of the various methods by which these expenditures were financed. Expenditures financed from special revenue bonds, special accounts, tax notes and from current revenue are all seen to have been, throughout the period covered, of minor importance compared with expenditures financed by issues of long-term corporate stock or bonds. In certain items, for instance, parks, the increase between 1929 and 1931 probably reflects some degree of deliberate expansion of expenditures for the purpose of relieving unemployment. In New York, as in a great many other cities throughout the country, unemployed men were set to work on minor construction, reconstruction and repairs in the municipal parks. The reasons for the increase of expenditures in some of the other classes, such as the Board of Water Supply, are examined more fully below. In 1932 and 1933, despite large expenditures for emergency

work relief, total expenditures for construction declined drastically.

The tax budget includes very few items for permanent improvements, capital outlays for these being financed almost entirely by issue of long-term corporate stock or bonds.

For purposes of comparison and comprehensiveness, however, such summary as can be made of the volume of construction work and the purchase of supplies and equipment financed from current revenue is presented in Table 61 in the form of annual appropriations.[2] It may be seen that none of these appropriations are, strictly speaking, for new construction, all such work in New York City being financed by bond issues, as indeed is also a large volume of repair and maintenance work. Reference to Table 60 shows clearly that the amount of public works financed from tax receipts is of relatively negligible importance. Table 61 does not give the total amount even of expenditures for materials, supplies and equipment: on the contrary the major portion of such expenditures are also financed by bond issues.

Construction of Schools before and during the Depression

Tables 58 and 59 show that the construction of subways, water supply systems, streets and schools has accounted for the major part of New York City's outlays on permanent improvements in recent years. Expenditures for the first three purposes did not fall sharply until 1932. The decline in the construction of schools, however, began in 1930, despite the still serious shortage of adequate educational facilities, with resultant overcrowding of pupils. This decline

[2] Because of the difficulty of collecting figures on actual expenditures, the figures of annual appropriations constitute probably the best available index of the amounts spent out of tax receipts on repairs, maintenance, supplies and equipment. The Comptroller's office believes that budget appropriations and actual expenditures correspond very closely and advises the use of appropriations as a satisfactory measure of expenditures.

TABLE 60

NEW YORK CITY
EXPENDITURES ON PUBLIC CONSTRUCTION, CLASSIFIED BY COMPREHENSIVE TYPES AND METHOD OF FINANCING, 1919–1933
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Special revenue bonds								
Buildings	...	...	...	...	...	...	...	$123
Borough presidents, five boroughs	$395	$1,297	$1,342	$842	$688	$1,366	$875	551
Miscellaneous	15	166	...	143	77	...	90	350
Total special revenue bonds	410	1,463	1,342	985	765	1,366	965	1,024
Corporate stock, serial bonds and assessment bonds								
Subways	11,795	7,764	6,965	4,213	5,927	8,641	18,566	50,733
Water supply system, etc.	2,096	2,430	6,354	10,704	14,474	12,141	8,886	7,823
Streets, roads and parkways	7,190	7,742	11,220	10,579	13,721	20,844	26,887	30,285
Docks and ferries, etc.	339	6,465	16,666	5,626	3,758	4,051	8,654	4,024
Buildings	3,346	5,791	12,939	14,218	24,268	58,046	47,264	19,981
Parks and park buildings	61	1,200	1,296	1,426	1,526	2,043	1,110	526
Borough presidents, five boroughs	3,816	5,135	8,413	5,628	5,524	4,262	4,393	1,593
Total corporate stock, serial bonds and assessment bonds	28,643	36,527	63,853	52,394	69,198	110,028	115,760	114,965
Tax notes								
Subways	[2]	[2]	...	11	...	...	17	116
Water supply system, etc.	[2]	[2]	11	...	27	4	33	10
Streets, roads and parkways	[2]	[2]	...	...	...	3	497	247
Docks and ferries, etc.	[2]	[2]	611	475	788	385	1,112	1,731
Buildings	[2]	[2]	288	282	887	1,395	1,567	2,269
Parks and park buildings	[2]	[2]	149	469	1,334	1,458	1,165	1,237
Borough presidents, five boroughs	[2]	[2]	3,992	702	1,403	4,690	10,032	8,070
Miscellaneous	[2]	[2]	24	...	29	...	...	...
Total tax notes	[2]	[2]	5,075	1,939	4,468	7,935	14,423	13,680

PURPOSE	1919	1920	1921	1922	1923	1924	1925	1926
Special accounts								
Buildings	...	...	...	...	...	...	...	...
Docks	...	...	...	...	...	...	...	...
Restoring and repaving streets, borough presidents	721	1,218	1,197	1,317	1,338	1,615	1,723	1,725
Total special accounts	721	1,218	1,197	1,317	1,338	1,615	1,723	1,725
Expenditures from current revenue[1]	...	...	...	...	...	...	...	...
Grand total	$29,774	$39,208	$71,467	$56,635	$75,769	$120,944	$132,871	$131,394

TABLE 60 *(cont.)*

NEW YORK CITY
EXPENDITURES ON PUBLIC CONSTRUCTION, CLASSIFIED BY COMPREHENSIVE TYPES AND METHODS OF FINANCING, 1919–1933
(in thousands)

PURPOSE	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*
Special revenue bonds							
Buildings	$235	$190	$416	$331	$874	$648	$172
Borough presidents, five boroughs	963	403	359	599	237	169	42
Miscellaneous	500	650	923	401	7,382	5,681	56
Total special revenue bonds	1,698	1,243	1,698	1,331	8,493	6,498	270
Corporate stock, serial bonds and assessment bonds							
Subways	64,146	57,455	79,060	83,895	79,374	47,798	15,726
Water supply system, etc.	7,668	6,095	9,833	19,026	27,167	9,679	2,355
Streets, roads and parkways	26,850	22,006	21,721	25,974	19,875	16,788	4,513
Docks and ferries, etc.	2,285	3,236	1,875	2,374	3,986	3,745	2,108
Buildings	19,642	22,427	33,840	34,456	29,358	20,162	5,839
Parks and park buildings	270	141	217	1,512	1,271	611	310
Borough presidents, five boroughs	2,533	2,237	799	1,297	2,671	189	96
Total corporate stock, serial bonds and assessment bonds	123,394	113,597	147,345	168,534	163,702	109,763 [3]	52,511 [4]
Tax notes							
Subways	210	181	65	205	411	763	493
Water supply system, etc.	33	120	20	8	84	4	66
Streets, roads and parkways	14	18	3	...	...	...	...
Docks and ferries, etc.	1,483	2,431	2,977	4,108	4,227	1,024	422
Buildings	2,011	1,482	2,480	4,126	7,088	4,437	1,810
Parks and park buildings	1,505	1,829	2,087	2,267	3,187	2,222	182
Borough presidents, five boroughs	4,232	2,426	4,259	3,070	6,028	8,108	6,206
Miscellaneous	...	409	321	676	421	253	79
Total tax notes	9,488	8,896	12,212	14,460	21,446	16,811	9,258

PURPOSE	1927	1928	1929	1930	1931	1932	1933
Special accounts							
Buildings	115	102	3	35	...	...	...
Docks	...	140	31	...	408	...	...
Restoring and repaving streets, borough presidents	1,850	1,743	1,724	1,408	1,553	1,136	727
Total special accounts	1,965	1,985	1,758	1,443	1,961	1,136	727
Expenditures from current revenue [1]	7,000	7,000	11,000	8,750	7,450	...	...
Grand total	$143,545	$132,721	$174,013	$194,518	$203,052	$134,208 [3]	$62,766 [4]

Source: New York City, Comptroller's *Annual Reports*

[1] These are, strictly speaking, tax budget appropriations for repaving and resurfacing streets, except $2,500,000 for airport construction included in 1929.

