

Chapter H. Construction and Housing (Series H 1-135)

Construction: Series H 1-80

CONSTRUCTION EXPENDITURES (H 1-39)

H 1-25. General note. Construction expenditures, estimated dollar volume, 1915-1945. SOURCE: Bureau of Foreign and Domestic Commerce, *Industry Report on Construction and Construction Materials, Statistical Supplement*, "Construction Volume & Costs, 1915-1947," May 1948. For 1939-1945, the estimates were developed jointly by the Department of Commerce and the Department of Labor. For 1920-1938, the estimates of private residential building (excluding farm) were compiled by the Department of Labor, Bureau of Labor Statistics. All other estimates for the period 1915-1938 were compiled by the Department of Commerce, Bureau of Foreign and Domestic Commerce, Construction Division. Detailed current estimates of construction volume appear monthly in the *Industry Report on Construction and Construction Materials*, published by the Bureau of Foreign and Domestic Commerce and in *Construction* issued by the Department of Labor.

These estimates represent the current value of construction work put in place during the year, including the value and cost of installation of equipment which is an integral part of a structure, but excluding costs for machinery and land. Since they are based upon work performed during the year, these estimates differ from building permit and contract award data which are indicative of the value of work started. (The value of *work started* represents the total estimated costs of projects begun in a given period. The value of *work put in place* represents the estimated expenditures on labor, materials, and overhead in a given period for projects, or parts thereof, on which construction work was in progress during the period, whether such projects were begun in a prior period or currently.)

The source publication comments as follows on the reliability of these data: "With minor exceptions, the data . . . are estimates . . . based on the best available primary data, adjusted as necessary to approximate a complete and comprehensive measure of over-all construction activity.

"The reliability of the estimates cannot be measured in mathematical terms. In general, however, it seems probable that the year-to-year changes in the figures for new construction are generally correct as to direction and at least approximately correct as to order of magnitude. The absolute level of the series is likely to be less exact than the year-to-year changes. . . .

"The figures for the federally financed public construction and the annual figures for most of the privately financed public utility construction would appear to be the most reliable portions of the estimates. The least reliable figures are those for maintenance and repair of nonfarm buildings, both residential and nonresidential, and the farm construction figures."

Following is a summary of the sources and methods developed and used in compiling the estimates for the chief types of construction. The emphasis is chiefly on current procedures, but the earlier sources and methods have been indicated briefly.

H 1-3. Total, total new, and total new private construction, 1915-1945. SOURCE: See general note, series H 1-25, and detailed listings below. Series H 1 represents summation of series H 2, 24, and 25; series H 2 represents summation of series H 3 and H 13; series H 3 represents summation of series H 4-5 and H 9-12.

H 4. New private residential construction (excluding farm), 1915-1945. SOURCE: See general note for series H 1-25. See also, for general reference, Housing and Home Finance Agency, *Housing Statistics Handbook*, 1948. Estimates of the dollar volume of new

private nonfarm residential building are derived directly from estimates of construction cost of new private nonfarm dwelling units (included in series H 46). For 1941-1945, the estimated construction cost for the units started each month is distributed according to a percentage pattern over the months during which actual construction work is estimated to occur, and then the distributed cost figures are totalled for each month. Estimates of construction time and the monthly pattern of expenditures outlay on residential building are made on the basis of the most recent field information about the average construction period and the extent of labor utilization each month on residential projects.

For 1921-1940, when monthly starts and construction cost data were not available, expenditures for residential building were derived from annual figures on construction costs, with only slight adjustment to include expenditures for units started before the beginning of the calendar year and to exclude expenditures for units started near the end of the year and not completed within the year. The 1915-1920 estimates are projected back from the 1921-1922 average by using link relatives indicated by year-to-year changes in the value of residential building contracts awarded as reported by F. W. Dodge Corporation. For a series beginning in 1900, see series H 47.

H 5-8. New private nonresidential building, 1915-1945. SOURCE: See general note for series H 1-25. Basic source is the record of contracts awarded as published by F. W. Dodge Corporation of New York, N. Y. (See text for series H 51-57.) Separate estimates were made for each of the following types of new private nonresidential buildings: Industrial; warehouses, office and loft buildings; stores, restaurants, and garages; religious; educational; hotels; social and recreational; hospital and institutional; and miscellaneous. The estimates of construction activity were derived by adjustment of the contract data for geographic and other under-coverage, rescissions and duplication of construction reported by public utilities, and by conversion to a work put in place basis.

H 9. Farm construction, 1915-1945. SOURCE: See general note for series H 1-25. Annual estimates of farm construction and maintenance were made by the Bureau of Agricultural Economics, Department of Agriculture, and were first published in the Department of Agriculture study, *Income Parity for Agriculture*, part II, section 5, March 1941. Separate estimates were prepared for operators' dwellings and for service buildings, which correspond respectively to residential and nonresidential building. Since the source estimates include both new construction and maintenance, a break between the two has been computed by the Department of Commerce on the basis of estimates of farm consumption of lumber as prepared by the Forest Service, Department of Agriculture. Data shown here do not include maintenance.

H 10. Railroads, including local transit, 1915-1945. SOURCE: See general note for series H 1-25. For 1922-1945, the annual volumes of the *Statistics of Railways in the United States*, Interstate Commerce Commission, and the annual *Review of Railway Operations*, Bureau of Railway Economics, Association of American Railroads, provided the gross capital expenditures of Class I railroads for road and structure. Estimates of construction expenditures of all railroads were obtained by the upward adjustment of the data for Class I railroads on the basis of the total investment in road and structure of Class I railroads and of all railroads. The estimates for 1915-1921 are based on extrapolation of expenditures data on the basis of miles of new track added.

Annual data on capital and maintenance expenditures of the transit industry for 1922-1945 were obtained from the *Transit*

Fact Book published by the American Transit Association. The association made available data on the expenditures of municipally owned transit companies, so that by subtraction the expenditures of the privately owned companies were obtained. The estimates for 1915-1921 are based on extrapolation of expenditure data on the basis of miles of track added or rebuilt.

H 11. Electric light and power, gas, and pipe lines, 1915-1945. SOURCE: See general note for series H 1-25, above. For 1937-1945, annual additions to electric plants have been reported to the Federal Power Commission. The data were adjusted to include small companies not reporting and to allow for work in progress and existing property purchased. For 1921-1936, data from the Edison Electric Institute were used. The estimates for 1915-1920 are based on an estimated year-by-year distribution of the 5-year increments in plant and equipment derived from data reported in the Census of Electrical Industries, Bureau of the Census, for 1912, 1917, and 1922.

The American Gas Association has published annual data, 1929-1945, on construction expenditures for both the manufactured and the natural gas utility industries. The reported data were adjusted to eliminate equipment expenditures. For 1915-1928, estimates were obtained by extrapolation on the basis of year-to-year changes in the fixed capital accounts of 50 large companies.

Capital expenditures on pipe lines for 1919-1945 were obtained from the reports filed with the Interstate Commerce Commission. Adjustment was made for the purchase of existing lines and for expenditures by companies not required to file information with the Commission. Only a rough estimate by the Construction Division, Bureau of Foreign and Domestic Commerce, is available for 1915-1918.

H 12. Telephone and telegraph, 1915-1945. SOURCE: See general note for series H 1-25. Estimated construction expenditures of the telephone industry for 1915-1945 were obtained from the American Telephone and Telegraph Co. Construction expenditures of the telegraph industry were derived from capital expenditures reported by the Western Union Telegraph Co. for 1927-1945 and by the Postal Telegraph and Cable Co. for 1919-1943. Extrapolation back to 1915 was made on the basis of annual increments in the value of plant and equipment.

H 13. Total new public construction, 1915-1945. SOURCE: See general note, series H 1-25. These data represent summation of series H 14-15, 19-23.

H 14. Public residential construction, 1918-1919, 1934-1945. SOURCE: See general note for series H 1-25. For 1939-1945, public residential construction estimates have been based upon regular progress reports issued by the Federal Public Housing Authority and other public housing agencies listing the value of work put in place for individual projects. Adjustments were made to cover funds contributed to the Federal projects by local agencies. Expenditures by the United States Housing Corporation for 1918-1919, and by the Public Works Administration, Resettlement Administration and Alley Dwelling Authority from 1934, were compiled from the annual reports of these agencies.

H 15-18. Public nonresidential building, 1915-1945. SOURCE: See general note for series H 1-25. Estimates through 1941 are based on the F. W. Dodge Corp. reports of contracts awarded for public buildings. These reports are published in the *Dodge Statistical Research Service*, "Construction Contracts Awarded," New York, N. Y. From 1942 on, estimates were based on specially prepared construction progress reports furnished by Federal agencies, supplemented by contract award reports of the F. W. Dodge Corp. See also text for series H 51-57.

