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VII

CONSTRUCTION EXPENDITURES OF CITY GOVERNMENTS

City Construction Expenditures in Prosperity and Depression

The causes of the expansion of municipal expenditures for construction purposes during the decade 1919–28 are obvious enough. The rapid growth of industry and trade, with their concomitant urbanization of population, created both the need for increased public improvements and the public's ability and willingness to assume the necessary burden of expenditures. Large sums were thus expended for increased educational facilities, for the improvement and extension of water supply and sewage systems, for streets, roads, parks, and a great variety of other permanent improvements. The public construction activities of local governments reached a peak in 1928. Thereafter they declined, as a result first of the business boom and later of depression.

Although the relative proportions in which public improvements are normally financed from current revenue and through long-term borrowing cannot be estimated for the country as a whole, because of the diverse policies of municipalities, data on long-term municipal obligations reveal that these are normally incurred almost entirely for construction purposes. The increase in the cost of borrowing in 1929 seriously affected the volume of long-term debt contracted by local governments and hence their ability to undertake new public improvements. The stock market crash temporarily enhanced the value of bonds but the industrial re-

cession so seriously affected the income and expenditures[1] of municipal governments that borrowing specifically for public works was greatly curtailed. The Reconstruction Finance Corporation, created in 1932, did not greatly enlarge the total volume of loans for public construction in that year. Loans for self-liquidating projects to both states and cities totaled approximately only $16,000,000. In 1933, $281,000,000 of PWA loans must be added to the bonds sold to the RFC. Since a relatively small proportion of the aggregate amount of new debt contracted for public works came from outside these two sources, borrowing for permanent improvements did not increase greatly in 1933. This Federal financing is reflected, however, in expenditures in 1934 because of the time-lag between borrowing and actual outlays by municipalities.

PURPOSES AND VARIATION

An idea of the nature and fluctuations of local expenditures for public works prior to and during the depression can be obtained from Table 43, which presents the aggregate volume of contracts awarded for public construction in 14 selected cities, annually, 1919–32. Educational buildings, hospitals and institutions, streets and roads and sewage systems account on the average for much more than one-half of the total.[2] New York City was responsible for the sudden rise in expenditures for water systems in 1928, and throughout the entire period accounts entirely for the item 'subways and tunnels' (see Table 43, note 5). The severe decline in construction caused by the depression is clearly shown. In

[1] During 1931, 1932 and 1933 a large part of new long-term debt was incurred for relief purposes.

[2] In 1920 and 1932 these 4 classes constituted only 44.5 and 44.7 per cent, respectively, of the total volume of contracts awarded, but in 1919, 1921, 1922 and 1923, more than 70 per cent.

TABLE 43

PUBLIC CONSTRUCTION CONTRACTS AWARDED IN FOURTEEN SELECTED CITIES, BY PURPOSE, 1919–1932 [1]

(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings	$25,017	$30,482	$45,018	$56,983	$73,179	$75,398	$74,983
Hospitals and institutions [8]	8,741	11,839	20,004	27,730	17,326	27,652	37,904
Military and naval buildings	4,697	3,892	604	500	501	218	1,977
Public buildings	2,227	10,378	10,691	5,403	4,137	10,570	9,671
Waterfront developments	5,484	4,359	6,589	5,021	5,994	4,741	2,363
Bridges	6,742	6,348	6,577	5,210	5,575	18,330	13,593
Incinerators	102	232	5	103	1,709	1,385	704
Lighting systems	1,164	45,121	1,966	3,763	5,590	3,433	8,431
Docks and piers	6,758	22,720	2,279	3,626	823	472	2,037
Subways and tunnels	1,011	4,261	1,988	21,705	7,818	28,220	62,367
Sewage systems	19,734	11,828	16,324	13,482	4,524	7,591	11,268
Streets and roads	23,035	27,567	24,527	26,071	15,949	25,592	25,462
Water supply systems	1,769	4,359	6,414	6,702	10,700	2,875	5,376
Parks (public)	247	438	241	981	421	219	126
Total	$106,728	$183,824	$143,227	$177,280	$154,246	$206,696	$256,262

TABLE 43 *(cont.)*

PUBLIC CONSTRUCTION CONTRACTS AWARDED IN FOURTEEN SELECTED CITIES, BY PURPOSE, 1919–1932 [1]

(in thousands)

PURPOSE	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Educational buildings	$90,612[2]	$96,129[2]	$100,073[2]	$111,850[2]	$100,052[2]	$59,275[2]	$16,656[2]
Hospitals and institutions [3]	44,073	44,346	60,542	46,354	40,219	25,626	6,998
Military and naval buildings	1,136	867	3,115	2,995	1,046	3,037	1,530
Public buildings	15,301	20,997	13,084	21,819	21,093	54,020	24,348
Waterfront developments	6,370	6,462	7,116	5,760	5,239	17,252	3,693
Bridges	27,307	45,189	23,802	23,994	30,471	13,770	7,265
Incinerators	565	1,998	1,527	396	290	158	6,138
Lighting systems	13,407	6,515	6,820	5,693	4,295	3,071	1,693
Docks and piers	[4]	[4]	[4]	[4]	[4]	[4]	[4]
Subways and tunnels	54,702[5]	77,943[5]	86,603[5]	91,342[5]	78,453[5]	28,426[5]	6,452[5]
Sewage systems	17,611	40,790	28,229	22,316	16,178	27,953	3,931
Streets and roads	37,155	68,261	58,633	49,487	41,896	39,833	15,714
Water supply systems	6,851	9,799	48,522	12,457	7,553	5,051	401
Parks (public)	353[6]	983[6]	551[6]	875[6]	1,664[6]	1,312[6]	2,158[6]
Total	$315,443	$420,279	$438,617	$395,338	$348,449	$278,784	$96,977

Source: F. W. Dodge Corporation, Statistical Division

[1] The 14 cities are Albany, Boston, Buffalo, Chicago, Cleveland, Detroit, Indianapolis, Newark, New Haven, New York, Philadelphia, Rochester, St. Louis and St. Paul.

[2] Including private schools.

[3] Including hospitals and institutions partly financed with private funds.

[4] Not reported separately in these years.

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

[6] Estimated.

1932 expenditures for public construction were smaller than in 1919, and amounted to between only a quarter and a fifth of their 1928 level.

The distribution of contracts, by purpose, for 1933 and 1934 reflects the influence of RFC and PWA financing. Since municipalities could obtain funds from the RFC only for self-liquidating projects, they were limited in the type of work undertaken. Analysis of the loans made by the RFC to cities in 1932 shows that the money was to be spent mainly for water supply systems, sewers, harbor development, bridge construction, and electric light plants. PWA funds are being more diversely distributed because there are no qualifications concerning the liquidity of the project.