[2] No separate statement is given during 1919 and 1920. During these two years expenditures financed out of tax note issues are included in the Corporate Stock Fund Account. Tax notes issued amounted to $2,050,000 in 1919 and to $4,250,000 in 1920.

[3] Includes unemployment (work relief) expenditures, for a variety of purposes, of $10,791,000.

[4] Includes unemployment (work relief) expenditures, for a variety of purposes, of $21,564,000.

TABLE 61

NEW YORK CITY
TAX BUDGET APPROPRIATIONS FROM CURRENT REVENUE FOR PUBLIC WORKS AND FOR SUPPLIES, EQUIPMENT AND MATERIALS, 1919–1933[1]
(in thousands)

PURPOSE	*1919*	*1920*	*1922*	*1923*	*1924*	*1925*	*1926*
Streets, highways and bridges, care and maintenance (personal service)	$5,154	$6,224	$6,645	$7,348	$7,339	$8,253	$8,955
Repaving and maintenance; resurfacing streets and avenues (contracts)	....	....	....	....	....	....	....
Public buildings and offices; care and maintenance							
a. Personal service	398	488	480	506	526	572	627
b. Contracts	....	....	1,043	1,267	1,510	1,743	2,075
Construction and equipment of new municipal airport	....	....	....	....	....	....	....
Protection of life and property (contracts)	4,049	4,152	3,235	3,372	3,746	4,015	4,332
Consumable supplies, total	11,448	13,612	13,166	14,470	14,787	14,119	14,927
Equipment, total	2,178	3,053	3,190	4,646	4,508	5,560	5,581
Materials, repairs and replacements	4,106	8,052	8,497	8,580	8,741	9,571	8,883

PURPOSE	1927	1928	1929	1930	1931	1932	1933
Streets, highways and bridges, care and maintenance (personal service)	$10,094	$11,273	$9,644	$10,280	$10,497	$10,438	$8,895
Repaving and maintenance; resurfacing streets and avenues (contracts)	7,000	7,000	8,500	8,750	7,450	....	....
Public buildings and offices; care and maintenance							
a. Personal service	687	743	764	904	930	903	835
b. Contracts	2,725	3,079	3,184	3,309	3,924	4,356	3,459
Construction and equipment of new municipal airport	....	....	2,500	....	....	....	....
Protection of life and property (contracts)	4,621	5,018	5,596	6,006	6,724	7,335	7,243
Consumable supplies, total	15,986	16,972	16,793	16,512	17,035	16,873	13,017
Equipment, total	6,152	6,794	6,060	5,805	7,406	5,258	2,253
Materials, repairs and replacements	9,416	10,113	10,417	11,029	11,314	11,346	6,744

Source: New York City, Department of Finance, *Bureau of Accountancy* (Table of Budget Appropriations, published by Board of Estimate and Apportionment in Annual Budgets)

[1] Figures are not available for 1921 because of a change in the form of the budget for that year.

cannot be mainly explained by the already greatly increased expenditures in 1929, for although these were markedly larger than during immediately preceding years, they were substantially less than in 1924 and 1925. Table 62 presents disbursements and contracts awarded for school construction yearly since 1925. The annual drop in both after 1929 is very sharp, but is much more marked in the latter, which indicates that the volume of new work initiated was being continuously and very rapidly cut down.

During the earlier years of the depression the reduction was not primarily due to a shortage of funds. The construction schedule for 1931 officially designated by the Board of Education

TABLE 62

NEW YORK CITY BOARD OF EDUCATION
TOTAL DISBURSEMENTS AND CONTRACTS AWARDED
FOR NEW SCHOOL CONSTRUCTION, 1925–1933
(in thousands)

YEAR	TOTAL DISBURSEMENTS [1]	CONTRACTS AWARDED
1925	$43,137	$12,683
1926	18,252	11,562
1927	18,047	17,879
1928	24,397	28,621
1929	39,402	26,576
1930	31,055	18,842
1931	20,042	14,507
1932	10,411	799
1933	3,299	[2]

Source: New York City, Board of Education

[1] Figures are for all construction disbursements, including expenditures on equipment, furniture, etc., and on the acquisition of sites. These disbursements are all made from corporate stock funds.
[2] No new contracts awarded.

called for an ultimate outlay of about $68,000,000, the largest building program in the history of the city's school system. It included items totaling about $24,000,000 carried over from the schoolbuilding program of the preceding year. Earlier in the depression funds appear to have been clearly available for accelerating construction. An obstacle, however, was the great

difficulty of enlarging at short notice the physical facilities of the staff in charge of planning and administration. As the depression continued, however, the explanation of the drastic reduction in construction expenditures lay mainly in the city's growing financial difficulties.

Construction of Water Supply Systems

The sharp rise in 1930 and 1931 in expenditures for the construction of water supply systems, in contrast to school-building outlays, does not reflect deliberate emergency acceleration of construction. It merely represents the execution of plans prepared and contracts awarded a considerable time previous. The figures of Table 63, average monthly

TABLE 63

NEW YORK CITY BOARD OF WATER SUPPLY
CONTRACT PAYMENTS FOR NEW CONSTRUCTION,
AND NUMBER EMPLOYED, 1918–1933

YEAR	CONTRACT PAYMENTS[1] (*in thousands*)					NUMBER EMPLOYED[2]
	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTAL	
1918	$64	$172	$165	$210	$611	132
1919	388	376	334	145	1,243	491
1920	252	347	330	332	1,261	619
1921	407	868	1,214	1,939	4,428	1,527
1922	1,270	1,858	2,535	2,299	7,962	2,116
1923	1,225	1,979	3,353	3,997	10,554	2,108
1924	768	1,500	1,935	1,282	5,485	1,083
1925	413	683	1,013	927	3,036	648
1926	319	439	721	347	1,826	345
1927	120	134	234	200	688	152
1928	54	45	81	41	221	59
1929	25	730	2,147	2,398	5,300	889
1930	1,812	1,489	3,806	4,646	12,753	2,141
1931	4,276	5,336	6,209	4,159	19,980	1,848
1932	2,555	2,391	1,085	599	6,630	512
1933	508	323	567	323	1,721	141

Source: New York City, Board of Water Supply

[1] These are figures of payments for contract work actually performed and not contracts awarded.
[2] Under contracts for construction of new water supply. Figures are averages of the number employed in the last week of each month.

payments made by the Board of Water Supply for construction work performed by contractors on new water supply systems, reveal a rapid rise, 1918–23, an equally rapid fall thereafter through 1928, sharply mounting expenditures for the succeeding three years and drastic reduction in 1932 and 1933. The fluctuations in the average monthly number employed naturally correspond closely to variations in expenditures.