H 19. Military and naval facilities, 1915-1945. SOURCE: See general note for series H 1-25. For 1940-1945, construction expenditures of the War and Navy Departments are based upon engineers' progress reports issued by these agencies. Navy Department construction expenditures for 1915-1936 were derived from special tabulations of the Bureau of Supplies and Accounts,

United States Navy Department. Expenditures of the Navy for 1937-1939 and the War Department for 1915-1939 are based upon expenditures shown in the *Budget of the United States Government*.

H 20. Highways, roads and streets, 1915-1945. SOURCE: See general note for series H 1-25. For 1921-1945, construction estimates for State administered highways are based on annual reports of the Bureau of Public Roads, and are adjusted to include expenditures by county, municipal, and other local bodies. The adjustments are based upon ratios developed from the analysis of total highway construction and State highway construction. Estimates from 1915 to 1919 are derived from the 1920 Department of Agriculture *Yearbook*. The 1920 estimates are obtained by straight-line interpolation.

H 21. Sewage disposal and water supply systems, 1915-1945. SOURCE: See general note for series H 1-25. For 1915-1942, construction estimates are based upon data published annually in *Financial Statistics of Cities*, Bureau of Census. Using the expenditure patterns of the city size groups reporting, expenditure ratios were derived for the smaller municipalities and rural incorporated areas. For 1943-1945, estimates are based upon contracts awarded as reported by F. W. Dodge Corp. (see text for series H 15-18) with adjustments for undercoverage.

H 22. Conservation and development, 1915-1945. SOURCE: See general note for series H 1-25. For 1915-1942, expenditures for reclamation, improvement of rivers and harbors, and flood control work are derived from annual reports of the Army Chief of Engineers and the Commissioner of Reclamation. The fiscal-year basis of the reports are converted to calendar year by taking one-half of the figure for each fiscal year included within that calendar year. For 1943-1945, estimates are based upon project reports furnished by the Corps of Engineers and the Bureau of Reclamation. Tennessee Valley Authority expenditures are available in annual reports by the Authority. Bureau of Indian Affairs, Forest Service, National Park Service and Soil Conservation Service expenditures are derived from special tabulations prepared by those agencies, and from the *Budget of the United States Government*.

H 23. Other public construction, 1915-1945. SOURCE: See general note for series H 1-25. Construction expenditures of all Federal agencies not discussed above are derived from the *Budget of the United States Government*. Outlays for municipal public service enterprises are obtained directly from the municipality or estimated on the basis of information reported in *Financial Statistics of Cities*, Bureau of Census. Current miscellaneous non-Federal public construction estimates are derived primarily from reports of contracts awarded, compiled by the F. W. Dodge Corp., and from the *Engineering News-Record* and other publications reporting contract awards.

H 24. Work relief, 1933-1943. SOURCE: See general note for series H 1-25. From the total relief expenditures as given in annual reports of the Federal Work Projects Administration, deductions were made for nonconstruction expenditures, and for expenditures included under other categories of construction. Approximately half of the expenditures reported for public buildings and housing, and a third of the expenditures for public recreation facilities, were included in the estimates of new public nonresidential building; these amounts were excluded from the work-relief figures. For conservation work, work-relief figures include only the amounts expended for irrigation and water conservation. They also include all work-relief expenditures for highways, roads, streets, etc., electric utilities, water and sewage systems, and transportation systems.

H 25. Maintenance and repairs, 1915-1945. SOURCE: See general note for series H 1-25. Residential maintenance for nonfarm owner-occupied dwelling units is largely estimated on the basis of consumer expenditure surveys for 1935-1936 and 1941 by the Bureau of Labor Statistics, Department of Labor, and the Bureaus of Home Economics and Agricultural Economics, Department of Agriculture. Extrapolation throughout 1915-1940 was made on the

basis of variations in income per family, and since 1940 on the basis of retail sales of building materials.

Residential maintenance for nonfarm tenant-occupied dwelling units was largely estimated on the basis of surveys for 1939-1943 made by the Office of Price Administration in connection with rent control, and consumer purchases studies for 1935-1936 and 1941 by the Bureau of Home Economics and the Bureau of Agricultural Economics, Department of Agriculture. Extrapolation throughout 1915-1940 was made on the basis of income per family, and since 1940 on the basis of results of surveys of rental housing made by the Office of Price Administration.

Residential maintenance for vacant dwelling units not for sale or rent was considered to move in the same way as that for owner-occupied units, while maintenance for units vacant for sale or rent was considered to move in the same way as that for tenant-occupied units.

For further discussion of nonfarm residential maintenance see: Stephan, Frieda J., and Palmer, J. Joseph, *The Pattern of Expenditures for Nonfarm Residential Repair and Maintenance*, Economic Series No. 55, Bureau of Foreign and Domestic Commerce, Department of Commerce, 1946.

Nonresidential building maintenance was estimated on the basis of the application of maintenance ratios to the total value of nonresidential properties using the estimate of such total value made by the Federal Trade Commission for 1922 and using rough estimates for other years. After 1938, the 1938 total value estimate was used, conversion to current values being made on the basis of the wholesale price index for building materials prepared by the Bureau of Labor Statistics, Department of Labor.

Other maintenance has been estimated from the same sources as was new construction. See text for series H 9-12 and H 15-23.

H 26. Total new construction, 1939 prices, 1915-1945. SOURCE: Bureau of Foreign and Domestic Commerce, *Industry Report on Construction and Construction Materials, Statistical Supplement*, May 1948. Measurement of construction activity in constant prices is an indirect way of approximating changes in the physical volume of construction. The present estimates are based on a deflation of each type of construction by an appropriate construction cost index, a procedure required by the almost complete lack of direct measures of physical volume comparable over time, and by the lack of a single construction cost index applicable to total new construction.

A discussion of the cost indexes used for each type of construction is found in the *Industry Report on Construction and Construction Materials*, September 1946, pages 35-40, Bureau of Foreign and Domestic Commerce. The *Statistical Supplement* to the May 1948 issue of the same publication contains a classification by types of construction.

H 27-32. Federal expenditures for public works, 1791-1919. SOURCE: Compiled by Department of Treasury from Treasury records and statements at the request of the Federal Works Agency. These data comprise construction and repair as defined in the note for series H 33-35.

H 33-35. Expenditures for public works by permanent federal construction agencies, 1920-1939. SOURCE: Federal Works Agency. These data comprise expenditures from regular appropriations, emergency funds, and in three instances (Inland Waterways Corporation, Panama Railroad Co., and Panama Railroad Steamship Line) expenditures from corporation revenue. The information was obtained by special questionnaires to the various Federal agencies. In the instructions "construction" was defined to comprise the erection of any new structural or nonstructural improvement to land, ships and floating equipment, additions to and complete replacement of existing works. "Repair" comprises work necessary for the restoration and preservation of structures, nonstructural improvements to maintain land and floating equipment in a sound and serviceable condition, and minor alterations.

H 36-39. Construction expenditures, estimates for new construction, 1869-1938 (by decades). SOURCE: Kuznets, Simon, *National Product Since 1869*, National Bureau of Economic Research, 1946, p. 99. Series H 36-37 is based on estimated consumption of construction materials and its calculated relationship to new construction, whereas series H 38-39 is based on various Department of Commerce estimates derived from building permit, construction contract, and other data; the estimates of the latter series have been superseded by revised estimates presented in series H 1-25.

H 36-37. New construction expenditures, based on materials output, 1869-1938 (by decades). SOURCE: See note, series H 36-39, above. While estimates of construction expenditures based upon more direct measures of construction activity will generally be preferred, estimates derived from the output of construction materials may be carried back through a considerable period. These estimates are derived from data on the output of construction materials destined for domestic consumption as prepared by William H. Shaw for the years 1869, 1879, and 1889-1938 (see series H 49 and H 50). Interpolation between the census years 1869, 1879, and 1889 was made on the basis of sample data. The output value figure was increased to cover transportation and distribution costs by the use of a factor 1.4576, based on 1929 data. A relatively small adjustment for inventory changes was made after which a measure of total new construction was obtained by the use of a factor 1.4036, based on the 1919-1933 relation between new construction and the cost of materials consumed. The computations were in terms of values expressed in constant prices, so to obtain values in current prices, a construction cost index based on a weighted average of building materials prices and building wage rates was used (see Kuznets, *National Product Since 1869*, p. 216).