TABLE 44

TOTAL PUBLIC CONSTRUCTION CONTRACTS AWARDED IN FOURTEEN SELECTED CITIES, BY CITY, 1926–1932 [1]
(in thousands)

CITY	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Albany	$2,643	$3,840	$6,308	$1,968	$3,735	$1,654	$1,510
Boston	12,037	12,015	9,717	13,123	15,906	18,899	7,174
Buffalo	8,317	12,522	10,624	16,669	2,950	4,632	3,148
Chicago	33,537	49,194	44,597	41,669	33,100	38,674	3,354
Cleveland	12,912	16,620	19,749	13,101	15,950	13,269	5,311
Detroit	36,016	37,527	33,476	31,935	22,110	5,505	5,047
Indianapolis	7,512	12,353	6,427	4,765	2,815	1,407	1,926
Newark	10,370	6,447	7,903	6,977	5,035	5,173	7,604
New Haven	3,606	8,377	3,045	16,054	12,161	7,725	2,317
New York [2]	138,323	193,330	232,479	196,521	188,408	140,713	32,555
Philadelphia	30,394	41,765	38,221	37,831	25,213	17,290	21,629
Rochester	3,434	6,813	6,610	7,392	8,213	8,508	1,327
St. Louis	15,267	17,505	18,037	2,603	10,552	8,039	2,931
St. Paul	1,074	1,973	1,425	4,739	2,311	7,294	1,144
Total	$315,442	$420,281	$438,618	$395,337	$348,449	$278,782	$96,977

Source: F. W. Dodge Corporation, Statistical Division

[1] Slight differences in totals shown by this table from figures in Table 43 are entirely due to rounding out of figures in thousands.
[2] Includes N. Y. C. Board of Transportation figures of contracts awarded for subway construction in New York City.

Public Construction in Selected Cities

Table 43 indicates the general trend of expenditures but does not reveal the relative importance of individual municipalities in the totals. From Table 44 it becomes apparent immediately that New York, Philadelphia, Chicago and Detroit account for well over half of the total annual expenditures of the 14 cities covered. A more detailed analysis of several cities will serve to illustrate more clearly the course of events during the period under survey. Dodge data, unfortunately, do not include cities of the Far West. Some attempt will, therefore, be made to indicate the trend of construction expenditures in two large California cities.[3]

DETROIT

A highly important factor in the construction activities of Detroit has been the unusually rapid growth of the city caused by the development of its leading industrial activity, automobile production. "In the beginning, obviously, the automobile industry was a much less important factor in Detroit's growth than it has been in recent years . . . The period of most rapid growth occurred approximately from 1915 or 1916 to 1922–23, coinciding with the second period of automobile production." [4]

The rapidity with which the population grew necessitated an increase in area, and in 1925 and 1926 annexations to the west and north enlarged Detroit by 40 square miles. Despite an increase in community income, the administration found difficulty in coping with the host of problems created by this expansion. The accelerated construction of schools, water

[3] New York City is treated in a separate chapter because of the magnitude and importance of its undertakings.

[4] Long-Time Measures of Detroit's Growth and the Future Rate of Increase, by Lester K. Kirk, *The Annalist,* April 26, 1929.

systems, sewers and streets is indicated in Table 45. Though total public construction declined after 1927, the curtailment was not severe until 1930, when contracts dropped 30 per cent from the level of the preceding year.

This serious contraction in public construction is the more significant in view of the fact that Detroit has worked out no less than three programs for public improvements within recent years.

Following the appointment of a Finance Committee on December 29, 1924, a ten-year financial program for public improvements was established in 1925, with a total outlay of $779,991,477. This first plan was reviewed and revised in 1927, and an Eight-Year Improvement Program involving a total expenditure of $736,211,864 for the period 1927–35 was submitted on February 25, 1927. On January 15, 1929 the mayor presented a third long-term program. This Ten-Year Improvement Program for Detroit, 1929–38, estimated "that the city will be required to finance a program of not less than $340,000,000 for public improvements during the next ten years, excluding rapid transit and sewage disposal".

Combining the planned expenditures for rapid transit and sewage disposal, $200,000,000 and $90,000,000, respectively, with the above total of $340,000,000 for general public improvements, the large outlay of $630,000,000 for the period 1929–38 was contemplated by this program. No financial difficulties were expected in the consummation of these projects. Extension of water and street railway utilities were to be financed from water rates and car fares. "Assuming a normal increase in the City's assessed valuation during the next ten years . . . this program can be carried out with very little effect upon taxes, and possibly without increasing the present rate at all for these purposes." Borrowing limits are 4 per cent of the assessed valuation for general public improvements, 2 per cent for water, 1 per cent for lighting and 2 per cent for street railways. "Within these limits, there is ample margin and over for financing . . . re-

TABLE 45

DETROIT, MICHIGAN
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings [1]	$3,068	$3,368	$9,740	$3,522	$1,989	$4,693	$4,247
Hospitals and institutions	1,062	158	637	154	20	2,418	1,227
Military and naval buildings	...	...	...	...	...	...	...
Public buildings	157	222	1,471	170	877	253	391
Waterfront developments	103	8	...	139	25	...	26
Bridges	...	1,000	3,057	53	216	400	125
Incinerators	...	...	...	...	...	33	...
Lighting systems	583	85	290	353	50	470	887
Docks and piers	...	6	25	186	...	80	7
Subways and tunnels	75	3,315	...	...	...	20	...
Sewage systems	4,296	2,501	10,285	2,409	200	422	3,029
Street paving and road construction	2,863	1,513	2,039	685	1,179	1,943	7,392
Water supply systems	199	1,000	1,282	687	5,508	87	75
Parks (public)	20	30	...	...	...	...	...
Total public construction	$12,426	$13,206	$28,826	$8,358	$10,064	$10,819	$7,406

PURPOSE	1926	1927	1928	1929	1930	1931	1932
Educational buildings [1]	$11,905	$6,062	$4,769	$6,327	$7,425	$2,843	$95
Hospitals and institutions	1,007	5,402	2,938	190	2,581	219	519
Military and naval buildings	9	...	...	...	...	3	5
Public buildings	715	1,189	848	184	285	484	3,371
Waterfront developments	156	107	121	774	37	3	329
Bridges	325	2,318	8,014	100	39	...	152
Incinerators	6	76	...	...	4	...	...
Lighting systems	204	750	125	197	1,125	146	429
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	6,766	6,742	8,071	8,060	2,893	153	3
Street paving and road construction	11,398	10,896	6,659	7,333	3,868	1,281	144
Water supply systems	3,507	3,485	1,928	8,598	3,507	370	...
Parks (public)	18[3]	500[3]	3[3]	172[3]	28[3]	3[3]	...
Total public construction	$36,016	$37,527	$33,476	$31,935	$22,110	$5,505	$5,047

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 $199,000; 1920, $108,000; 1921, $174,000; 1922, $4,650,000; 1923, $480,000; 1924, $1,423,500; 1925, $2,662,700.

[2] Not reported in these years.

[3] Estimated as one-half total parks.

quirements for water, lighting and street railways. The city is somewhat restricted . . . with a 4 per cent limit for such general public improvements as sewers, grade separation, port development, airports, playgrounds, hospitals and other public buildings. In fact, the limit at this time is so restrictive that improvements . . . now authorized" exceed the legal limit by $12,000,000. Added borrowing power, however, "which will accrue as a result of the normal annual increase in valuations and other sources (such as annual sinking fund reserves), will be large enough to permit the gradual carrying out of the projects subject to this limitation." [5]

Detroit's rapid financial disintegration, however, destroyed completely the feasibility of this plan. In 1931 assessed valuations began to decline, tax delinquencies rose, and expenditures for purposes other than public construction increased. During the fiscal year ending in June 1931, Detroit spent $13,500,000 for relief, and found itself unable to cover a large sum of short-term securities issued in anticipation of bond sales. A floating debt of $62,000,000 forced it to seek the aid of bankers. The continued slump in the automobile industry, with the consequent reduction of community income and the closing of the Michigan banks in February 1933, culminated in the defalcation of maturities and the demoralization of Detroit's credit standing. In the autumn of 1931 the city government decided to stop all further new public construction that was not absolutely essential. Their decision is reflected in the severe drop in contracts awarded, which in 1932 were only 13 per cent of the 1927 level. Because of its poor credit position Detroit was unable to receive very substantial aid from the Federal government in 1933. In that year the PWA allotted about $331,000 of grants to the city for sewers and streets.