Expenditures and employment in 1929–31 were augmented by a construction program launched in 1928. At the end of that year the Board of Water Supply had outstanding contracts amounting to over $40,000,000 for the construction of a water supply delivery tunnel. Moreover, the first steps had been taken towards the initiation of the Delaware River Supply System, a new program for the construction of additional sources of water supply for the city. In 1928 the probable cost of this plan over the ensuing twelve years was estimated at around $273,000,000.[3]

Even if this program is ignored, however, the Board of Water Supply by the end of 1928 had already initiated a considerable volume of new construction. Four contracts for the delivery tunnel mentioned above [4] were awarded on October 5, 1928, aggregating over $42,000,000. Since additional smaller contracts were awarded by the Board of Water Supply in 1929, and in view of other concurrent expenditures during this period, it becomes clear that the greatly increased expenditures of 1929–31 were the direct outcome of projects planned, initiated and contracted before the onset of the depression. The course of construction during the last twenty-five years reveals alternating

[3] New York City, Board of Water Supply, *Annual Report*, 1928, Appendix I, p. 83.

[4] The construction of this project, known as City Tunnel No. 2, was originally approved by the Board of Estimate and Apportionment on March 10, 1927. At the same time the Board authorized the issuance of corporate stock to the amount of $64,000,000 to provide the requisite funds for its construction. The entire project was approved by the State Water Power and Control Commission on June 15, 1927. During 1928 two contracts, awarded April 12, 1927, were completed at a cost of $241,438.

phases of expansion and contraction as old supplies of water were fully utilized and new ones had to be tapped. Contracts awarded, as compared with a total of almost $43,000,000 in 1928, amounted to less than $1,000,000 in each of the succeeding three years.

This decline was no indication that the city found its existing provision for water supply adequate or was likely to do so in the near future. On the contrary, it was faced with a serious problem in this respect, and its administration prior to the depression was only too willing to expend liberal sums in the construction of additional water supply facilities. The delay arose from inevitable obstacles of cumbersome procedure, largely of a legal nature, which had to be surmounted before the first contract could be awarded.

The New York City Delaware River Supply Plan, mentioned above, was designed to meet the city's needs for increased water facilities. As early as June 17, 1921 the Board of Estimate had authorized the Board of Water Supply to proceed with studies and investigations for an additional supply of water for New York City. Under a plan outlining the Board's recommendations, submitted to the Board of Estimate and Apportionment on July 27, 1927,[5] most of the new supply was to be derived from the use of the flood waters of the tributaries of the Delaware River west of the present Catskill development. These lie entirely within New York State, but the Delaware River itself flows also through New Jersey and Pennsylvania. Directly after the project was authorized by the New York State Water Power and Control Commission in May 1929, New Jersey—with Pennsylvania intervening to the same end—requested the United States Supreme Court to prohibit the proposed development, chiefly on the ground that it would injure navigation on the Delaware. To this New York City filed an answer on October 7, 1929, and the dispute was referred to a master in Chancery for investigation in January 1930. The latter's report, made to the Supreme Court

[5] New York City, Board of Water Supply, *Annual Report*, 1928, Appendix I, pp. 79–106.

on February 2, 1931, recommended that it deny New Jersey's demand that the state and city of New York be enjoined from diverting any waters from the Delaware or its tributaries, and that it grant New York's demand only to the extent of permitting 440,000,000 gallons daily to be taken, instead of the 600,000,000 desired. On May 4, 1931 the Supreme Court handed down a unanimous opinion supporting its special master's findings, allowing the city 444,000,000 gallons daily from the Delaware River. At best, however, it was estimated that the proper development of the Delaware system would require ten years.[6] As the President of the Board of Water Supply explained, a tri-State agreement to authorize the Delaware watershed diversion had been urged by him to the Governors of New York, New Jersey and Pennsylvania as early as 1921.[7] The removal of all legal obstacles was thus finally effected ten years after this project was first suggested.

Roadbuilding

The above examination of construction expenditures and programs for water supply systems illustrates the difficulties that beset the acceleration of large-scale projects at short notice in times of depression. The problems surrounding attempts to expedite the construction, reconstruction and repair of streets are of a different and less serious nature: the greatest, the seasonal element, receives detailed discussion in Chapter XII. In respect of the volume of employment created, roadbuilding expenditures in New York City are of even greater importance than those for the construction of either school or water supply systems, normally being second only to expenditures on subway construction.

Roadbuilding and roadrepairing are performed by several different agencies in New York City, and expenditures are

[6] Opinion expressed by Thaddeus Merriman, Chief Engineer of the Board of Water Supply, reported in the *New York Times*, May 5, 1931.
[7] *New York Times*, April 8, 1931.

TABLE 64

NEW YORK CITY
EXPENDITURES ON ROADBUILDING, 1928–1933
(in thousands)

METHOD OF FINANCING	PURPOSE	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*
Special revenue bonds, borough presidents	Paving and repaving	$403	$359	$599	$237	$169	$42
Corporate stock	Tri-Borough Bridge, etc.	...	...	963	1,678	998	79
Assessment bonds	Street Impovement Fund	22,006	21,721	25,011	18,197	15,790	4,434
Tax notes	Bronx River Parkway	18	3	...	...	...	...
Special accounts	Restoring and repaving	1,743	1,724	1,408	1,553	1,136	727
Current revenue	Repaving and resurfacing	7,000	8,500	8,750	7,450	...	...
Total expenditures from all sources		$31,170	$32,307	$36,731	$29,115	$18,093	$5,282

Source: New York City, Comptroller's *Annual Reports*

financed from a variety of sources. The summary totals of expenditures yearly from 1919 to date are presented in Tables 59 and 60. The same data for 1928–33 are presented in greater detail in Table 64.[8] Total roadbuilding expenditures increased slightly in 1930 but fell off sharply during the succeeding three years. The reason lies partly in their nature and financing. Assessment bonds are used to assist in the financing of the Street Improvement and the Street and Park Opening Funds, the most important items in roadbuilding expenditures in New York City. The first defrays the cost of road construction, reconstruction and paving and other similar assessable improvements, the other the cost of lands acquired for these purposes. Such expenditures, being for assessable improvements, involve a highly elaborate and protracted procedure, which does not allow the rapid acceleration of construction projects. The land must first be acquired, and to this end petition is made by the local board of the Borough President to the Board of Estimate. Condemnation proceedings are instituted only after a public hearing. Maps showing the area of assessment must be prepared, submitted to and approved by the Board of Estimate. The Court must hear both interested sides before making tentative awards, and must hear objections before it makes a final award. Only after all these and a great many other steps have been taken can the Board of Estimate give preliminary

[8] Special revenue bonds provide for supplementary appropriations and are redeemed out of tax receipts in the budget succeeding the year of their issue. Expenditures financed in this manner by the five Borough Presidents are for paving and repaving streets and avenues. Long-term corporate stock and tax notes, a form of temporary borrowing which follows exactly the same procedure as special revenue bonds, are not used to finance ordinary road construction or repair work but larger projects such as those indicated. Expenditures from special accounts, made by the five Borough Presidents, are defrayed partly from revenues derived from two of the large city bridges and amounts received for the opening of streets where pavements are restored by the Borough Presidents with these funds. Expenditures from current revenue and those financed with assessment bonds are self-explanatory.

authorization to the Borough President under whose control the project falls to proceed with the work of physical improvement. Actual construction cannot be started until elaborate contracts, plans and specifications have been prepared.