H 38-39. New construction expenditures, based on building permit, contract, and other data, 1909-1938 (by decades). SOURCE: See note, series H 36-39, above. For purposes of comparison with the more direct measure of new construction activity, the averages of annual estimates of the latter type are given for overlapping decades for 1914-1938, the figures being based on estimates by the Construction Division, Bureau of Foreign and Domestic Commerce, Department of Commerce, made somewhat earlier than the estimates given in series H 1-25.

DWELLING UNITS STARTED AND DEMOLISHED (H 40-48)

H 40-47. General note. Dwelling units started in nonfarm areas: Number, cost, and value, 1900-1945. SOURCES: Number of new units started: For 1900-1919, see The Twentieth Century Fund, *American Housing*, 1944, p. 364, which also gives figures through 1941; for 1920-1929, see Wickens, David L., and Foster, Ray R., *Nonfarm Residential Construction, 1920-1936*, National Bureau of Economic Research, Bulletin 65, 1937; for 1930-1943, see Bureau of Labor Statistics, *The Construction Industry in the United States*, Bulletin No. 786, which gives figures for 1920-1943; for 1944-1945, see Bureau of Labor Statistics, monthly releases. Data for construction cost of new units (series H 46) were provided by the Bureau of Labor Statistics; see also Housing and Home Finance Agency, *Housing Statistics Handbook*, 1948, table 14, p. 17. For total value of new nonfarm residential construction, see detailed listing for series H 47.

The Bureau of Labor Statistics' estimates of new dwelling units started and of the construction cost of new units are based primarily on reports of local building permits issued. (For indexes of building permits issued, see series H 74-79.) A permit to build is required in practically all urban and in many rural-nonfarm places. The size and the builder's estimate of the cost of the proposed structure are usually recorded on these permits, thereby providing an indication of the volume of building to be carried on in the locality. The Bureau of Labor Statistics began collecting summaries of building-permit records in 1920. During that year, information was collected from 207 cities having a population of

35,000 or over. The Bureau now (1947) receives summaries of building-permit records from over 2,500 cities, 1,700 rural incorporated places and about 350 unincorporated areas, that is, from practically every place that requires a permit to build.

The dwelling units covered in this series are housekeeping units in new structures. Units provided by conversion of existing structures at the original site, or nonhousekeeping units such as those in dormitories, barracks, rooming houses, or hotels are excluded.

H 40. Total new dwelling units started in nonfarm areas, 1900-1945. SOURCE: See general note for series H 40-47, above. Figures shown here for 1910-1919 are estimates of the Twentieth Century Fund and differ considerably from Bureau of Labor Statistics estimates for the same period; the BLS estimates appear in *Bulletin 786* mentioned in the text for series H 40-47. The Fund estimates were used here because, in addition to presenting the total of new dwelling units started, the total data are shown in detail for urban and rural dwellings started and for construction cost of new units.

H 41. New urban units started, 1900-1945. SOURCE: See general note for series H 40-47, above. The term *urban* is applied to all incorporated places with a population of 2,500 or more in 1940, and, by special rule, to a small number of unincorporated civil divisions. To derive the urban estimate, the cities reporting building-permit data to the Bureau of Labor Statistics are arrayed by State, population size group and whether inside or outside a metropolitan district; the volume and value of residential building during the month is summarized for each class of place. The estimate for all urban areas in the country is prepared by applying to the volume of housing reported for each type of place, the ratio of the total number of such places in the country to the number reporting that month.

Figures for publicly financed urban units are based on actual enumerations rather than estimates. The number and location of publicly financed units started are reported to the Bureau monthly by the agencies awarding the contracts or performing the work, and are added to the estimates for privately financed units to obtain a total of all urban housing started during the month.

H 42. New rural-nonfarm housing started, 1900-1945. SOURCE: For 1920-1929, see Wickens and Foster, *Nonfarm Residential Construction*; for 1900-1919, see *American Housing*, p. 364. Also see discussion on p. 363, *American Housing*. See also note for series H 40-47, above.

Rural-nonfarm housing covers all housing (except farm housing) in unincorporated areas and in incorporated places of less than 2,500 inhabitants. Thus, urban housing is classified by location (see text for series H 41, above), whereas rural-nonfarm and farm housing are classified according to the intended use of the structure.

H 43-45. New dwelling units started, by type, 1920-1945. SOURCE: For 1920-1929, see Wickens, David L. and Foster, Ray R., *Nonfarm Residential Construction, 1920-1936*, National Bureau of Economic Research, *Bulletin 65*, 1937; for 1930-1943, see Bureau of Labor Statistics, *The Construction Industry in the United States*, *Bulletin No. 786*; for 1944-1945, see Bureau of Labor Statistics, monthly releases. See also general note for series H 40-47 above.

H 46. Construction cost of new units, 1920-1945. SOURCE: See general note for series H 40-47, above. Estimates of construction cost are based on data from building-permit reports, adjusted for nonreporting places and for the cost of building in non-permit-issuing places. Starting with 1930, adjustments were made to compensate for the understatement of construction cost inherent in permit valuations. In 1945 allowances were made for lapse in building permits and lag between permit issuance and start of construction. Series H 4 and H 14 are derived directly from this series. (For indexes of building permits, see series H 74-79.)

Construction cost includes the cost of labor, materials and subcontracted work and contractor's overhead and profit, but excludes land and development costs and speculative profits.

H 47. Expenditures for new nonfarm residential construction, 1900-1918. SOURCE: Chawner, Lowell J., *Residential Building*, Housing Monograph Series No. 1, National Resources Committee, 1939, p. 13, table V. These data are intended to supplement series H 4 and H 14, which covers the period 1915-1945. The present series originally covered the period 1900-1937, but the figures for the later years have been superseded by those in series H 4 and H 14. The method of estimation is described in part in Chawner, Lowell J., *Construction Activity in the United States, 1915-1937*, Domestic Commerce Series No. 99, Bureau of Foreign and Domestic Commerce, Department of Commerce, 1938, pp. 9-10 and 38-45. The volume of public residential construction, reported for 1918 only, was compiled directly from the reported expenditures of the public agencies concerned. Private residential construction was estimated on the basis of contract award data as reported by the F. W. Dodge Corporation, building permits in representative cities, the estimated number of new dwelling units added each year, construction cost indexes, and other information.

H 48. Number of nonfarm dwelling units demolished per decade, 1890-1939. SOURCE: 1890-1929, Wickens, David L., *Residential Real Estate*, National Bureau of Economic Research, 1941, p. 54; 1930-1939, Naigles, M. H., "Housing and the Increase in Population," *Monthly Labor Review*, April 1942, p. 880. The figures for 1900-1939 appear in The Twentieth Century Fund, *American Housing*, 1944, p. 410. The estimates include not only voluntary demolitions but also demolitions and losses resulting from fire, explosion, flood, windstorm, earthquake and other causes.

The estimates for 1930-1939 are based in part on demolition permit reports to the Bureau of Labor Statistics. Fire losses resulting in complete destruction of dwellings were estimated from figures published by the National Board of Fire Underwriters. Also included were losses of dwellings during disasters, as reported by the American Red Cross, undercoverage being assumed balanced by overlapping of the permit coverage.

The estimates for 1920-1929 are based on demolition permit data, fire losses reported by the National Board of Fire Underwriters, and allowance for losses due to floods, earthquakes, windstorms, and other causes. The proportion of reported fire losses assumed to represent total loss of dwellings was estimated on the basis of data for seven States for 1930.

The estimates for 1890-1919 are derived chiefly from fire loss data for all types of property and extrapolation of the 1920-1929 demolition permit data, assuming smaller rates of voluntary demolition prior to 1920.

MATERIALS OUTPUT, CONTRACTS AWARDED, AND CAPITAL OUTLAYS (H 49-63)

H 49-50. Value of output of construction materials destined for domestic consumption, 1869-1939. SOURCE: Shaw, William H., *Value of Commodity Output Since 1869*, National Bureau of Economic Research, 1947, pp. 64, 65, 69, 76, 77. The estimates are based upon a study of the successive Censuses of Manufactures and annual reports of the Bureau of Mines and the Department of Agriculture, supplemented by State and other fragmentary data. Imports were added and exports deducted to yield the output available for domestic use. Data on wholesale prices from various sources were used in order to develop a price index with which to convert current values into 1913 values.

The estimates are in terms of producers' values and do not allow for transportation or distribution costs. No allowance is made for flow into or out of inventories held by producers, distributors, or consumers. Hence, the estimates are a measure of the amounts available at the production level rather than the amounts actually consumed. No distinction is made between amounts destined for consumption in new construction and amounts destined for consumption in repairs and maintenance.