[5] Detroit Bureau of Governmental Research, *Public Business*, Vol. IV, No. 13, February 15, 1929, and *Planning and Control of Public Works*, pp. 156–7.

CHICAGO

In Chicago the peak of public construction in 1927 was succeeded by a 9 per cent decline in 1928 (Table 46). The suspension of tax collections in 1928 and 1929 resulted in further curtailment of public works. In 1930, when collections were again resumed, the general depression had already affected Chicago and still further hindered large expenditures on public construction. Preparation for the World's Fair stimulated expenditures in 1931 and total public construction contracts awarded almost reached the 1929 level. Drastic curtailment in 1932, however, reduced the volume of new contracts to only about 7 per cent of the 1927 or 1928 level. The steady decline in virtually all classes of construction indicates clearly that no deliberate attempts were made during the depression to utilize public works for the alleviation of unemployment and distress. The city engaged in no long-term borrowing in 1933, but PWA authorizations of more than $45,000,000 of loans and grants substantially affected the volume of construction awards in 1934.

The multiplicity of authorities in Chicago and the consequent chaotic condition in its governmental structure is in large part responsible for the planlessness of public works expenditures. Since each of the 400 or more independent or semi-independent governments has its own tax-levying and borrowing powers, responsibility is diffused and there is little coordination among spending bodies and purposes of expenditure. The report of J. L. Jacobs Company for the Advisory Board of Estimate and Apportionment (Chicago, January 1929) indicates the inherent obstacles to the prosecution of a comprehensive plan for public works.

"With the increases in the number and growth of some of these independent local governments, there have necessarily

TABLE 46

CHICAGO, ILLINOIS
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings[1]	$5,266	$623	$3,081	$11,080	$4,564	$5,694	$20,955
Hospitals and institutions	1,076	1,345	1,684	1,262	1,981	4,440	6,150
Military and naval buildings	50	35	5	...	5	160	...
Public buildings	69	1,539	5,499	396	49	125	387
Waterfront developments	40	1,149	800	36	390	80	30
Bridges	4,230	1,264	265	4	1,929	1,676	3,298
Incinerators	...	...	...	...	...	15	200
Lighting systems	293	42,277	100	315	393	227	1,979
Docks and piers	18	...	...	75	...	100	...
Subways and tunnels	140	230	...	...	165	400	100
Sewage systems	2,212	1,300	1,200	5,071	980	24	140
Street paving and road construction	393	91	3,031	8,822	322	10,996	2,147
Water supply systems	40	...	162	...	...	376	3,039
Parks (public)	100	187	...	...	...	...	...
Total public construction	$13,927	$50,040	$15,827	$27,061	$10,778	$24,313	$38,425

PURPOSE	1926	1927	1928	1929	1930	1931	1932
Educational buildings [1]	$16,736	$17,715	$22,423	$19,508	$16,350	$8,893	$57
Hospitals and institutions	6,567	4,197	5,902	12,073	3,387	287	389
Military and naval buildings	71	108	517	1,363	33	22	10
Public buildings	4,786	7,204	965	583	275	15,799	113
Waterfront developments	119	718	2,905	169	20	1,190	45
Bridges	3,787	8,674	2,294	4,408	8,401	2,636	1,145
Incinerators	...	788	...	...	30	3	...
Lighting systems	325	250	525	1,853	651	1,420	44
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	2	7,895	6,231	150	2,087	5,974	32
Street paving and road construction	944	440	2,720	1,547	1,829	2,143	1,330
Water supply systems	200	1,205	3	15	25	7	190
Parks (public)	...	...	112[3]	...	12[3]	300[3]	...
Total public construction	$33,537	$49,194	$44,597	$41,669	$33,100	$38,674	$3,355

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 $79,300; 1920, $333,000; 1921, $690,000; 1922, $325,000; 1923, $1,115,000; 1924, $2,650,000; 1925, $29,245,000.

[2] Not reported in these years.

[3] Estimated as one-half total parks.

ensued considerable duplication and overlapping in certain activities and lack of coordination in others. The planning, design, construction and maintenance of extensive public works and of surface and underground improvements are similarly diffused. Annual expenditures now totalling over a million dollars for these purposes are made with little or no coordinated planning. Separate engineering, designing and construction and repair forces are maintained by the independent agencies. An example of the duplication that exists is the comparatively recent venture of the Sanitary District into the Public Health work in the same territory served by the Health Department of the City of Chicago and the health services of other municipalities within the country. Multiplicity of local governing bodies has also brought with it lack of coordination in the issues of bonds and spreading of special assessments in the same or adjacent governing units. The undertaking of public improvements with little reference to the extent or time of payment and retirement of bonds, and the sources of revenue available and expected ultimately to finance such retirement, has not only brought on financial crises among some of the local governments, but many necessary improvements have been set back because of unwillingness on the part of the taxpayers to burden themselves further without some assurance that the expenditure of public monies for such improvements will be along sound and economical lines."

CINCINNATI

The adoption of a new city charter in 1924, and the subsequent reorganization of the city administration during 1925, freed Cincinnati from financial dominance by the county and prepared the ground for a successful development of its entire public improvements program.

The procedure in general is as follows: The department heads of each bureau of the city, the county and the school board submit annually their budgets for the ensuing year and their esti-

TABLE 47

CINCINNATI, OHIO
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings [1]	$385	$972	$438	$473	$1,268	$420	$2,375
Hospitals and institutions	228	279	7	841	108	934	2,517
Military and naval buildings	20	...	...	...	10	...	43
Public buildings	60	17	5	1,000	...	10	12
Waterfront developments	...	36	...	...	...	...	...
Bridges	662	3,520	3,500	60	50	...	199
Incinerators	...	...	...	...	...	...	...
Lighting systems	140	540	...	...	25	250	173
Docks and piers	...	...	...	...	...	...	...
Subways and tunnels	...	...	...	...	...	...	...
Sewage systems	258	739	379	334	375	10	253
Street paving and road construction	360	1,716	1,546	237	326	481	1,776
Water supply systems	2	...	3	...	144	807	157
Parks (public)	...	...	12	...	...	...	...
Total public construction	$2,115	$7,819	$5,890	$2,945	$2,306	$2,912	$7,505

TABLE 47 *(cont.)*

CINCINNATI, OHIO
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Educational buildings [1]	$2,027	$2,364	$4,087	$2,755	$2,881	$1,526	$408
Hospitals and institutions	933	807	1,731	2,587	2,834	645	466
Military and naval buildings	5	...	...	...	...	91	...
Public buildings	33	...	26	144	78	594	1,852
Waterfront developments	...	...	130	...	119	...	...
Bridges	57	4,202	2,116	414	2,210	1,136	244
Incinerators	...	...	...	251	12	134	...
Lighting systems	5	115	30	...	9	46	534
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	670	454	243	293	596	126	246
Street paving and road construction	3,420	3,252	673	3,132	2,232	...	1,193
Water supply systems	150	7	25	299	190	211	300
Parks (public)	...	250[3]	29[3]	19[3]	10[3]	86[3]	...
Total public construction	$7,300	$11,451	$9,090	$9,894	$11,171	$4,595	$5,243

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 $15,000; 1922, $285,000; 1923, $340,000; 1924, $215,000; 1925, $350,000; in 1920 and 1921 there were no expenditures for private schools.
[2] Not reported in these years.
[3] Estimated as one-half total parks.

mates of capital outlays and expenditures for the ensuing five years. A budget is then prepared for each of the three major governmental units and a five-year program developed. These budgets and programs are then submitted to the joint finance committee of the county, city and school board, and each organization must defend its requests and estimates against the criticism of the other two groups on this board. The aim of the committee is to coordinate the programs of the three governmental units in such fashion that capital outlays are made at a steady rate and that no two of the agencies undertake major enterprises concurrently.