The volume of much-needed public works in the construction and reconstruction of streets, roads, express highways and the like in New York City was very large even prior to the depression. The Borough President of Manhattan declared in 1930 that half the street systems and highways of New York must eventually be rebuilt, and the modernizing of roadways was so extensive a project that a large number could be employed continually. In the other boroughs streets in many sections, even in populous neighborhoods, have been in deplorable condition. Apart from financial problems raised by the depression, however, it is difficult to increase rapidly the volume of such work in progress at any given time. This is even truer of the major roadbuilding and similar projects for which such a pressing need is felt for the relief of traffic congestion.

Rapid Transit Construction and City Finances

By far the most important purpose of municipal construction expenditures in New York City in recent years has been subway building, as may be seen from Tables 59 and 60. During the last decade it has accounted for a third of all public construction expenditures. In 1930 expenditures for this purpose reached the record figure of $84,000,000, followed by a sharp decline during the ensuing three years to only $16,000,000 in 1933. Table 65 shows that the number employed on subway construction has fluctuated in close correspondence with expenditures. A steady upward movement to a peak in 1930 is followed by a sharp decline. The figures for contracts awarded, however, show a peak in 1929 and a very rapid drop during the succeeding four years. The absence of deliberate acceleration during the depression is manifest. The reasons were various: the difficulty of speed-

TABLE 65

NEW YORK CITY
CONTRACTS AWARDED FOR SUBWAY CONSTRUCTION, AND NUMBER EMPLOYED, 1921–1933

YEAR	CONTRACTS AWARDED (*in thousands*)					NUMBER EMPLOYED[1]
	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTAL	
1921	$69	$206	$185	$3,867	$4,327	[2]
1922	508	2,039	753	2,882	6,182	[2]
1923	388	1,366	93	2,541	4,388	[2]
1924	132	765	139	6,759	7,795	[2]
1925	11,959	18,797	24,371	23,032	78,159	2,560
1926	25,348	3,085	896	25,373	54,702	8,020
1927	23,629	23,106	421	30,787	77,943	9,713
1928	15,065	13,868	32,013	25,657	86,603	9,597
1929	29,667	20,009	29,083	12,583	91,342	11,520
1930	15,551	21,272	9,892	31,738	78,453	11,772
1931	1,489	6,232	5,805	14,900	28,426	9,736
1932	2,230	2,350	1,219	653	6,452	5,180
1933	. . .	. . .	. . .	479	479	1,167

Source: New York City, Board of Transportation

[1] Figures are annual averages of the daily average number employed during each month.
[2] Not available.

ing this type of work, the complexity of many of the financial problems involved even prior to the depression, and their material aggravation as the latter developed. In no measure was the retardation due to adequate rapid transit facilities. The elaborate plans drawn towards that end are far from nearing completion. A brief discussion of the difficulties encountered should serve to illustrate the obstacles often lying in the way of enlarging the volume of construction even of projects for which the need is pressing, and to show how, in New York, the subway problem has dominated city finances as a whole.

The numerous legal requirements entailed in the construction of new transit facilities often result in the postponement of actual construction for months or years after plans have been drawn up by the Board of Transportation.

Under the law, public hearings must be held and may extend

over several years, during which everyone interested must be given an opportunity to be heard. The completed plan usually represents a compromise between the taxpayers on the one hand and the engineering and financial necessities of the situation on the other. Before the plan can be approved by the Board of Estimate and Apportionment, however, the consent of the property owners along the right-of-way must be obtained. Again, before contracts can be submitted for bids, they must first be considered at a public hearing and then presented for approval to the Board of Estimate and Apportionment. If the contractor sublets portions to subcontractors, each of the latter must also be approved by the Board of Estimate.

The financial problems raised by its vast program of subway construction have been the most important that the city has had to face. Prior to the depression they were thought to have been largely solved. With the constantly and rapidly mounting assessment list, and with $300,000,000 added by state legislation to the city's debt limit, New York seemed able to find money for the new subways. Moreover, it was estimated that the termination of the emergency housing laws in 1932 would add about a billion dollars to the city's assessment list and a hundred million—10 per cent of the assessed valuation—to its legal borrowing power. Chairman Delaney of the Board of Transportation was thus able to advocate successfully before the Board of Estimate the policy of issuing four-year bonds redeemable out of the budget to finance subway building. During 1927–30 inclusive such bonds to a total of $208,000,000 were issued with provision for their retirement through redemption by appropriations against the budget.

This plan was designed to preserve the five cent fare—the sacrifice of which in New York City was considered by all parties to be a political impossibility—without increasing the tax rate. In 1930, however, in large part as a direct result of conditions

brought about by the depression, it became clear that if persisted in this system would either cause increases in the tax rate or compel the city to reduce other essential public services. In two reports made to the subcommittee on the pricing of city services of the Mayor's Committee on Taxation in October 1930[9] and June 1931[10] respectively, the conclusion was reached that the Delaney plan could not be continued in operation. In 1933 it was abandoned. Its failure was due to several factors: construction costs had exceeded original estimates, the original schedule for sinking fund requirements had not been fulfilled, and assessed valuations on realty had not increased as expected. In addition, the city's financial burden resulting from the operation of the new lines at a five cent fare proved far heavier than originally contemplated, for much less revenue was produced from the operation of these lines than had been estimated under the Delaney plan when the short-term financing scheme was formulated. But the fundamental factor in the plan was the expected large increases in assessed valuations, half of the proceeds of which were to go for subway construction. General economic conditions, however, stultified this expectation. The Delaney plan worked while assessed valuations were increasing rapidly, making it possible to keep the basic tax rate below the $2.66 limit fixed in the original scheme. The Rogers reports recommended the abandonment of the plan and the substitution of the policy of issuing long-term bonds. The great advantage of rapid amortization lay, however, in releasing hundreds of millions of frozen credit from the debt limit.

Thus the city was faced with the dilemma that largely because of changed conditions in real estate values brought about by the depression it found itself unable to proceed with its original plan of financing subway construction without ruinously affecting other city services; while on the other hand if it substituted a policy of issuing long-term

[9] The 1931 Tax-Rate and the Delaney Plan, by Lindsay Rogers.
[10] Memorandum on the Cost of Rapid Transit to the City of New York, by Lindsay Rogers, Joseph McGoldrick and John Dickinson.

bonds it was in danger of finding itself saddled with an embarrassingly heavy load of frozen credit and involved in difficulties with its constitutional margin of debt-incurring power.