H 51-57. Construction contracts awarded, 1925-1945. SOURCE: F. W. Dodge Corporation, New York, N. Y. Figures are published

currently in considerably greater detail in *Dodge Statistical Research Service* (monthly). See also Bureau of the Census, *Statistical Abstract of the United States*, 1946, p. 770, for figures in somewhat greater detail than shown here.

The present series of contract award data is prepared monthly by a staff of reporters throughout the 37 Eastern States who contact owners, architects, engineers, contractors, financial institutions, real estate brokers, and others able to supply reliable information on the awarding of construction contracts. Small projects, especially noncontract construction, for example, work done by a firm's own force, are less completely covered. The F. W. Dodge Corp. has provided the following descriptive statement for its series after 1925:

Contract awarded statistics compiled by F. W. Dodge Corp. are based upon project news reports gathered daily by the corporation's field staff operating in the 37 States east of the Rocky Mountains. The figures are factual since they contain no estimates beyond the range of the field coverage. The figures include new construction, additions and alterations. No maintenance work is included. No shipbuilding is included. A negligible volume of farm building is included. Force-account work is generally included, except when executed with mass-purchased materials not earmarked for specific projects at time of purchase. Generally speaking, the figures are considered to be more nearly comprehensive in the field of non-residential buildings than in residential building. In the category of residential buildings, coverage of multiple dwellings is considered to be reasonably complete for the territory; coverage of development projects of one- and two-family houses is also reasonably complete; principal deficiency in coverage is in one-family houses erected singly, particularly in low valuations and in small communities.

The eleven Western States not covered are: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California. The District of Columbia is included in the covered area.

For monthly figures, 1925-1945 for 37 States, and 1910-1925 for 27 States, see series App. 22, appendix I.

H 58-63. Capital outlays in 145 municipalities, 1900-1937. SOURCE: Wolkind, Harold, *Fluctuations in Capital Outlays of Municipalities*, Bureau of Foreign and Domestic Commerce, Economic Series No. 10, 1941, pp. 8 and 11. The capital outlays of municipalities include the cost of land and other properties and public improvements more or less permanent in character, which are owned and used by municipalities in the exercise of their municipal functions or in connection with the business undertakings conducted by them. These outlays embrace all payments for the purchase and improvement of land; the erection of new buildings; the installation and extension of water-supply systems, sewerage systems, electric light systems and other enterprises; the purchase of apparatus for the fire and police departments; purchases for collections of libraries, museums, and art galleries; and all other acquisitions which add to the number and value of the permanent possessions of the municipalities.

Expenditures which merely put an existing piece of property or equipment in a condition not better than its condition at the time of its original construction or acquisition are considered as repairs and so are excluded from capital outlays.

The acquisition by a municipality of privately owned facilities is customarily included with other capital outlays of municipalities although such expenditures do not result in additions to the total stock of such facilities within the community.

The present data are based on the outlay data compiled by the Bureau of the Census and published for each year in the *Financial Statistics of Cities*, which cover the years 1902-1937, and Department of Labor reports covering the years 1900-1901.

For 1900-1901, the reports covered 124 cities; for 1920 the coverage was 107 cities and for 1932-1937 the coverage was 83 cities. The data for each of these years were increased to yield estimated totals comparable to those for the full 145 cities covered in other years. No data were available for 1913, 1919, and 1921.

Allowance was made for the wide variation in the dates of closing of the fiscal year, for changes in the area incorporated within each city, for expenditures by divisions of government other than the city corporation, and where possible for noncapital outlays included in the data. For the period 1933-1937, Federal work relief expenditures could not be entirely separated from municipal outlays.

The per capita outlay data (series H 63) are computed from the total outlay data for the 145 cities, using for 1900-1930 the sum of the population estimates for the individual cities as published in the *Financial Statistics of Cities* for each year. For 1931-1937, the population totals were estimated by interpolation on the basis of the Census of Population for 1930 and 1940.

CONSTRUCTION COST AND BUILDING PERMIT INDEXES (H 64-79)

H 64-73. Construction cost indexes, 1910-1945. SOURCE: *Engineering News-Record*, annual construction costs number, April of each year, McGraw-Hill Publishing Co., N. Y., except H 71-72, for source of which see text of individual series. Text for individual series show primary sources whenever possible. Data shown here for series H 66 (Boeckh) and H 68-69 (Handy) are heretofore unpublished but are based on the data which appear in the *Engineering News-Record*. For additional explanation of these series and for construction cost indexes with the base 1939=100, see Bureau of Foreign and Domestic Commerce, *Industry Report on Construction and Construction Materials, Statistical Supplement*, May 1948.

Construction cost indexes are useful in the conversion of construction expenditure data from current prices to constant prices and in the study of cost trends. However, no single cost index is satisfactory for all types of construction, since, as the present series indicate, the movements of cost differ for different types of construction. A rough approach to a cost index for total new construction may be obtained by dividing series H 2, total new construction in current prices, by series H 26, total new construction in 1939 prices.

Construction cost indexes generally are not fully adequate for the making of cost comparisons over an extended period of time. Changes in the productivity of and the proportions used of the various productive factors cannot be allowed for easily in the assignment of weights to labor, materials, and other cost items. An aggregative index proportional to the total construction cost of a standardized project or a component part thereof, is not easily computed for most types of construction and suffers from the disadvantage of the probable eventual obsolescence of any adequately specified standard project. For further discussion of this subject see: Chawner, Lowell J., "Construction Cost Indexes as Influenced by Technological Changes and Other Factors," *Journal of the American Statistical Association*, 1935, vol. 30, pp. 561-576.

H 64. Engineering-News Record, construction cost index, 1913-1945. Base: 1913=100. SOURCE: See text for series H 64-73, above. The index is based on the aggregate cost of the following items: 2,500 pounds of structural steel at base price; 6 barrels of cement at Chicago price; 1,088 board feet of lumber, 2"x4", surfaced-on-4-sides pine and fir in carload lots, using a weighted average of prices in 20 cities; and 200 man hours of common labor, using a weighted average of wages in 20 cities. Prior to 1935, the lumber component was based on the New York wholesale price of 12"x12" long leaf yellow pine.

H 65. Turner, building cost index for Eastern cities, 1913-1945. Base: 1913=100. SOURCE: See text for series H 64-73, above. The index is based on the Turner Construction Co.'s building cost experience in Eastern cities as applied to materials prices, wage rates, productivity of labor, efficiency of plant and management, and competitive conditions.

H 66. Boeckh, residential construction cost index, 1910-1945. Base: 1926-1929=100. SOURCE: E. H. Boeckh and Associates.

Inc., Consulting Valuation Engineers, Cincinnati, Ohio (Statistical and Publications Office, Washington, D. C.). Figures on a monthly basis are shown in their monthly publication, *Building Costs*. Monthly indexes are prepared for individual cities, by types of construction. Surveys are made of local construction cost conditions in each city to determine the materials prices actually paid by contractors to dealers, and the prevailing wage rates for skilled and for common labor. Some allowance is made for variations in labor efficiency and labor shortages in some areas. Sales taxes, social security taxes, and compensation insurance are included. See also Housing and Home Finance Agency, *Housing Statistics Handbook*, 1948, pp. 33-34.

The present annual index is derived from an unweighted average of the cost for frame and for brick residential construction in the 20 cities for which the Boeckh data are available. The base of the index is the United States average for 1926-1929, an average derived from more than the 20 cities covered by the index.

H 67. Railroad construction cost index, 1910-1945. Base: 1910-1914=100. SOURCE: Interstate Commerce Commission, Bureau of Valuation, Engineering Section, "Accounts 1-45, for Road," published annually in *Railroad Construction Indexes*. This index refers to the total road construction cost of Class I railroads. It is based on returns by carriers, joint studies made with various subcommittees of President's Conference Committees, data from engineering and trade publications, contracts covering major construction projects and other information furnished by carriers.

H 68-69. Handy, public utility construction, cost indexes, 1911-1945. Base: 1911=100. SOURCE: See note for series H 64-73, above. Individual indexes for each of 81 cost elements affecting the cost of public utility construction are compiled for each of five geographic regions as of January 1 and July 1 each year. The compilers are Whitman, Requardt and Associates and B. L. Smith Associates, Baltimore, Md., for the Estate of William W. Handy. Selected cost elements are combined to give cost indexes for various major categories of utility construction, using weights based on cost analysis experience, materials price data from *Engineering News-Record* and *Iron Age* and from manufacturers, and wage rates reported by utility companies, trade unions, and building associations. Indexes are published by major categories for each of the five geographic regions.