The first program of improvements was established for the year 1928 and included $6,403,000 for various city projects, $2,000,000 for the school district, and $2,150,000 for the county. From the record of public construction contracts presented in Table 47 it would appear that this total of over $10,000,000 was started virtually in full during that year. Construction was further increased during 1929, and in 1930

TABLE 48

CINCINNATI, OHIO
EXPENDITURES ON PUBLIC CONSTRUCTION, 1929–1933
(in thousands)

	(year ending December 31)				
PURPOSE	*1929*	*1930*	*1931*	*1932*	*1933*
Street, sidewalk and parkway improvements	$2,941	$2,181	$1,069	$2,701	$254
Sewer improvements	233	580	355	40	257
Bridge and viaduct improvements	10	269	1,004	182	7
Municipal airports	343	397	21	134	17
Building improvements	565	947	1,284	307	3
Incinerators	275	116	373	. . .	. . .
Park and playground improvements	619	899	256	470	473
Water works improvements	. . .	. . .	106	177	235
Miscellaneous	99	120	270	1,165	370
Total	$5,085	$5,509	$4,738	$5,176	$1,616

Source: Details of disbursements from bond and special assessment funds taken from items listed by H. Urner, Auditor, in a letter of March 15, 1934

an additional $1,300,000 were spent. In 1931, however, contracts dropped nearly 60 per cent below the total for the preceding year, and in 1932 rose only slightly. Actual disbursements for public construction reveal the same trend as contract awards during the depression period but appear to have fluctuated less violently. The precipitous drop in 1933, shown in Table 48, is especially striking.

ST. LOUIS

Upon the approval of the electorate in April 1923, St. Louis followed a comprehensive program of public improvements financed by bond issues in accordance with the provisions laid down in authorizations of $75,372,500 for public buildings and improvements, and of $12,000,000 for new water works.

The ordinance covering the sale of bonds for public buildings and improvements established a definite program which provided for the issuance of these bonds in not more than the following annual amounts, 1923–33 inclusive.[6] Water bonds were to be sold as funds were needed for construction.[7]

1923	$3,000,000	*1929*	$8,000,000
1924	7,000,000	*1930*	9,000,000
1925	6,000,000	*1931*	9,000,000
1926	7,000,000	*1932*	7,372,500
1927	7,000,000	*1933*	4,000,000
1928	8,000,000		
		Total	$75,372,500

[6] Progress under the 1923 Bond Issue, in *Mind Your Business* (Bureau of Municipal Research, St. Louis), November 30, 1926.

[7] In the original program the charter provided that construction contracts could be awarded only when the requisite funds were on deposit in the city treasury. This regulation necessitated the sale of bonds before the money was actually needed. To allow smoother operation in letting of contracts, the city charter was amended in April 1925 to permit contracts to be awarded for public improvements before the requisite funds were in the city treasury. The effect of this arrangement was that the sale of bonds was thereafter controlled by the actual progress of construction.

Bonds issued during the fiscal years (ending in April) 1923–33 are presented in Table 49. Sales of public building and improvement bonds during the calendar years 1923, 1924,

TABLE 49

ST. LOUIS, MISSOURI
LONG-TERM BOND ISSUES, WITH INTEREST RATES AND BASIC YIELDS, 1923–1933

DATE AND PURPOSE	INTEREST RATE (per cent)	TERM OF YEARS	AMOUNT (in thousands)	PRICE	BASIS (per cent)
June 29, 1923					
Public buildings and improvement	4½	12¼ av.	$2,500	$101.17	4.37
Dec. 20, 1923					
Public buildings and improvement	4½	12¼ av.	500	100.481	4.44
Jan. 31, 1924					
Water works revenue	4½	12¼ av.	2,000	102.09	4.76
March 31, 1924					
Public buildings and improvement	4½	12¼ av.	5,000	101.157	4.37
Total, fiscal year 1923–24			10,000		
May 26, 1924					
Public buildings and improvement	4½	12¼ av.	2,000	101.899	4.30
Oct. 31, 1924 Water works	4½	12 1/3 av.	2,500	101.29	4.37
Total, fiscal year 1924–25			4,500		
Sept. 30, 1925					
Public buildings and improvement	4¼	12¼ av.	4,139	99.311	4.32
Total, fiscal year 1925–26			4,139		
Sept. 30, 1926					
Public buildings and improvement	4	12¼ av.	6,000	98.299	4.18
Water works revenue	4¼	12¼ av.	2,500	99.18	4.34
March 31, 1927					
Water works revenue	4¼	12¾ av.	3,000	100.826	4.16
Total, fiscal year 1926–27			11,500		
Sept. 29, 1927					
Public buildings and improvement	4	11½ av.	7,861	100.85	3.91
Total, fiscal year 1927–28			7,861		

TABLE 49 *(cont.)*

ST. LOUIS, MISSOURI
LONG-TERM BOND ISSUES, WITH INTEREST RATES AND BASIC YIELDS, 1923–1933

DATE AND PURPOSE	INTEREST RATE *(per cent)*	TERM OF YEARS	AMOUNT *(in thousands)*	PRICE	BASIS *(per cent)*
Oct. 25, 1928					
Public buildings and improvement	4¼	12¼ av.	10,000	100.619	4.18
Total, fiscal year 1928–29			10,000		
April 15, 1929					
Airport	4½	1–20 ser.	2,000	100.932	4.32
Public buildings and improvement	4½	12¼ av.	2,000	101.332	4.36
April 19, 1929					
Water works revenue	4½	12¼ av.	2,000	100.158	4.48
Oct. 1, 1929					
Public buildings and improvement	4½	12¼ av.	6,000	par	. . .
Jan. 30, 1930					
Public buildings and improvement	4½	12¼ av.	9,000	100.07	4.45
Total, fiscal year 1929–30			21,000		
April 15, 1931					
Public buildings and improvement	4	12¼ av.	8,200	102.539	3.74
Total, fiscal year 1930–31			8,200		
Dec. 1, 1932					
Public buildings and improvement	4	12¼ av.	6,972	101.5299	3.84
Total, fiscal year 1932–33 [1]			6,972		
Sept. 28, 1933					
Public buildings and improvement	4	12¼ av.	1,700	100.849	3.91

Source: Municipal Bond Sales, 1923–1932, published by *The Bond Buyer*, and *The Bond Buyer*, 1933

[1] No bond sales for the fiscal year 1931–32.