Retardation of Needed Public Works: Construction Procedure in New York

Subway construction affords perhaps the most conspicuous example of delay on a badly-needed project as a result of financial, legal and administrative difficulties. But other instances of retardation in consequence of obstacles which, although less serious, tend to prove almost equally time consuming, could be multiplied indefinitely. A few examples chosen at random may be offered.

The Port of New York Authority, a New York–New Jersey Interstate Commission that can operate more expeditiously than either the state or city administration, found it easier to span the Hudson River with a gigantic bridge than make headway in the face of the vested interests and prejudices arrayed against an inland freight terminal of an estimated cost of $16,000,000 which it had long been eager to build. Agreement had to be reached with twelve railroads serving the port area, but the latter, accustomed to look askance at any innovation tending to disturb the competitive equilibrium, were reluctant to relinquish their ancient competitive freight-handling practices. At one time political differences threatened to delay the project indefinitely. When a site had been selected, real estate interests on the west side of Manhattan raised new objections. Only in 1931 were these difficulties finally overcome, the city's consent obtained, and agreement reached with the railroads.

After several years of agitation and discussion the Board of Estimate at the end of January 1931 approved the program for the development of Jamaica Bay for shipping and industrial purposes by the construction of a railroad along the marginal way and the dredging of Paerdegat Basin. The city had, how-

ever, been committed to the project for fifteen years, and large sums had already been spent there by the city, state and Federal governments. In June 1925 the Board of Estimate had approved an extension of the tracks of the Long Island Railroad, and in June 1928 a subcommittee of the Mayor's committee on plan and survey submitted a report calling attention to the potential development of the bay as a subport of New York harbor. When the program was finally approved the city was entering a long period of serious financial embarrassment which necessitated stringent curtailment of expenditures.

The elimination of railroad grade crossings affords a good example of a type of very necessary public improvement which could not be hastened very much for purposes of unemployment relief for somewhat different reasons. The cost of this work is borne not by the city but jointly by the state government and the railroads.[11] The volume to be performed in New York City was large. Early in November 1930 the Transit Commission announced that every effort was being made to hasten this type of work in conformity with the Governor's request that public works be expedited as a means of unemployment relief.[12]

But before the depression this work had been pushed as expeditiously as possible in view of legal and other difficulties. As early as 1925 the voters of New York State had amended the Constitution by approving in a referendum the bond issue of $300,000,000 for this purpose.[13] Having decided to spend this sum the state government very naturally felt that the work should be finished as rapidly as it could be done efficiently. Furthermore, because of the joint administration of the projects by the state and the railroads and of the extended quasi-judicial procedure involved, this work does not lend itself to speedy execution. After a specific elimination project has been determined upon, about two years are usually consumed with hearings, ne-

[11] For the financing of grade crossing eliminations see Laws of New York State, 1926, Ch. 233; 1927, Ch. 445; 1929, Ch. 645; Highway Law, 1929, p. 385; and *Planning and Control of Public Works*, p. 75.
[12] Release of The Transit Commission, November 3, 1930.
[13] New York State Constitution, Art. 7, Sec. 14.

gotiations, discussions, preparation of plans, and the acquisition of rights-of-way before actual construction is started. This procedure is followed for each individual elimination project under consideration, and by its very nature cannot be greatly hastened.[14]

Thus there can be no hope of any adequate control over public works so long as the city lacks a comprehensive and integrated system of planning its improvements. Despite the splendid efforts of non-official organizations such as the Russell Sage Foundation with its Regional Plan of New York, the city's method of procedure has been most haphazard. Its practice during good times has been to commit itself to a vast number of projects often before detailed plans have been prepared or the financial problems involved have been considered. The result has naturally been constant confusion, delay and uncertainty.[15]

Even when money has been authorized for construction projects the award of contracts is frequently delayed. Thus on January 31, 1931 authorized public improvements for which funds had been voted amounted to $249,405,000, but the charges against this total in contracts already awarded were only $144,337,000, leaving a balance of authorized but uncontracted improvements of a value of $105,068,000. The huge volume not merely of needed public works but also of projects to which the city was already committed was shown by a report on the estimated costs of general improvements undertaken by the city submitted on February 5, 1931 by the Comptroller to the Board of Estimate. The almost complete absence of any long-range planning for the financing or orderly execution of the improve-

[14] For details of the procedure involved, see *Planning and Control of Public Works,* pp. 84–6.

[15] The Board of Estimate, preoccupied with a great many other functions, has often yielded to the strongest pressure. "If a locality needed an improvement and raised sufficient clamor," the Mayor remarked in 1930, "the improvement would be provided, even though it rendered impossible the supplying of a like need in some other locality more in need but less vociferous" (*New York Times,* October 21, 1930).

ments projected by the city is there very clearly revealed. The program of public improvements to be financed by bond issues alone to which the city administration was committed at that date was in excess of two billion dollars. This figure excluded work to be financed by budget funds, short-term obligations or assessments, an important source of certain construction expenditures. "This additional $2,000,000,000 would have more than doubled the City's debt. Moreover, the City has never succeeded in borrowing more than $150,000,000 in a single year, yet all of these projects were planned for immediate execution. At the time that these facts were disclosed the Board of Estimate did not even know the extent of its commitments." [16]

The desirability of setting up a strict budget for corporate stock and tax note issues has often been urged. Hitherto, department heads have made their requests for these in the same fashion as they have requested funds from the tax budget, the requests being summarized in 'the corporated stock and tax note calendar'. Hearings by the Board of Estimate have usually been held in April or May, but extra funds were applied for during the year as needs arose. Thus between the calendar and incidental requests, the Board of Estimate has been obliged to make appropriations for individual projects without opportunity to compare their merits with those of others and has financed them bit by bit.[17]

[16] New York City's Budget, Memorandum by Joseph McGoldrick.

[17] "The Committee which Mayor Walker appointed in 1927 under the Chairmanship of Mr. Herbert Lehman, the present Governor, recommended many improvements in the City's budgetary methods, but . . . . hardly any of its suggestions were followed, although various civic groups urged them from time to time. Early this summer (1933) a general reorganization both of the City's current and capital budgeting was effected through Charter amendments adopted by the Municipal Assembly under its Home Rule power. The pressure of the financial emergency and the approach of the Municipal election has made it difficult to put these in operation. The City administration's troubles are so enormous that it can hardly be blamed for virtually ignoring the new requirements in the preparation of the current budget" (New York City's Budget, Memorandum by Joseph McGoldrick). The city now has an official Budget Bureau, with a Director of the Budget at its head.

Financing Public Works

THE CITY'S DEBT

Meanwhile New York's outstanding debt has been steadily growing. The tremendous increase during the last half century and the shifts in the classification by purpose is shown in Table 66. For some years the greater portion has been accounted for by rapid transit construction and the building of schools, water supply systems, streets and sewers. In Table 67, which gives the city's outstanding debt at the beginning of each year since 1925, and the debt contracted during the course of the year, these classes of construction are not unexpectedly found to have been responsible until very recently for the major part of the latter. In 1932, however, borrowing for relief purposes bulks large, and in 1933 accounts for most of the new debt contracted. Of particular interest is the fact that until 1929 the total outstanding debt increased at a slower annual percentage rate than did assessed valuations of taxable real estate, while from 1930 it increased markedly more rapidly.