The present cost indexes for the total construction and equipment of gas plants (H 68) and for electric light and power plants (H 69) are computed from unweighted averages of the five regional indexes, with weights of 1, 2, and 1, respectively, assigned to the initial, middle, and closing averages for each year. For 1916 and 1923, only initial and closing averages were available and for 1921 a September 1 average replaced the mid-year average. There were no data for 1922, so indexes for that year were obtained by interpolation on the basis of movements in the Handy utility building index. Beginning in 1934, when monthly reporting of data commenced, the data for each month were released during the same month, so such data were lagged 1 month, that is, taken as applying to the previous month.

H 70. Highway construction cost index, 1922-1945. Base: 1925-1929=100. SOURCE: Public Roads Administration, quarterly publication, *Price Trends in Highway Construction*. This is an index of the cost of construction of a composite standard mile of highway. The index is based on aggregate bid prices for the following: 17,491 cubic yards of excavation; 3,726 square yards of surfacing; and structures requiring 16,000 pounds of reinforced steel, 4,325 pounds of structural steel, and 68 cubic yards of structural concrete. The excavation includes common excavation plus other excavation items expressed as equivalent common excavation. The surfacing includes portland cement, concrete, and other surfacing items expressed as equivalent portland cement concrete.

H 71-72. Farm construction cost indexes, 1910-1945. Base: 1910-1914=100. SOURCE: Department of Agriculture, Bureau of Agricultural Economics, *Income Parity for Agriculture: Part II—*

Expenses of Agricultural Production; see Section 5, "Expenditures for and Depreciation of Permanent Improvements on Farms, 1910-1940," March 1941, table 7, p. 28. Data for 1941-1945 were obtained from records of the Department of Agriculture. The farm construction cost index for operators' dwellings (H 71) covers only farm operators' dwellings located on the farm operated. The index for service buildings (H 72) covers barns and other buildings used in production, dwellings other than operators' dwellings, fences, windmills, and wells. Excluded are roads, terraces, windbreaks, orchards, dams, ponds, irrigation and drainage works, and the like. Because of lack of data, also excluded are value of materials and labor furnished by the farm. Indexes of the prices of construction materials purchased and the wage rates of labor hired for construction were used. In the case of operators' dwellings (H 71), the total weight assigned to materials was 73 percent and to labor 27 percent. In the case of service buildings (H 72), the weights were 78 percent for materials and 22 percent for labor. These weights were based on a survey made in 1936 and were assumed to be applicable throughout the period covered. While the wages paid by farmers for construction labor are higher than the wages paid for ordinary agricultural labor, it was assumed that wages for farm construction labor have fluctuated more like the farm labor wage rates than like the urban union wage rates in the building trades.

H 73. American Appraisal Co., building cost index, 1913-1945. Base: 1913=100. SOURCE: See text for series H 64-73, above. The index covers 30 cities for 1925-1945 and 24 cities for 1913-1924, and is based on the structural cost items used in four types of buildings: All frame, brick with wood frame, brick with steel frame, and reinforced concrete. Mechanicals, such as plumbing, heating, lighting, and elevators, are excluded. The index is calculated from actual appraisal costs for each city, using normal average materials prices, average wages and the market conditions of the individual cities. Such extremes in costs as the following are excluded: Premium prices, overtime wages for rush work, and cut-throat price practices during depression periods. Allowance is made for such overhead costs as Social Security taxes and unemployment insurance.

H 74-79. Building permit indexes, 1856-1939. SOURCE: See detailed listings for individual series below. While comprehensive estimates of construction expenditures by types of construction, such as presented in series H 1-25, will generally be preferred for most purposes, building permit data are available for a considerably longer period. Permit values are based on the sum of estimates by builders of the costs of building for which permits are granted or plans filed. Permit data generally cover private, rather than public, construction; building, rather than nonbuilding, types of construction; and are generally limited to construction within the corporate limits of the cities covered. On the average, the cost of the projects covered is underestimated; small projects are generally not covered at all. Permit data are less frequently available for smaller cities and for earlier years. It follows that building permit data in unadjusted form are unsatisfactory as measures of the total absolute volume of new construction. Permit data are often more satisfactory when used in the form of relatives or indexes of permit values, as in the case of series H 77-79.

Indexes of the number of permits granted (series H 74-76) do not require adjustment for price changes and undervaluation of projects. However, the number indexes suffer from the remaining limitations associated with permit value indexes.

Although the absolute amount of construction activity is not adequately indicated by early permit data, the data clearly indicate the presence and approximate timing of cycles in private building. However, the relatively few cities upon which permit indexes are based during the earlier years suggests caution in the drawing of quantitative conclusions, particularly as to the amplitude of building cycles. Nonbuilding construction of various types and public building have fluctuated somewhat differently from building permit indexes, so that the data available for the

analysis of cycles in total new construction over an extended period of years are particularly inadequate.

H 74-76. Indexes of number of building permits, 1856-1936. Base: 1920-30=100 (see next paragraph). SOURCE: Long, Clarence D., Jr., *Building Cycles and the Theory of Investment*, Princeton University Press, 1940, pp. 228-229. For 1856-1862, only Philadelphia is covered. Manhattan and part of the Bronx were added in 1863, Boston in 1873, Brooklyn in 1874, Washington (D. C.) and Wards 23 and 24 of the Bronx in 1875, Newark in 1878, Salem in 1879, Detroit in 1880, New Haven in 1881, Providence in 1883, Minneapolis and Cambridge in 1887, Indianapolis in 1891, the remainder of the Bronx in 1895, Bridgeport, Atlanta, Louisville, and Waltham in 1896, Watertown (Mass.) and Queens and Richmond Boroughs in 1898, New Bedford in 1899, Baltimore in 1901, Rochester in 1906, Portland (Me.) in 1907, Cleveland and Richmond (Va.) in 1908, St. Louis in 1910, Springfield (Mass.) in 1911, and Kansas City (Mo.) in 1912. For 1887-1912 Philadelphia data were excluded from total nonresidential and total new building data because of the reporting of an excessive number of miscellaneous structures.

Since the number of cities covered varied from 1 to 30 (or 26 if all the Boroughs—Brooklyn, Bronx, Manhattan, Queens, and Richmond—of New York City are combined), the aggregate number of permits each year was divided by the aggregate number for the same cities during 1920-1930. Thus, the base used was a shifting one. For additional explanation, see text for series H 74-79, above.

H 77. Index of building permit values, 1868-1939. Base: 1930=100 (see next paragraph). SOURCE: Long, Clarence D., Jr., *Building Cycles and the Theory of Investment*, Princeton University Press, 1940, pp. 213-223. This index was obtained by averaging the monthly indexes given in the source. For 1868-1874, only Manhattan is covered. Louisville was added in 1875, Detroit in 1881, Brooklyn and St. Louis in 1882, Cincinnati and Minneapolis in 1887, Cleveland and Nashville in 1888, Boston in 1889, New Haven in 1890, Chicago and St. Joseph in 1891, Indianapolis and Syracuse in 1892, Trenton in 1893, Omaha, Pittsburgh, Philadelphia, St. Paul, Denver, Kansas City (Mo.), Los Angeles, New Orleans, and Washington (D. C.), in 1894; Duluth in 1895, Cambridge, Fort Wayne, Atlanta, and Milwaukee in 1896; the Bronx, Alleghany (Pa.), and Buffalo in 1898; Newark (N. J.) and Everett (Mass.) in 1906; and Richmond and Queens Boroughs (New York City) in 1916. Cambridge was omitted for 1911-1917, and Trenton was omitted for 1912 and 1924-1929. Alterations were excluded from Brooklyn data for 1882-1892 and 1895-1896. Alterations were estimated for Boston for 1893-1894, 1903, and 1906-1908. Manhattan data were estimated for 1880.

Since the number of cities covered varied from 1 to 37 (or 33 if all the Boroughs—Brooklyn, Bronx, Manhattan, Queens, and Richmond—of New York City are combined), the aggregate permit volume each year was divided by the aggregate volume for the same cities in 1930. Thus, the base used was a shifting one. For additional explanation, see text for series H 74-79, above.