1929 and 1930 conform with the amount scheduled in the 1923 program. During 1925, 1926, 1931, 1932 and 1933 sales were below schedule, but the shortages for 1925 and 1926, $1,861,000 and $1,000,000, respectively, were made good

TABLE 50

ST. LOUIS, MISSOURI
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings [1]	$778	$758	$1,187	$3,101	$2,682	$712	$1,494
Hospitals and institutions	391	718	507	2,702	584	1,650	146
Military and naval buildings	...	...	...	...	...	...	...
Public buildings	44	65	94	157	45	...	314
Waterfront developments	...	8	...	...	58	30	...
Bridges	18	...	23	...	768	...	105
Incinerators	...	...	...	70	...	...	...
Lighting systems	...	...	...	35	15	530	103
Docks and piers	...	...	...	...	...	...	...
Subways and tunnels	...	...	...	...	...	...	...
Sewage systems	36	407	225	9	313	1,951	2,323
Street paving and road construction	443	1,242	888	1,964	2,447	1,577	2,078
Water supply systems	...	9	14	440	...	...	...
Parks (public)	...	...	...	...	...	...	...
Total public construction	$1,710	$3,207	$2,938	$8,478	$6,912	$6,450	$6,563

TABLE 50 *(cont.)*

ST. LOUIS, MISSOURI
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Educational buildings [1]	$2,997	$2,507	$1,806	$641	$4,881	$543	$106
Hospitals and institutions	2,605	752	4,459	...	284	1,291	409
Military and naval buildings	...	...	...	...	...	...	...
Public buildings	1,375	5,260	209	35	61	291	126
Waterfront developments	1,232	...	...	...	...	24	...
Bridges	341	153	1,256	...	220	1,321	478
Incinerators	...	...	15	...	...	...	...
Lighting systems	1,900	948	2,731	...	620	...	30
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	629	3,891	2,741	719	898	1,032	554
Street paving and road construction	4,113	3,524	4,280	1,190	3,588	2,934	1,228
Water supply systems	...	470	...	18	...	605	...
Parks (public)	75[3]	...	...	...	...	...	...
Total public construction	$15,267	$17,505	$18,037	$2,603	$10,552	$8,041	$2,931

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 $10,000; 1920, $50,000; 1921, $80,000; 1922, $690,000; 1923, $1,235,000; 1924, $3,075,000; 1925, $388,000.
[2] Not reported in these years.
[3] Estimated as one-half total parks.

during the subsequent two years; sales in 1927 were $861,000 and in 1928, $2,000,000, in excess of the quota for these years.

Although total bond flotations were maintained according to schedule through 1930, public construction contracts awarded dropped in 1929 to less than one-sixth of the 1928 level (Table 50). In 1930 they again increased but fell far short of their former level. The downward trend continued through 1931 and 1932, indicating that St. Louis was forced to ignore its long-term program because of depression exigencies. The fact that the PWA allotments of $634,000 in 1933 to St. Louis were all in the form of grants is further evidence of the city's straitened condition.

PHILADELPHIA

Public construction in Philadelphia had begun to slacken before the depression, and declined sharply during it. Expenditures from loan funds (excluding those of the School District) are given herewith, in thousands of dollars, 1919–1932.

1919	$4,311	*1926*	$55,187
1920	8,584	*1927*	44,050
1921	15,558	*1928*	32,560
1922	19,859	*1929*	24,429
1923	9,336	*1930*	32,045
1924	18,662	*1931*	31,183
1925	57,197	*1932*	12,458

Source: Report on Public Works and Housing, State Emergency Relief Board of Pennsylvania

The record of contract awards (Table 51) tells much the same story. The trend of these figures suggests that little has yet been accomplished in the direction of comprehensive planning of public works. The Philadelphia Bureau of Municipal Research and the Industrial Research Department of the Wharton School of Finance have on various occasions

TABLE 51

PHILADELPHIA, PENNSYLVANIA
PUBLIC CONSTRUCTION CONTRACTS AWARDED, 1919–1932
(in thousands)

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings [1]	$470	$1,618	$1,802	$5,626	$5,200	$5,422	$9,004
Hospitals and institutions	381	652	2,135	3,207	377	3,360	6,416
Military and naval buildings	1,018	1,849	75	284	260	14	216
Public buildings	509	25	279	320	400	315	1,038
Waterfront developments	1,121	197	221	897	525	2,884	472
Bridges	373	294	2,704	2,434	1,906	11,906	...
Incinerators	...	...	5	...	164	...	7
Lighting systems	10	172	207	211	55	330	5
Docks and piers	4,525	18	1,418	2,436	36	40	50
Subways and tunnels	57	50	233	181	1,203	27,700	11
Sewage systems	307	...	2,500	2,005	747	2,122	1,305
Street paving and road construction	1,312	3,619	5,724	1,981	1,431	1,847	723
Water supply systems	169	479	1,951	142	60	282	214
Parks (public)	18	...	159	138	35	56	123
Total public construction	$10,270	$8,973	$19,413	$19,862	$12,399	$56,278	$19,584

PURPOSE	1926	1927	1928	1929	1930	1931	1932
Educational buildings [1]	$11,952	$13,766	$9,197	$15,276	$6,034	$2,680	$6,746
Hospitals and institutions	4,354	6,914	8,906	3,298	3,227	4,402	898
Military and naval buildings	128	141	123	285	57	237	45
Public buildings	2,692	1,664	243	1,073	432	1,805	7,226
Waterfront developments	242	412	1,879	1,082	1,166	1,883	1,136
Bridges	4,109	2,829	5,204	11,254	6,005	969	77
Incinerators	408	...	50	3	188	...	4,707
Lighting systems	100	2,140	1,520	315	585	166	301
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[3]	[3]	[3]	[3]	[3]	[3]	[3]
Sewage systems	2,140	7,196	2,995	2,325	2,386	2,636	62
Street paving and road construction	3,025	6,508	7,734	2,825	4,209	2,438	282
Water supply systems	1,154	182	362	93	883	58	49
Parks (public)	90[4]	13[4]	8[4]	2[4]	41[4]	16[4]	100[4]
Total public construction	$30,394	$41,765	$38,221	$37,831	$25,213	$17,290	$21,629

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 $50,000; 1920, $135,000; 1921, $394,000; 1922, $2,230,600; 1923, $1,138,200; 1924, $2,396,500; 1925, $1,705,700.

[2] Not reported in these years.

[3] Not reported in these years (expenditures from loans funds for construction, improvement and equipment of subways, as reported on Comptroller's reports, amounted in 1919 to $2,610,093; 1920, $1,747,645; 1921, $2,591,890; 1922, $5,120,112; 1923, $207,541; 1924, $3,316,456; 1925, $30,567,107; 1926, $24,185,365; 1927, $18,966,420).

[4] Estimated as one-half total parks.

advocated the policy of cyclical control of new construction.[8] A number of bills with this objective have been introduced in the Pennsylvania legislature (see Ch. 1). But "the idea has not yet been tried either in Pennsylvania or in any important political subdivision".[9]

The passage of a City Planning Ordinance in April 1929 and the appointment of a commission to develop a city plan were significant in indicating the need felt for planning. Although Philadelphia undertakes construction with funds derived from long-term borrowing, its floating debt in recent years has been a serious obstacle to the acceleration of public works. By weakening the credit position of the city, it has hindered the sale of long-term bonds. Recent reorganization of city finance has been directed towards curbing mandamus expenditures and providing for the payment of floating debt.

BUFFALO

The pronouncedly adverse effect of the business depression upon the whole range of public building activities in Buffalo and the absence of definite attempts to accelerate public works is clearly indicated by the record of contracts awarded, presented in Table 52. The upward trend until 1929, the peak year, was followed by a sharp decline during 1930–32. By 1932 the volume of contracts had declined approximately 72 per cent from the 1929 level. Actual disbursements for public works during the depression are shown by Table 53 to have followed a similar course.[10] Since

[8] W. N. Loucks, *The Stabilization of Employment in Philadelphia.*

[9] *Report on Public Works and Housing,* State Emergency Relief Board of Pennsylvania, January, 1935. Cf. *Public Works and Stabilization of Employment in Philadelphia,* a memorandum based on a field study (Division of Building and Housing, U. S. Department of Commerce, December 1929).