The provisions of the state constitution that define and restrict the power of New York City—as of other cities of the state—and the method of computing its debt-incurring power within the debt limit imposed, are described in detail in Appendix B. As is there pointed out, New York City has frequently found this constitutional debt limitation embarrassing, and its borrowing powers have repeatedly had to be enlarged by constitutional amendment. The city's constitutional debt-incurring leeway at the beginning of each year, 1920–34, is presented in Table 68. The third column, which shows that portion of the debt-incurring power still not earmarked by the Board of Estimate, is the most significant. As is pointed out in the note to this table, it does not include

TABLE 66

NEW YORK CITY
GROWTH AND DISTRIBUTION OF THE OUTSTANDING DEBT, 1886–1933
(in thousands)

PURPOSE	*(year as of January 1)*										
	1886	*1898*	*1911*	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*
Rapid transit	. . .	. . .	$64,652	$273,610	$301,609	$380,610	$446,110	$557,110	$636,110	$696,110	$682,260
Schools	$1,168	$18,045	110,367	243,117	263,074	278,212	301,374	331,687	350,215	365,427	358,888
Water supply	17,747	53,083	130,821	254,233	277,203	287,972	299,686	310,054	326,148	325,607	364,766
Streets and sewers [1]	16,963	24,992	164,460	212,209	212,459	230,995	256,198	240,930	241,597	255,211	257,369
Public buildings, other than schools	6,345	24,319	75,030	105,962	138,583	127,005	160,527	171,001	160,785	170,146	172,874
Docks	12,053	34,033	108,783	141,955	143,298	146,354	155,986	159,936	166,862	166,842	171,671
Bridges	5,587	13,474	93,782	101,944	101,165	100,144	67,482	65,114	64,800	64,418	64,329
Parks	13,250	28,845	62,606	57,781	56,957	56,227	62,958	49,799	49,264	49,511	50,865
Miscellaneous, including refunding	52,015	25,168	36,622	83,243	56,847	84,900	74,031	61,912	74,934	76,129	84,584
Total	$125,475	$223,018	$857,953	$1,474,054	$1,551,198	$1,692,419	$1,824,352	$1,947,543	$2,070,715	$2,169,401	$2,207,606

Source: Comptroller's annual statement of the Constitutional Debt-Incurring Power of the City

[1] Including assessment bonds.

TABLE 67

NEW YORK CITY
PURPOSE OF NEW DEBT CONTRACTED YEARLY, 1925–1933
(in thousands)

PURPOSE	*1925*	*1926*	*1927*	*1928*	*1929*
January 1 each year—outstanding debt	$1,459,589	$1,565,854	$1,660,994	$1,761,819	$1,858,548
Plus: new debt added annually	126,033	126,933	132,118	134,796	169,254
Total	1,585,622	1,692,787	1,793,112	1,896,615	2,027,802
Minus: annual redemptions of debt	19,769	31,793	31,292	38,068	58,909
December 31 each year—outstanding debt	1,565,853	1,660,994	1,761,819	1,858,548	1,968,893
Yearly percentages of increase in debt	....	6.1	6.1	5.5	5.9
General purposes of new debt					
Rapid transit	20,360	51,355	64,660	61,041	99,404
Water supply	9,960	7,660	7,970	7,015	11,369
Dock improvements	6,925	2,350	17,003	3,132	7,071
School construction	41,788	19,199	16,975	25,780	41,610
Various municipal purposes, hospitals, Brooklyn Municipal Building, etc.	26,950	35,724	18,510	12,828	8,260
Home and emergency work relief	....	....	....	....	....
Brooklyn-Richmond Tunnel	50	500	....	....	1,540[2]
Construction of sewers, highways, etc.	20,000	10,145	7,000	25,000	....
Total	126,033	126,933	132,118	134,796	169,254
Assessed valuation of taxable real estate	$11,901,349	$12,997,581	$14,539,838	$15,845,506	$17,133,817
Yearly percentages of increase in taxable real estate	....	9.211	11.866	8.980	8.130

TABLE 67 *(cont.)*

NEW YORK CITY
PURPOSE OF NEW DEBT CONTRACTED YEARLY, 1925–1933
(in thousands)

PURPOSE	*1930*	*1931*	*1932*	*1933*
January 1 each year—outstanding debt	$1,968,893	$2,127,846	$2,246,101	$2,294,688
Plus: new debt added annually	179,920	189,295	121,385	89,915
Total	2,148,813	2,317,141	2,367,486	2,384,603
Minus: annual redemptions of debt	20,968	71,039	72,798	16,165
December 31 each year—outstanding debt	2,127,846	2,246,101	2,294,688	2,368,438
Yearly percentages of increase in debt	8.1	5.6	2.2	3.2
General purposes of new debt				
Rapid transit	103,380	94,120	50,830	6,500
Water supply	19,895	30,600	8,610	1,385
Dock improvements	7,150	4,150	2,900	1,130
School construction	33,000	21,200	11,463	520
Various municipal purposes, hospitals, Brooklyn Municipal Building, etc.	16,445[1]	21,500[1]	21,563[1]	3,380[1]
Home and emergency work relief	....	....	20,000	77,000
Brooklyn-Richmond Tunnel	50[2]	....	19[2]	....
Construction of sewers, highways, etc.	....	17,725	6,000	....
Total	179,920	189,295	121,385	89,915
Assessed valuation of taxable real estate	$18,203,548	$18,806,167	$19,616,935	$18,463,011
Yearly percentages of increase in taxable real estate	6.243	3.310	4.311	*(decrease)* 5.882

Source: New York City, Department of Finance, Bureau of Accounting

[1] Includes new debt for Tri-Borough Bridge and Mid-Manhattan East River Tunnel from 1930, and undistributed debt for general purposes in 1932 and 1933.

[2] Awarded by Supreme Court for acquisition of land.

[3] For new Brooklyn-Richmond Tunnel.

TABLE 68

NEW YORK CITY
TOTAL INDEBTEDNESS, DEBT-INCURRING POWER, AND UNRESERVED DEBT MARGIN, 1920–1934
(in thousands)

YEAR AS OF JAN. 1	TOTAL INDEBTEDNESS WITHIN DEBT LIMIT	CONSTITUTIONAL DEBT-INCURRING POWER	UNRESERVED DEBT MARGIN [1]
1920	$772,354	$70,478	$21,439
1921	799,098	63,514	35,233
1922	822,032	175,267	133,643
1923	851,818	173,181	128,515
1924	911,283	148,323	67,116
1925	991,458	123,424	47,011
1926	1,088,387	101,748	42,175
1927	1,172,614	127,144	101,521
1928	1,253,064	200,920	162,410
1929	1,269,969	314,582	266,504
1930	1,248,883	464,499	379,686
1931	1,268,136	552,219	307,529
1932	1,339,360	541,257	360,608
1933	1,340,076	621,618	600,841
1934	1,351,111	495,190	462,570[2]

Source: New York City, Comptroller's *Annual Reports*

[1] These figures were obtained by deducting the total indebtedness within the debt limit (gross funded debt minus debt excluded from limit, in accordance with the state constitution) from an amount equal to 10 per cent of the assessed valuation of the taxable real estate of New York City. The result constitutes the debt-incurring power; whatever part of this amount was not specially authorized by the Board of Estimate and Apportionment is represented by the unreserved margin.