H 78-79. Building permit index, 1875-1933. SOURCE: Newman, William H., "The Building Industry and Business Cycles," *The Journal of Business of the University of Chicago*, vol. VIII, No. 3, pp. 63-71. These are annual indexes and annual averages of monthly indexes. Series H 78, in current prices, with 1920-30=100, is based on: Bradstreet's building-permit values, 120 identical cities, 1911-1933; Babson's monthly values of building permits in 20 cities, 1903-1910; Ayres' permits in 50 cities, 1900-1902; and permit data from 13 cities, 1875-1900. Series H 79, in 1913 prices with 1913=100, is obtained from series H 78 by the use of the following building cost indexes. The American Appraisal Co.'s building construction cost index, 1913-1933; an arithmetic average of the American Appraisal Co.'s cost indexes for frame, brick and reinforced concrete buildings, 1900-1913; and an average of the

frame- and the brick-building cost indexes, 1875-1900. For additional explanation, see text for series H 74-79, above.

CONSTRUCTION EMPLOYMENT (H 80)

H 80. Construction Employment, 1929-1945. SOURCE: 1929-1943, Bureau of Labor Statistics, *The Construction Industry in the United States*, Bulletin No. 786; 1944-1945, *Monthly Labor Review and Construction*, both published monthly by Bureau of Labor Statistics.

The estimates include wage earners, salaried employees, and special trades contractors actively engaged on all types of new construction work and on alterations, additions and repair work of the kind usually covered by building permits. Force-account workers (employees of nonconstruction firms and public bodies who perform construction work) are also included as well as self-employed persons, working proprietors, and workers employed by construction firms either on or off the construction site. The estimates exclude persons engaged in maintenance work.

For federal construction, employment is estimated directly from reports on employment collected from contractors. For non-federally financed construction, the employment averages are derived primarily by converting construction expenditure figures into the average number of man-months of labor ordinarily required to perform the volume of work reported.

Housing: Series H 81-135

EXISTENT HOUSING UNITS (H 81-112)

H 81-83. Available housing units and total families in nonfarm areas, 1900-1938. SOURCE: Chawner, Lowell J., *Residential Building*, National Resources Committee, 1939, Housing Monograph Series No. 1, table VI, p. 16. Annual estimates of total available housing units were obtained by calculating the net annual increases in the supply. Changes in the available supply of housing depend not only upon new building but also upon such factors as the conversion of large single-family houses to multiple-family dwellings, the conversion of residential structures to other forms of use, principally to stores and offices, and the withdrawal of structures from use by demolition and by destruction through catastrophes, such as fire, flood, and tornado.

The term "family" as used here refers to "natural groups such as man and wife (with or without children and other dependents), and widower, widow or divorcee (with or without dependents). The year-to-year fluctuations in single-person 'families,' i. e., single individuals occupying a dwelling unit, are disclosed only to a very limited extent in [these series]." (See footnote 1, table I, p. 2, of source cited above.) Series H 83 is affected by the doubling-up of families into single dwelling units, a fact that accounts for the ratio of families to available units being greater than unity in the years 1922-1924 and 1938.

For data on nonfarm dwelling units started, on construction cost of new units, and on expenditures for new nonfarm residential construction, see series H 40-47.

H 84-88. Nonfarm dwelling units standing and net additions to supply, decennially 1900-1939. SOURCE: The Twentieth Century Fund, *American Housing*, 1944, appendix table 35, p. 410.

These figures were derived by projecting backwards the number of nonfarm dwelling units reported by the 1940 Census of Housing. Thus, 29,706,000 units, including both occupied and vacant units, were standing in 1940 (preliminary estimate). According to "Housing and the Increase in Population," *Monthly Labor Review*, April 1942, a total of 3,459,000 new and converted units were built from 1930 to 1940, 952,000 makeshift units were added and 397,000 units were demolished. The total standing in 1930 was thus 25,692,000. For earlier decades, the same procedure was followed, using data for new and converted units and demolitions as reported in Wickens, David L., *Residential Real Estate*, National Bureau of

Economic Research, 1941, table EM5, p. 54. The average shown is the arithmetic mean of the four decades.

H 89-112. Occupied dwelling units or families, and tenure of homes, decennially, 1890-1945. SOURCE: For 1890-1940, see Sixteenth Census Reports, *Housing*, vol. II, pt. 1; for 1945, see *Characteristics of Occupied Dwelling Units for the United States: November 1945*, Special Census Reports on Housing, Series H 46, No. 1. The 1910 figure for farm population (series H 106) is an estimate which appears in Truesdell, Leon E., *Farm Population of the United States, 1920*, Bureau of the Census, Census Monographs VI, Washington, D. C., 1926, p. 45. The 1910 figure for nonfarm population (series H 98) was derived by subtracting the estimated farm population from the total population.

The first Nation-wide Census of Housing was taken in 1940. For that census, an occupied dwelling unit was defined as the living quarters occupied by one household. (A dwelling unit might be a detached house; a tenement, flat, or apartment in a larger building; or a room in a structure primarily devoted to business or other nonresidential purposes; a tourist cabin; a trailer, boat, tent, etc., if occupied by persons having no other place of residence.)

The term "private family," in 1940, was synonymous with the term "private household." A *private household*, in the 1940 census, included the related family members and the unrelated lodgers and servants or hired hands who lived in the same dwelling unit and shared common housekeeping arrangements. However, the number of occupied dwelling units in 1940, shown here, is not identical with the number of private families in 1940 (see series B 171). The difference is caused by the fact that the living quarters of about 115,000 families, that were enumerated in 1940 at other than their usual place of residence, were classified as vacant, rather than as occupied, but the related members of the household were counted as a private family. Also the small number (about 20,000) of lodging places with 11 or more lodgers were counted as occupied units, but the heads of such lodging houses were not counted as heads of private families.

The comparability of the present series rests on the fairly close correspondence of the definition of occupied dwelling unit used in 1940 and that for family or home used in previous censuses. The count of families for 1930 and 1900 (shown here) represents private families only; that for 1920, 1910, and 1890 includes the small number of quasi-family groups which were counted as families in those years. See text for series B 171-181.

For purposes of comparison with the 1940 population per occupied dwelling unit, the total population per private family in 1930 and 1900 is used and not the "population per private family" as published in the 1930 census reports. (The latter is obtained by dividing the population in private families, excluding persons in

institutions and other quasi-family groups, by the number of private families.) Since the population in private families was not tabulated separately except in 1930 and 1900, the total population per private family is used because of its closer comparability with statistics for the other years.

A dwelling unit is classified as owner-occupied if it was owned wholly or in part by the head of the household or by some related member of his family living in the dwelling unit. All other occupied units are tenant-occupied whether or not cash rent was actually paid.

NONFARM HOUSING CREDIT (H 113-135)

H 113-119. Mortgage loans made on one-to-four-family nonfarm homes, 1925-1945. SOURCE: Federal Home Loan Bank Administration, *Statistical Supplement to the Federal Home Loan Bank Review*, 1947, table 14, p. 14. These data are based on mortgages recorded throughout the country by type of mortgage, and special studies and reported statistics of various types of mortgage lending institutions. The data do not include mortgage loans made on farm or commercial properties. The "home loans" include all mortgage loans on one-to-four-family nonfarm residences regardless of occupancy status (owner-occupied, rented or vacant). See also, Housing and Home Finance Agency, *Housing Statistics Handbook*, 1948, particularly part 3 on "Housing Finance."

H 120-126. Mortgage loans outstanding on one-to-four family nonfarm homes, 1925-1945. SOURCE: Same as series H 113-119.

H 127. Number of foreclosures made on nonfarm homes, 1925-1945. SOURCE: Federal Home Loan Bank Administration, *Statistical Supplement to the Federal Home Loan Bank Review*, 1947, table 16, p. 14. These figures are based on data reported monthly from approximately 1,500 counties, cities, townships, or other governmental divisions, and measuring the number of properties acquired monthly through foreclosures. Approximately 65 percent of all nonfarm dwellings are included in the sample used.

H 128-132. Operating savings and loan associations, 1920-1945. SOURCE: Federal Home Loan Bank Administration, *Statistical Supplement to the Federal Home Loan Bank Review*, 1947, table 7, p. 7. For data for 1920-1921 for series H 128-129, see U. S. Savings and Loan League, *Secretary's Annual Report*, Chicago, 1946. These data are based on a compilation from the annual reports of FHLB member associations and of State savings and loan supervisory authorities. These data show selected statistics for all operating savings and loan associations. The data do not include resources of institutions in liquidation.

H 133-135. Building and Loan Association failures, 1920-1945. SOURCE: U. S. Savings and Loan League, *Secretary's Annual Report*, Chicago, 1946.