[10] The totals are distinctly larger, mainly because 'actual disbursements' cover fiscal years, whereas the Dodge data cover calendar years; furthermore, contract awards represent only the initiation of new construction, while outlays

(Note concluded on p. 193)

TABLE 52

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

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings [1]	$884	$1,205	$1,270	$2,684	$2,715	$2,382	$5,040
Hospitals and institutions	1,214	3	10	318	45	230	500
Military and naval buildings	54	8	...	...	4	...	...
Public buildings	28	61	84	100	773	605	123
Waterfront developments	34	619	...	350	2,200	...	250
Bridges	549	439	...	10	...	...	3,000
Incinerators	...	...	...	...	...	...	459
Lighting systems	...	25	8	148	2,048	85	...
Docks and piers	129	23	...	50	75	...	1,000
Subways and tunnels	9	...	...	...	...	...	37
Sewage systems	24	17	...	...	28	...	...
Street paving and road construction	688	442	215	55	55	...	15
Water supply systems	348	1,449	...	4,000	...	...	...
Parks (public)	19	5	...	...	...	45	...
Total public construction	$3,980	$4,296	$1,587	$7,715	$7,943	$3,347	$10,424

TABLE 52 *(cont.)*

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

PURPOSE	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Educational buildings[1]	$2,063	$3,562	$6,351	$2,870	$2,021	$575	$42
Hospitals and institutions	2,461	2,261	1,317	738	108	487	1,116
Military and naval buildings	25	22	3	34	40	41	910
Public buildings	288	1,109	108	7,667	473	403	37
Waterfront developments	1,389	335	493	385	43	628	298
Bridges	...	43	666	1,003	50	760	...
Incinerators	...	...	...	...	...	22	...
Lighting systems	...	...	...	...	215	5	35
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	38	169	60	1,359	...	68	2
Street paving and road construction	1,971	5,008	1,546	2,370	...	1,534	688
Water supply systems	82	13	8	232	...	36	16
Parks (public)	...	...	...	11[3]	...	74[3]	4[3]
Total public construction	$8,317	$12,522	$10,624	$16,669	$2,950	$4,633	$3,148

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 $81,000; 1920, 0; 1921, $210,000; 1922, $815,000; 1923, $80,000; 1924, $685,000; 1925, $120,000.

[2] Not reported in these years.

[3] Estimated as one-half total parks.

TABLE 53

BUFFALO, NEW YORK
EXPENDITURES ON PUBLIC CONSTRUCTION, 1930–1933[1]
(in thousands)

PURPOSE	*1929–30*	*1930–31*	*1931–32*	*1932–33*
Airport construction and improvement	$299	$56	$101	$1
Education	4,389	3,454	1,450	344
City hall	1,742	3,904	1,068	59
Fire department	19	160	351	. . .
Harbor and river channel improvements	141	17	80	. . .
Highways and highway improvements	864	644	540	602
Parks and playgrounds	243	309	129	50
Police department	148	61	6	. . .
Public hospitals and health	186	339	269	3
Public markets	. . .	17	18	. . .
Public sewers and sewage disposal	283	1,166	135	2
Water supply system	398	791	1,464	177
General	310	26	89	3
Total	$9,020	$10,944	$5,701	$1,242

Source: Financial Reports, City of Buffalo, 1930–33

[1] Includes disbursements for land and equipment.

"all public works are planned with a view first as to their actual necessity and second as to our borrowing margin",[11] it is unlikely that any long-time program will be undertaken for some years to come. The unused debt margin, which was $38,000,000 in June 1932, had declined to $19,000,000 in June 1933, despite the decrease in borrowing for public works. In 1933 the PWA authorized a total loan and grant of more than $2,000,000 for schools and storm drainage.

ROCHESTER

Rochester constitutes one of the leading examples of a community in which, through cooperative action, a vigorous

may be for construction in progress or completed. A further source of discrepancy is found in the composition of the disbursement figures (see footnote to Table 53).

[11] Letter from the Department of Audit and Control, March 20, 1934.

attack was made on the unemployment problem, as a result of a well organized city administration and the civic consciousness of the citizens.

Early in 1930 the recognition that a period of serious business decline accompanied by wide-spread unemployment was at hand led a group of prominent citizens, with the cooperation of city and county officials, to organize the Civic Committee on Unemployment. It "immediately launched upon a program of emergency action to overcome as much of the ill effects of a depression as possible. At the same time it undertook a careful analysis of the problems of employment so that in due time constructive measures could be formulated and adopted which would measurably decrease unemployment locally and promote public welfare".[12] The committee itself comprised the following subcommittees: Fact-Finding, Stabilization of Employment, Construction Reserve, Central Employment, Temporary Employment, Relief Study, Vocational Guidance and Training, and Public Information. For each of these subdivisions both a plan for emergency action with respect to the current depression and a permanent policy for the future were worked out.

Of particular significance in connection with public works are the steps taken by the Construction Reserve Committee. In conferences held between those interested in construction work, including city, county and state engineers, agreement was reached on the desirability of hastening the building program for 1930 and stimulating all possible construction work.[13] Prompt action was made possible on roadbuilding, and on work on river banks and parks, and the School Board cooperated fully in providing employment through making alterations, cleaning school buildings, and putting grounds

[12] Report, December 30, 1930.
[13] "The work was materially aided by the city and county officials' early recognition of the importance of speeding up public works and their responsibilities for undertaking such projects in time of emergency."

in good shape. The Council expedited the adoption of as many local improvement ordinances as possible.

The success of these efforts, until 1932, is indicated in Tables 54 and 55, which present respectively expenditures and contracts awarded for public construction in recent years. During the last thirteen years the Board of Education has planned its work five years in advance. The value of their foresight is evident in the increase of expenditures on schools during 1931 and 1932. During the first two years of the depression large sums were also expended on bridge con-

TABLE 54

ROCHESTER, NEW YORK
EXPENDITURES ON PUBLIC CONSTRUCTION, 1925–1932[1]
(in thousands)

	(fiscal years ending December 31)							
PURPOSE	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Schools (buildings and equipment)	$566	$1,131	$1,036	$1,530	$1,982	$1,081	$1,523	$1,589
Bridges	29	. . .	. . .	. . .	260	2,042	2,021	360
Sewage disposal plant	6	40	16	19	141	172	10	3
Water works	458	477	357	136	122	68	68	19
Subway construction	2,073	1,747	1,777	543	99	30	91	13
Parks and playgrounds	. . .	76	. . .	. . .	73	47	665	84
Public buildings (hospital, library)	314	350	74	39	64	60	83	8
Miscellaneous	133	173	10	137	151	2	. . .	293
Subtotal	3,579	3,994	3,270	2,404	2,892	3,502	4,461	2,369
Local improvements (street improvements and extensions, sewer construction)	3,350	3,332	3,542	2,059	2,302[2]	2,016[2]	1,110	291
Total	$6,929	$7,326	$6,812	$4,463	$5,194	$5,518	$5,571	$2,660

Source: Annual Reports of the Comptroller

[1] The figures represent costs of actual construction (expenditures for land excluded wherever possible) which have been listed as "additions to capital assets due to new construction" in the *Annual Reports* of the Comptroller, plus the amounts spent for local improvements from assessment funds. The two together indicate total amounts spent for public construction as closely as they can be determined.

[2] Represents total capital disbursements from assessment (local improvement) funds.