[2] In addition to this amount there is still an unencumbered balance of $38,813,000 out of a $300,000,000 credit, without the constitutional debt limit, which may be used by the city "for the construction or equipment, or both, of new rapid transit railroads".

an unencumbered balance of $38,813,000 out of a $300,000,000 credit exempted from the debt-limit provision for the construction and equipment of rapid transit facilities. On the whole, the unreserved debt margin increased substantially during the depression, and the city was far from exhausting its constitutional debt-incurring power. In this particular respect, therefore, there would have been no great danger in the expansion of public works financed by borrowing. The difficulty was political and economic rather than legal. While the unreserved debt margin of New York was nearly half a billion dollars at the beginning of 1934, its

credit had been so seriously impaired by mounting delinquencies and financial profligacy that it was no longer able to market its securities. Between 1931 and 1933, borrowing for rapid transit construction declined from over $94,000,000 to $6,500,000, for water supply purposes from over $30,000,000 to little more than $1,000,000, for school construction, from $21,000,000 to $500,000 (Table 67).

THE BUDGET AND MONEY MARKET CONDITIONS

A factor as important as the limitation of the city's constitutional debt-incurring power in restricting public works expenditures financed by long-term borrowing is the rate of interest and the amount in which bonds can be sold. Table 69 shows how the rate at which the city has borrowed has fluctuated with prevailing money market conditions.

TABLE 69

NEW YORK CITY
LONG-TERM BOND ISSUES, 1924–1933[1]

DATE	AMOUNT *(in thousands)*	INTEREST RATE *(per cent)*	BASIS *(per cent)*
June 3, 1924	$37,000[2]	4¼	4.19
June 3, 1924	30,400[3]	4¼	3.99
May 5, 1925	60,000	4¼	4.045
February 16, 1926	75,000	4¼	4.185
May 11, 1927	60,000	4	3.938
February 29, 1928	52,000	4	3.866
November 20, 1928	55,000	4¼	4.2002
May 20, 1929	52,000	5¼	4.8065
December 11, 1929	65,000	4½	4.351
October 21, 1930	50,000	4	3.9986
March 4, 1931	100,000	4¼	4.134
May 12, 1931	52,000	3	2.997
January 25, 1932	100,000[4]	6	6.0
May 19, 1932	5,000[5]	5½	5.5
November 1, 1933	70,000[5]	4	4.0

Source: Commercial and Financial Chronicle

[1] Excluding those sold to the city's sinking funds.
[2] Corporate stock.
[3] Serial bonds.
[4] Three- to five-year corporate stock notes.
[5] Serial bonds for work and emergency home relief.

Conditions of security inflation and dear money are reflected in the high basic cost of the issues in the latter part of 1928 and in May 1929. The sale of December 1929 was originally scheduled for the middle of October, but the city was forced to postpone its financing for almost two months because of the stock market crash. Almost a year later, in October 1930, it was compelled to reduce an offering of $75,000,000 to $50,000,000 because conditions in the bond market had become unsettled since the financing had first been announced: in the interval the uncertainty in the stock market had been communicated to the bond market and dealers were reluctant to commit themselves in long-term issues. The reduced amount was sold at the favorable net interest rate of less than 4 per cent. Seven months later the city was able to market an issue of $52,000,000 at a net interest rate of less than 3 per cent, the lowest cost on record since its incorporation in 1898, and in contrast to the rate of 4.81 on the issue sold a year previous—a striking indication of the easy money conditions prevailing and of the consequent demand for high-grade municipal bonds. Eight months later, however, early in 1932, the situation was completely changed as a result of the city's growing financial embarrassment and the international financial uneasiness. The course of events is traced in detail in Chapters X and XI. On this occasion the city had great difficulty in borrowing $100,000,000 on three- to five-year corporate stock notes, and eventually did so only by going to the legal limit of 6 per cent. The city was able to carry on without default only as a result of special negotiations with the banks.

During 1932 and 1933 New York City's finances suffered a succession of crises.[18] The immediate source of the difficulties lay in the accumulation of short-term obligations. These consisted of revenue bills issued in anticipation of

[18] In this period five sessions of the legislature, three of them extraordinary sessions, dealt with the city's financial problems. In what follows in this section I have drawn freely upon the memorandum on New York City's Budget by Professor Joseph McGoldrick, subsequently Comptroller of New York City, and wish to acknowledge his generous assistance.

taxes, corporate stock notes issued pending the sale of long-term securities, tax notes and special revenue bonds issued for one year, and various classes of special revenue bonds and certificates of indebtedness issued to provide money for unemployment relief. Each presented a special problem.

In normal times the city had been able to borrow on its revenue bills at not more than 2 per cent. During the depression, however, owing to hard times and lack of confidence in the city administration, the volume of tax delinquency had risen sharply. Since, consequently, these revenue bills could not be retired, they accumulated slowly. The percentage of real estate taxes remaining uncollected at the end of the year had risen from 11 in 1927 to 26 in 1932. The city was forced to borrow not only against future collections but also against a rising amount of arrears.[19] The growing volume of revenue bills had to be renewed continually for a few months at a time, and at each renewal date the difficulty became increasingly acute.

In 1931 the city's credit had been so good that it was able to sell its corporate stock notes at 1.25 per cent.[20] Refunding into long-term corporate stock, which would have had to be sold at around 4 per cent, was therefore postponed. As things turned out, this delay proved unfortunate, for bond market conditions and the city's credit greatly altered for the worse.[21] Since 1931

[19] The annual budget carries an item designated Tax Deficiency; this, however, provides not for current delinquency, but for delinquencies in real estate deemed uncollectible and outstanding more than four years. Thus the Tax Deficiency item in the 1933 budget was for real estate taxes delinquent for the year 1929 or earlier, and took no account of more recent increased delinquencies.

[20] Unlike most other cities, New York has generally financed public improvements not by first selling bonds and then letting contracts and meeting the bills from the funds on deposit in the banks. It has followed the reverse procedure of first awarding contracts, then selling short-term corporate notes to obtain the money to pay for the work, and subsequently, when these notes have accumulated in large volume, of refunding them into long-term bonds known as corporate stock.

[21] This situation was not substantially improved by legislation later enacted permitting the sale of corporate stock notes for three-, four- and five-year terms.

the city has not been able to sell a long-term bond issue, and in 1933 was carrying its corporate stock notes not at 4 per cent but at 5.75 per cent; towards the end of the year the volume outstanding was little short of $200,000,000. Like revenue bills they had been continually maturing, and each maturity date brought another crisis.