Series H 1-26.—CONSTRUCTION EXPENDITURES—ESTIMATES: 1915 TO 1945

[In millions of dollars]

YEAR	NEW PRIVATE CONSTRUCTION											
	Total construction	Total new construction	Total	Residential (excluding farm)	Nonresidential ¹				Farm construction	Railroads (including local transit)	Electric light and power, gas, and oil pipelines ³	Telephone and telegraph
					Total	Industrial	Warehouses, office buildings, etc. ²	Other				
1	2	3	4	5	6	7	8	9	10	11	12	
1945	9,782	4,808	2,716	684	1,014	642	199	173	191	282	428	117
1944	8,636	4,186	1,823	535	350	208	56	87	213	262	380	83
1943	12,005	7,784	1,744	650	232	156	32	44	292	225	284	61
1942	17,757	13,412	3,007	1,815	635	346	150	139	271	209	422	155
1941	15,196	10,490	5,426	2,765	1,486	801	400	285	303	217	476	179
1940	11,600	7,042	4,390	2,355	1,028	442	342	244	236	217	432	122
1939	10,938	6,307	3,808	2,114	785	254	287	244	226	191	399	93
1938	9,873	5,186	3,076	1,511	764	232	279	253	196	160	353	92
1937	9,845	5,487	3,390	1,372	1,088	492	378	218	225	238	365	102
1936	9,392	4,836	2,650	1,131	712	266	283	163	189	194	257	67
1935	6,488	3,230	1,676	665	472	158	206	108	176	156	155	52
1934	5,976	2,805	1,235	361	455	191	169	95	93	158	121	47
1933	4,782	2,376	1,012	278	404	176	127	101	69	115	101	45
1932	5,845	3,290	1,467	462	499	74	216	209	39	168	212	87
1931	8,990	5,967	3,375	1,228	1,104	221	437	446	97	361	419	166
1930	11,692	8,042	5,265	1,446	2,099	532	856	711	193	606	588	333
1929	13,876	9,873	7,476	2,797	2,822	949	1,097	776	279	592	632	354
1928	14,611	10,780	8,313	3,869	2,797	802	1,121	874	275	523	603	246
1927	14,852	11,067	8,733	4,175	2,825	696	1,145	984	283	639	699	212
1926	14,702	11,119	9,040	4,496	2,878	727	1,107	1,044	251	642	646	227
1925	13,907	10,512	8,439	4,505	2,373	513	940	920	259	445	647	210
1924	12,779	9,548	7,705	4,195	1,897	460	740	697	257	421	739	196
1923	11,637	8,567	6,997	3,640	1,896	549	716	631	270	435	598	158
1922	9,838	7,017	5,377	2,734	1,638	467	613	558	218	263	409	117
1921	8,238	5,581	3,991	1,661	1,543	574	570	399	183	243	259	102
1920	9,113	6,117	4,779	1,545	2,082	1,099	625	358	381	266	381	124
1919	8,375	5,736	3,770	1,536	1,147	621	(4)	(4)	414	329	268	76
1918	6,988	4,714	2,482	691	771	449	(4)	(4)	323	472	152	73
1917	6,088	4,138	2,865	902	860	364	(4)	(4)	315	515	188	85
1916	5,241	3,453	2,750	1,066	771	262	(4)	(4)	255	390	207	61
1915	4,584	2,932	2,217	950	513	197	(4)	(4)	205	353	153	43

YEAR	NEW PUBLIC CONSTRUCTION													
	Total ⁵	Residential	Nonresidential				Military and naval	Highways, roads, and streets	Sewage disposal and water supply systems	Conservation and development	Other public construction	Work relief ⁵	Maintenance and repairs	Total new construction, 1939 prices
			Total	Industrial	Educational	Other								
13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1945	2,092	71	652	470	59	123	690	386	97	130	66	4,974	3,500	
1944	2,313	190	638	507	41	90	837	346	79	163	60	4,500	3,103	
1943	6,040	700	1,805	1,668	62	75	2,550	420	102	235	178	4,183	5,737	
1942	10,405	545	3,653	3,437	116	100	5,016	616	139	350	86	3,300	10,390	
1941	5,064	430	1,584	1,280	135	169	1,620	800	168	354	108	3,995	9,339	
1940	2,652	200	556	164	132	260	385	832	194	310	125	3,640	6,858	
1939	2,499	65	859	23	418	418	125	867	162	310	111	1,189	6,307	
1938	2,110	35	563	12	266	290	62	858	179	299	109	1,403	5,203	
1937	2,097	93	470	2	221	247	37	902	174	310	111	924	5,438	
1936	2,286	61	604	4	323	277	29	927	208	339	118	1,359	5,210	
1935	1,554	9	278	2	180	146	37	709	137	317	67	490	2,763	
1934	1,570	1	286	11	110	165	47	826	116	245	49	658	2,513	
1933	1,364	---	205	2	43	160	36	809	81	168	65	2,245	2,728	
1932	1,823	---	392	(5)	123	269	34	961	166	139	141	2,394	4,057	
1931	2,592	---	578	(5)	269	309	40	1,351	270	135	218	3,023	6,363	
1930	2,777	---	623	(5)	344	279	29	1,505	343	111	166	3,650	7,857	
1929	2,397	---	622	(5)	367	255	19	1,254	253	86	163	4,003	9,257	
1928	2,467	---	638	(5)	378	260	15	1,275	300	72	167	3,831	10,314	
1927	2,334	---	596	(5)	367	229	12	1,156	312	63	195	3,785	10,604	
1926	2,079	---	603	(5)	399	204	11	1,005	285	61	114	3,583	10,569	
1925	2,073	---	573	(5)	400	173	8	1,021	278	73	120	3,395	10,027	
1924	1,843	---	494	(5)	353	141	9	932	263	79	66	3,231	8,993	
1923	1,570	---	481	(5)	346	135	16	755	203	65	50	3,070	8,002	
1922	1,640	---	481	(5)	342	139	25	834	201	48	51	2,821	7,183	
1921	1,540	---	387	(5)	274	113	49	830	178	52	44	2,707	5,078	
1920	1,338	---	283	(5)	190	93	161	644	153	55	42	2,996	4,570	
1919	1,966	14	246	(4)	(4)	(4)	1,089	418	124	39	36	2,639	5,413	
1918	2,232	23	199	(4)	(4)	(4)	1,556	289	94	29	38	2,274	5,109	
1917	1,273	---	192	(4)	(4)	(4)	608	313	91	27	42	1,950	5,209	
1916	703	---	207	(4)	(4)	(4)	21	308	95	28	44	1,788	5,305	
1915	715	---	217	(4)	(4)	(4)	17	298	106	36	41	1,652	4,984	

¹ Excludes nonresidential building by privately owned public utilities.² Includes loft buildings, stores, restaurants, and garages.³ Includes construction with Rural Electrification Administration funds.⁴ Not available separately.⁵ For period 1933-1943, about 70 percent of total work-relief construction is shown in series H 24; series H 13 includes the remaining 30 percent, which cannot be segregated.⁶ Public industrial and commercial building not segregated from private construction for 1915-1932.

Series H 27-32.—CONSTRUCTION EXPENDITURES—FEDERAL EXPENDITURES FOR PUBLIC WORKS: 1791 TO 1919

[In thousands of dollars]