TABLE 55

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

PURPOSE	*1919*	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*
Educational buildings[1]	$1,239	$1,332	$836	$3,040	$272	$644	$216
Hospitals and institutions	167	1	255	145	1,934	2,030	500
Military and naval buildings	4	4	49	...	...	...	10
Public buildings	72	10	8	54	...	250	450
Waterfront developments	662	861	15	1,806	...	...	...
Bridges	5	500	65	10	...	5	...
Incinerators	...	...	...	...	...	10	...
Lighting systems	...	...	...	...	231	105	2,929
Docks and piers	...	...	...	24	...	...	...
Subways and tunnels	...	16	...	...	2,000	...	1,938
Sewage systems	239	...	97	202	82	43	35
Street paving and road construction	498	65	93	580	128	127	468
Water supply systems	...	...	...	...	2	...	...
Parks (public)	...	...	...	...	...	...	...
Total public construction	$2,886	$2,789	$1,418	$5,861	$4,649	$3,214	$6,546

PURPOSE	1926	1927	1928	1929	1930	1931	1932
Educational buildings [1]	$1,736	$2,301	$3,051	$1,643	$1,916	$3,164	$35
Hospitals and institutions	13	1,189	2,292	1,126	1,982	3,276	365
Military and naval buildings	...	...	...	...	16	...	...
Public buildings	16	31	7	6	3	46	807
Waterfront developments	510	...	...	...	...	4	...
Bridges	...	...	...	824	3,250	...	...
Incinerators	...	...	...	...	...	...	...
Lighting systems	...	30	11	2,000	...	14	...
Docks and piers	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Subways and tunnels	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Sewage systems	215	387	162	404	81	177	45
Street paving and road construction	944	1,875	1,087	1,389	963	1,548	73
Water supply systems	...	1,000	...	...	...	29	2
Parks (public)	...	...	...	...	[2]	250[3]	...
Total public construction	$3,434	$6,813	$6,610	$7,392	$8,213	$8,508	$1,327

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 0; 1920, $100,000; 1921, $50,000; 1922, $520,000; 1923, $20,000; 1924, $1,333,000; 1925, $250,000.

[2] Not reported in these years.

[3] Estimated as one-half total parks.

struction.[14] Total contracts awarded for public construction in 1930 and 1931 show increases of approximately 11 and 15 per cent, respectively, above the 1929 level. The sudden reduction in 1932, in both contracts and expenditures, was largely the result of retrenchment. The rapid rise in tax rates and assessed valuations placed an increasingly heavy burden on the community. In 1933 Rochester, like many other communities with curtailed income, resorted to the expedient of short-term borrowing for permanent improvements. Total long- and short-term borrowing, however, was far below the customary level.

LOS ANGELES

Although Dodge data do not include the far western section of the United States, the magnitude of the undertakings of certain western municipalities makes desirable their inclusion in this study.

The financial reports of governmental departments of Los Angeles are drawn up in a manner that precludes the possibility of extracting from them figures of expenditures on public construction financed from tax receipts. The material presented and analyzed in this section, therefore, relates almost exclusively to the trend of permanent improvements financed from borrowing. The omission is, however, not serious because Los Angeles pays for very much the greater part of its public works, including special assessment work, by means of long-term obligations.

During the last eight years the outstanding undertakings of Los Angeles have consisted of harbor improvements, electric power plant construction, and the extension of water supply systems. Though few in number, these projects are

[14] The reason that these figures of actual expenditures, presented in Table 54, are considerably lower than the corresponding figures of contracts awarded lies in certain differences in composition and the usual tendency of expenditures to lag behind contracts awarded.

important because of their magnitude. This is clearly illustrated in Table 56 showing the amounts and distribution of outstanding bonded debt, 1926–33. Harbor projects, power

TABLE 56

LOS ANGELES, CALIFORNIA
AMOUNT AND DISTRIBUTION OF OUTSTANDING BONDED DEBT, 1926–1933
(in thousands)

	(amount outstanding June 30)							
	1926	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*
GENERAL CITY BONDS								
General purposes	$31,652	$36,426	$35,371	$37,662	$39,868	$46,898	$45,431	$43,780
Harbor	21,534	20,903	20,248	22,305	23,753	23,002	22,250	21,499
Power	43,150	35,072	39,396	40,527	39,195	37,863	36,531	35,199
Water	38,625	43,184	43,166	44,984	43,831	53,164	53,834	55,240
Total	123,961	135,585	138,181	145,478	146,647	160,927	157,936	155,718
IMPROVEMENT DISTRICT BONDS								
General purposes	2,767	3,360	3,276	4,740	5,029	5,027	4,871	4,945
Water	6,437	6,183	6,324	6,315	6,126	6,045	5,766	5,257
Total	9,204	9,543	9,600	11,055	11,155	11,072	10,637	10,202
							732[1]	732[1]
Grand total	$133,165	$145,128	$147,481	$156,533	$157,802	$171,999	$169,305	$166,652

Source: Annual Reports of the Controller for fiscal years ending June 30

[1] Acquisition and Improvement District Bonds.

plants, and water supply systems have properly been designated as the public utilities of the city. They are the most important group of the city's public works, and are responsible, on the average, for two-thirds of its bonded indebtedness. During the depression, however, borrowing has been curtailed for almost every type of construction except the development of water systems. In 1930–33, bonds to the value of $38,000,000 were issued for the latter purpose.[15] The sharp rise in bonded debt in 1931 was due to large issues for street improvement and water systems. Grant authorizations by the PWA in 1933 were for buildings and roads.[16]

[15] On September 29, 1931 the Metropolitan Water District, of which Los Angeles is the most important member, authorized a bond issue of $220,000,000 to finance the building of an aqueduct to supply the Los Angeles metropolitan area.

[16] That same year the Los Angeles Board of Education adopted a $31,272,000 school reconstruction and repair program to be distributed over a three-year period.

In recent years the possibility of carrying on extensive public improvements by means of Municipal Improvement District bonds has been very slight. Even before the depression a serious situation had developed in Los Angeles as a consequence of the heavy indulgence in special assessments, a common practice in Californian cities. In more than one community whole blocks, once occupied by bungalow houses, were deserted because owners preferred to abandon them rather than pay the heavy assessments levied against them. Los Angeles, because of its exceedingly rapid growth (the population almost tripled in the decade 1920–30), had to undertake permanent improvements with such haste that it was forced to supplement regular long-term borrowing with special assessments. In many instances the projects expedited by special assessments did not reap the expected benefits. Since non-payment of either taxes or assessments is ground for foreclosure, many property owners stopped paying both. The high rate of tax delinquency can be traced almost directly to the burden of assessment.

Since the number of permanent improvements in Los Angeles financed from special assessment proceeds has in recent years been very large, serious problems are raised concerning the volume of work that can be undertaken in this manner in the future. Aside from the financial difficulties experienced as a result of the excessive utilization of special assessments, this procedure is unsuited by its time-consuming nature to rapid acceleration of public improvements during depression periods. The decline in the amount of Municipal Improvement District Bonds (Table 56) during the last three years may be an indication of the city's awareness of the defects of a too extensive use of this method of financing public works.

SAN FRANCISCO

In 1928, in a pamphlet entitled A Capital Expenditure Program for San Francisco, the San Francisco Bureau of Governmental Research presented a complete list of proposed and continuing major public improvement projects, and emphasized the need of orderly planning and financing for the city's proper physical development.