The third class of short-term obligations mentioned above, certain one-year special revenue bonds and tax notes permitted under various charter provisions, were of much smaller aggregate volume. Lastly there were the obligations issued to provide for unemployment relief. This was treated by the city as an emergency problem to be met by borrowing. The sum of $75,000,000 was added to the city's indebtedness for work relief, mainly in certificates of three to five years' maturity and in short-term obligations. In October 1933 the gross total of unfunded debt was $475,000,000 and the funded debt $2,290,000,000. During the year Mr. Samuel Untermyer, special counsellor and adviser on financial matters to the Board of Estimate, had charged that the city's credit was "completely shattered and destroyed" and that the city was tottering on the verge of bankruptcy.

In the autumn of 1933 it was clearly evident that unless drastic measures were adopted, New York would be faced with the immediate prospect of defaulting on its obligations. Under Mayor O'Brien the Delaney plan had been abandoned and payroll cuts amounting to $45,000,000 had been made. In all $113,000,000 had been cut from the budget for 1933 as finally adopted. The Bankers' Agreement, negotiated in September, made it possible for the city to finance current needs without difficulty and at a moderate cost, and brought the recurrent crises over short-term debt to an end.[22] But the agreement was conditional

[22] Under the Bankers' Agreement outstanding tax notes were funded for three years at 4 per cent, a reserve for delinquent taxes was created and provision was made for a revolving fund to finance the city's current needs over a period of four years. Savings banks, life insurance companies and other similar institutions agreed to purchase $70,000,000 worth of 4 per cent ten-year serial bonds, $32,000,000 to be used for the retirement of the outstanding certificates of indebtedness, the remaining $38,000,000 for current relief expenditures. By the end of the year the outstanding revenue bills had been

upon further economies and a balanced budget. When the Fusion administration took office in January 1934, however, the budget was out of balance by about $31,000,000 and the city's bonds were selling at a discount. Passage of the Economy Act, reduction of expenditures by the new administration and the imposition of new taxes quickly improved the city's credit. Bonds which sold in 1933 below 75 have been virtually at par for some time, and most of the city's issues are selling above par.

These reforms, however, which have made it possible for the city to square its outstanding accounts, preclude the hope of large expenditures for new construction for some time. Still another example is afforded of the inability of local governments to undertake expanded programs of public works in depressions when they have not carefully preserved their credit during prosperity. The public works program in New York City today must necessarily be limited chiefly to projects that can be financed with the aid of Federal funds. On May 16, 1934 the city finally succeeded in demonstrating that its budget was properly balanced and received $37,558,500 from the PWA for completion of seven projects delayed for months because it had not been able to qualify for huge loans and grants.[23] It was estimated that altogether a total of 1,600,000 man-days of work were involved. Had its finances been in better shape New York could have received the money months earlier.

THE TAX RATE

Since in New York City public improvements are financed to a negligible extent from current revenue, the height of

either paid off or refunded for three years, and the corporate stock notes had also been refunded, though for only nine months. The certificates of indebtedness had been exchanged for the serial bonds.

[23] The major allotments were in the form of loans and grants but several other awards were strictly loans. Over $23,000,000 was for subway construction, 30 per cent being a grant and the balance a loan.

the tax rate has no direct bearing upon construction expenditures. Debt service charges, however, must be carried in the tax budget, while the difficulties involved in the alternative method of financing further capital outlays by long-term borrowing have been sufficiently dwelt upon above.

"During the period of Mayor Walker's incumbency, budget making was rendered delightfully simple by the fact that the City's income was expanding steadily. In each of the five years from 1926 to 1930, tax values in New York City rose by more than $1,000,000,000. The peak was reached in 1927 when $1,500,000,000 odd in new values was added to the City's tax rolls. Applying the current tax rate, which at this period was kept at about $2.60, to these annual increases, the City had between $25,000,000 and $40,000,000 of new money available every year. Budget making, therefore, consisted of apportioning this increase among the ever-eager departments. . . . No effort was made to examine the department's entire budget. Once it achieved a particular total, that total became a vested interest, and attention was confined to requests for additional allowance." [24]

The total amount of the budget to be raised by tax and general fund revenues in 1930 was $569,770,000; in 1931 it had risen to $620,840,000, and in 1932 to $631,366,000. In 1933 a reduction to $518,428,000 was effected.[25] In 1926 the tax budget had amounted to $437,000,000; in the interval assessed valuations had also increased, but the rate of annual increase has been steadily slower.

By far the largest single appropriation in recent budgets has been for debt service provisions, which alone account for over 30 per cent of the total sum to be raised by tax and general fund revenues. In recent years new debt has been contracted much more rapidly than old obligations have been redeemed. Only rising real estate valuations made it

[24] New York City's Budget, Memorandum by Joseph McGoldrick.
[25] New York City, Annual Budgets.

possible for the city to sell these bonds without exceeding the debt limit, and to collect increased tax receipts without exceeding the tax limit. Such a condition ceased to prevail during the depression, and is not likely to return in the near future. Although the gap between the contraction of new debt and the redemption of old narrowed somewhat during the depression, it still continued large; meanwhile the yearly rate of increase in assessed valuations was markedly slower (see Table 67).

In the face of these conditions a considerable increase in the tax rate for 1931 and 1932 was inevitable at a time when real estate, as a result of the depression, had generally fallen in value throughout the five boroughs, when rents could not be collected as readily or in the same amounts as previously, and when, in consequence, real estate owners could not pay the taxes they had been able to pay in times of active business. The rise in the city and school tax rates in recent years has been especially marked. During the depression, when annual increases in assessments were becoming smaller, public works could not be expanded unless taxes were greatly increased. On the other hand, the difficulties that beset any increased volume of financing through borrowing made that course impossible. Thus one course was left open—drastic retrenchment—if the city was to avoid default; and this course meant curtailment rather than expansion of public works expenditures.

Summary of Conclusions

The failure to expedite public works for purposes of unemployment relief in New York City during the depression affords a highly instructive example of the obstacles likely to be encountered unless, through careful forethought, machinery has been devised well in advance of a depression

which will allow the speedy acceleration of construction at the desired time. The difficulty did not lie in finding public improvements that could be undertaken with manifest profit to the community: on the contrary, many projects to the eventual execution of which the administration was definitely committed were already greatly delayed. Nor did the character of the city's financial structure present insuperable, or even considerable, difficulties. The greatest obstacles proved to be threefold in character, but were highly interdependent: first, those of a technical and administrative sort, due in large part to an unwieldy, complicated and slowly moving administrative machinery, with divided control and diffused responsibility, which made all the more difficult the cutting of 'red tape' and the reduction of the inevitable delay involved in planning and initiating public improvements; second, the difficulties arising from the absence of any comprehensive system of advance planning of physical improvements as a well-ordered whole, or of long-range budgeting for their financing; third, the difficulties of a financial nature arising from the very heavy financial burdens to which the city had committed itself in years of prosperity without knowing very clearly how it was going to meet them: burdens the weight of which was greatly increased by conditions created by the depression itself in a variety of respects interacting and reinforcing one another to bring about a situation in which retrenchment rather than further expenditure was clearly indicated as the paramount need. In such circumstances, and faced with growing unemployment which demanded immediate attention, the city naturally found it simpler and easier to meet the crisis through direct measures which, though less desirable economically and not even having the merit of adequacy, did afford immediate and clearly tangible relief: measures which in large part took the form of outright charity.