In the past construction projects have been taken up individually as circumstances dictated, without consideration of their effect upon the financing of other perhaps more important improvements. The lack, in many instances, of adequate provisions for street and sewer reconstruction, for schools, playgrounds and other constant needs, has retarded development in these categories of public works. Consequently, public works have been carried out in a haphazard fashion. The outlays presented in Table 57 include expendi-

TABLE 57

SAN FRANCISCO, CALIFORNIA
OUTLAYS ON PERMANENT IMPROVEMENTS, 1925–1932
(in thousands)

	(fiscal years ending June 30)							
PURPOSE	*1925*	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
General government	$444	$371	$282	$191	$207	$191	$128	$82
Protection of persons and property	242	235	259	245	388	232	181	162
Conservation of health	27	90	203	48	18	8	8	3
Sanitation and promotion of cleanliness	127	188	179	231	211	286	942	351
Highways	905	1,690	2,261	3,233	4,061	3,553	2,393	1,501
Recreation	922	756	866	783	771	1,015	2,130	3,339
Water works	. . .	. . .	. . .	. . .	. . .	40,030[1]	1,028	1,022
Electric light plants	. . .	. . .	79	. . .	. . .	92	93[2]	85
Municipal railway	290	179	399	425	432	71	79	37

Source: Annual Reports of Financial Transactions of Municipalities and Counties of California for the fiscal years 1925–32; issued by the State Controller

[1] From March 30, 1930 (date of acquisition by city and county) to June 30, 1930.
[2] Exclusive of the amount received and retained by the Pacific Gas and Electric Company for distribution.

tures for land and equipment but they give some indication of the trend of expenditures for public construction in recent years. Disregarding the large total outlay for water works, all governmental groups have curtailed expenditures. The heavy outlay for water works in 1930 resulted chiefly from the acquisition by the city of the Spring Valley Water Supply and distributing system which had previously been owned privately.

This purchase, which was to have been effected in 1928, was consummated almost two years later because the condition of the bond market during 1928 and most of 1929 made the sale of the bonds at par in accordance with charter requirements impossible. Bonds in the amount of $41,000,000 were offered for sale 'over the counter' until December 1929, when the Bank of Italy made an acceptable offer which enabled the city to acquire the water supply system in March 1930.

In January 1933 work was begun on the Golden Gate Bridge connecting San Francisco with Marin County. A $35,000,000 bond issue, authorized three years previous, was to be sold as funds were needed. Another bridge connecting San Francisco with Oakland is being financed by revenue bonds issued by the California Toll Bridge Authority. These bonds, $61,400,000, have been underwritten by the RFC. Material aid by the PWA appears to be noticeably increasing the volume of work now in progress. A summary[17] of the estimated expenditures on public works by cities in California in 1934 indicates the prominence of San Francisco in this program. Of a total of $110,000,000 San Francisco was to allocate more than one-third.

Causes of the Failure to Expedite Public Works during the Depression

A survey made in September 1930 of the status and progress of needed public improvements in 236 leading cities

[17] *Construction Outlook in California* by J. Treanor (California Journal of Development, January 1934).

throughout the United States [18] showed that billions of dollars worth of public improvements involving Federal, state, county and municipal construction were estimated to be needed in these cities alone. Projects scheduled for the more distant future were omitted, only those improvements being included which were definitely under consideration for construction. A very large volume, in the aggregate, of low-cost projects was also omitted. The variety of reasons given for the delays and postponements of public construction programs is interesting. The chief causes listed were slowness of official procedure, difficulty of authorizing and passing bond issues; lack of public funds; delays in drawing plans, asking bids and awarding contracts; litigation; government 'red tape'; private differences; site selection; condemnation proceedings; difficulties of securing legislative appropriations; and general depression in business and industry. Some of these causes of delay were of course intimately related to others. Thus popular hostility is closely linked with the height of local taxation and other financial troubles, and in turn often explains the defeat of bond issue proposals.

A year later, in its report issued in October 1931, the Committee on Employment Plans and Suggestions of the President's Organization on Unemployment Relief summarized the obstacles that had delayed the progress of public works as follows:

"There is hardly a state and few industrial districts which have not in abeyance extensive programs of public improvements and for which in many cases all the preliminary authority and financing has been completed. These projects remain dormant, however, because of obstacles usually describable by the term 'red tape'. In some cases it is only the requirement, entirely justified in ordinary circumstances, that a certain period elapse

[18] Survey conducted by S. W. Straus and Company of New York in cooperation with local Chambers of Commerce, Boards of Trade, etc.

between initial proposal and final approval; in others it comprises a too meticulous reading of statutory limitations, which, again, are plausible and desirable only under normal conditions; still in others the delay results from interference by partisan or otherwise especially interested groups who take advantage of slow legal processes in the raising of minor or inconsequential points to compel adoption of their selfish views."

During the succeeding eighteen months, the depression steadily intensified in severity, and the financial difficulties of local governments in launching public works programs were correspondingly aggravated. In consequence the public works activities of state and city governments were very materially retarded. During the first year or so after the recession the delays in forwarding public works were very largely attributable to the difficulties of a technical and administrative nature involved in accelerating them at short notice in the absence of adequately laid plans. In the early stages of the depression the lack of plans and specifications, the delay in selecting and acquiring sites, the time consumed in authorizing projects and getting appropriations made for them, the cumbrous official procedure involved, were very largely responsible for the failure to expand speedily the volume of public works.

As the depression continued, however, the financial difficulties of local governments became progressively more acute and made imperative the greatest possible reduction in expenditures on public improvements. Any expansion of construction programs, on their own initiative, even where other obstacles were not present, was usually out of the question. Already early in 1932 New York City, with an unexcelled credit record among city governments, encountered considerable difficulty in borrowing $100,000,000, and eventually did so only by undertaking to effect a drastic reduction in expenditures and at the abnormally high rate of 6

per cent (see Ch. VIII). With the passage of time the situation, as shown above, became progressively worse. Chicago was for months without funds with which to pay its teachers, policemen and firemen. Philadelphia was also forced temporarily to cease paying salaries. Financial conditions of local governments in smaller cities and in rural areas were not essentially different in numerous instances, and exceptions, such as Milwaukee, of cities which had adequate resources readily available to meet their needs were extremely rare: although it is significant that those states and cities which had kept their expenditures down during previous years were able to obtain credit at a low rate of interest. The roots of the difficulties often lay in conditions prevailing prior to the recession, but everywhere the depression aggravated them and frequently precipitated a virtual financial crisis by squeezing local governments between the pincers of diminished receipts and heavily increased expenditures in certain directions; the latter had arisen, as shown below, because the major burden of unemployment relief had been imposed until relatively late in the depression upon the budgets of local governments, city and county. Meanwhile the volume of taxes in arrears kept steadily increasing. In these circumstances local agencies found it impossible not merely to expand their public works programs, but even to proceed with them at the previous normal rate. Furthermore, as shown in Chapter XI, despite the drastic and continued deflation of private security values, municipal bonds became increasingly difficult to place, and local bodies were faced in consequence with the necessity of curtailing expenses and deferring all possible improvement projects, limiting themselves to applying for such funds as were essential for the conduct of municipal affairs.

The root of the financial difficulties of the municipalities is thus seen to have lain in their lack of reserves of borrow-

ing power which could be drawn upon during times of depression: and this in turn may be traced to the large bond issues for public works sold in good times. The seriousness of the obstacle which this condition creates in the way of the rapid expansion of construction is thrown into clear relief by the difficulty encountered in the latter half of 1933 in speedily utilizing for state and local, as contrasted with Federal projects, the huge funds made available, partly by grants and partly through loans, by the PWA under Title II of the National Industrial Recovery Act.