YEAR	Total	Military and naval ¹	Rivers, harbors, and flood control	Public buildings	Reclamation	Other ²	YEAR	Total	Military and naval ¹	Rivers, harbors, and flood control	Public buildings	Other ²
	27	28	29	30	31	32		27	28	29	30	32
1919	1,997,615	1,924,571	93,078	22,320	4,305	13,341	1855	7,044	1,413	791	2,633	2,207
1918	1,257,625	1,185,588	29,594	17,870	5,205	19,368	1854	4,543	823	937	1,273	1,510
1917	102,673	29,312	30,487	16,982	4,994	20,898	1853	2,552	265	489	657	1,141
1916	83,092	13,362	32,450	15,177	5,892	16,211	1852	1,947	410	40	678	824
							1851	2,037	660	70	483	824
1915	123,566	19,991	46,834	19,018	12,091	25,632	1850	2,601	717	42	698	1,144
1914	120,375	17,302	50,762	12,010	7,709	32,592	1849	1,710	680	26	280	724
1913	118,607	11,705	42,275	16,296	6,646	41,685	1848	1,802	415	24	121	742
1912	117,226	18,924	35,861	17,994	9,194	35,253	1847	1,302	1,055	44	93	769
1911	122,009	24,120	33,968	18,522	7,642	37,757	1846	1,889	1,046	219	177	447
1910	118,207	22,188	29,273	22,391	8,136	36,219	1845	2,016	632	529	374	481
1909	119,617	22,704	34,579	18,510	9,765	34,059	1844	1,710	787	313	112	411
1908	119,703	20,470	30,361	15,659	11,159	42,054	1843	901	415	111	51	324
1907	94,825	15,491	23,310	13,859	12,795	29,370	1842	1,884	1,016	82	137	649
1906	86,036	18,087	25,955	14,461	7,257	20,276	1841	2,091	1,321	79	185	506
1905	70,595	23,234	22,814	15,946	3,882	4,719	1840	1,660	195	145	368	952
1904	109,593	19,790	22,546	14,093	1,612	51,552	1839	3,043	743	780	353	1,167
1903	50,595	18,151	19,390	11,469	269	1,116	1838	2,934	594	1,054	352	934
1902	38,249	14,214	14,948	8,306	---	781	1837	4,226	1,173	1,362	333	1,358
1901	46,094	13,684	19,544	12,340	---	526	1836	3,928	959	869	538	1,562
1900	40,758	13,912	18,736	7,770	---	340	1835	2,980	381	569	447	1,583
1899	34,923	13,751	16,094	4,880	---	198	1834	2,606	715	598	130	1,163
1898	37,068	11,202	20,792	4,585	---	489	1833	3,318	986	704	261	1,367
1897	25,156	5,942	13,686	4,854	---	674	1832	2,128	598	538	41	951
1896	28,278	5,122	18,119	4,544	---	493	1831	2,185	795	652	54	684
1895	30,054	4,662	19,944	5,173	---	275	1830	2,525	991	574	88	872
1894	32,411	6,566	19,888	5,457	---	500	1829	2,499	855	524	61	1,059
1893	27,935	6,266	14,804	6,491	---	374	1828	1,585	794	188	8	655
1892	25,439	3,479	13,024	8,291	---	645	1827	1,551	718	136	38	659
1891	20,991	1,996	12,253	6,202	---	540	1826	1,677	838	87	---	752
1890	21,662	2,764	11,740	6,463	---	695	1825	1,429	839	40	4	546
1889	20,410	2,516	11,234	6,140	---	520	1824	823	594	26	---	263
1888	14,434	1,865	7,007	5,086	---	476	1823	776	517	---	13	246
1887	13,948	897	7,786	4,973	---	292	1822	620	432	1	1	186
1886	10,132	1,747	4,137	3,915	---	273	1821	609	375	---	---	234
1885	17,540	1,634	10,558	4,915	---	433	1820	1,181	742	---	129	310
1884	15,364	1,991	8,237	4,746	---	390	1819	1,783	1,033	---	75	625
1883	20,854	1,809	13,839	4,889	---	317	1818	1,436	781	---	144	511
1882	17,422	443	11,624	2,867	---	2,488	1817	1,077	533	---	61	483
1881	15,572	401	9,072	3,231	---	2,868	1816	687	331	---	139	217
1880	13,834	385	8,080	2,838	---	2,531	1815	963	800	---	---	163
1879	14,529	378	8,267	3,484	---	2,400	1814	404	252	---	---	152
1878	9,160	253	3,791	2,912	---	2,204	1813	662	456	---	---	206
1877	12,560	413	4,655	5,106	---	2,386	1812	564	370	---	---	194
1876	14,459	1,151	5,736	4,835	---	2,737	1811	251	105	---	---	146
1875	19,647	1,435	6,434	8,741	---	3,037	1810	578	428	---	---	150
1874	18,404	2,363	5,704	7,759	---	2,578	1809	743	655	---	2	86
1873	19,362	2,742	6,312	7,224	---	3,084	1808	1,186	1,075	---	10	101
1872	15,144	2,756	4,962	4,141	---	3,285	1807	331	226	---	7	98
1871	12,394	1,913	4,421	3,318	---	2,742	1806	106	---	---	15	91
1870	9,957	1,304	3,528	2,513	---	2,612	1805	122	---	---	---	122
1869	8,371	1,084	3,545	1,799	---	1,943	1804	143	25	---	21	97
1868	10,935	3,450	3,457	1,412	---	2,616	1803	78	1	---	---	77
1867	6,888	2,179	1,217	1,280	---	2,212	1802	140	18	---	53	69
1866	4,299	2,236	295	287	---	1,481	1801	166	85	---	---	81
1865	8,170	5,121	305	1,257	---	1,487	1800	163	116	---	6	41
1864	6,424	5,035	102	318	---	969	1799	241	171	---	---	70
1863	5,314	3,955	65	405	---	389	1798	239	184	---	---	53
1862	3,582	2,790	37	63	---	692	1797	88	40	---	---	48
1861	3,301	1,176	172	839	---	1,114	1796	61	26	---	---	35
1860	3,816	1,278	228	761	---	1,549	1795	112	82	---	---	30
1859	5,323	1,447	290	1,972	---	1,614	1794	79	42	---	---	37
1858	8,550	2,955	427	2,572	---	2,596	1793	24	---	---	12	12
1857	7,535	1,787	263	2,940	---	2,540	1792	46	---	---	7	39
1856	5,801	1,371	161	2,123	---	2,146	1791	23	---	---	---	23

¹ Excludes naval vessels.

² Prior to 1882, the entire cost of the Lighthouse Service is included in "Other."

³ Detailed classification fails to add to total for 1798.

Series H 33-35.—CONSTRUCTION EXPENDITURES—FOR PUBLIC WORKS BY PERMANENT FEDERAL CONSTRUCTION AGENCIES: 1920 TO 1939

[In thousands of dollars]

FISCAL YEAR	Total	New construction	Repair	FISCAL YEAR	Total	New construction	Repair
	33	34	35		33	34	35
1939 ¹	1,056,618	966,716	89,902	1928	257,591	188,519	69,072
1938 ¹	733,578	628,819	104,758	1927	237,418	174,039	63,379
1937	886,884	788,668	98,214	1926	235,567	175,159	60,408
1936	787,546	699,220	88,326	1925	260,949	205,805	55,644
1935	750,369	670,723	79,646	1924	216,879	168,526	48,353
1934	687,038	598,966	88,072	1923	185,029	142,858	42,671
1933	528,306	462,019	66,287	1922	205,473	160,715	44,758
1932	539,445	464,731	74,714	1921	233,971	172,245	61,726
1931	459,447	386,839	72,608	1920	204,356	146,417	57,939
1930	329,119	250,864	78,255				
1929	294,788	221,078	73,710				

¹ Estimated.

Series H 36-39.—CONSTRUCTION EXPENDITURES—ESTIMATES FOR NEW CONSTRUCTION: 1869 TO 1938

[In millions of dollars. Figures are averages per year by decades]

PERIOD	BASED ON MATERIALS OUTPUT		PERIOD	BASED ON BUILDING PERMITS, CONTRACTS, ETC.	
	In current prices	In 1929 prices		In current prices	In 1929 prices
	36	37		38	39
1929-1938	6,008	6,602	1929-1938	5,274	5,797
1924-1933	8,038	8,235	1924-1933	8,308	8,504
1919-1923	8,188	7,981	1919-1923	8,528	8,310
1914-1923	5,785	6,879	1914-1923	5,141	6,114
1909-1918	4,181	7,297	1909-1918 ¹	3,784	6,609
1904-1913	3,512	6,873			
1899-1908	2,708	5,848			
1894-1903	2,036	4,991			
1889-1898	1,862	4,690			
1884-1893	1,662	3,921			
1879-1888	1,162	2,679			
1874-1883	841	1,920			
1869-1878	702	1,496			

¹ Average of annual estimates for 1914-1918 and annual rate for 1909-1913.

Series H 40-47.—CONSTRUCTION—DWELLING UNITS STARTED IN NONFARM AREAS: 1900 TO 1945

YEAR	NEW DWELLING UNITS STARTED (IN THOUSANDS OF UNITS)						Construction cost of new units started ¹ (million dollars)	YEAR	NEW DWELLING UNITS STARTED (IN THOUSANDS OF UNITS)			Expenditures for new nonfarm residential construction, (million dols.)
	Total	By location		By type					Total	Urban	Rural nonfarm	
		Urban	Rural nonfarm	1-family	2-family	Multi-family						
	40	41	42	43	44	45			46	40	41	
1945 ²	226	144	82	201	9	16	1,005.3	1918	174	79	95	745
1944	169	115	54	145	11	13	560.7	1917	277	180	97	943
1943	350	209	141	286	18	46	1,016.4	1916	394	364	30	1,108
1942	497	281	216	391	20	86	1,716.1	1915	414	364	50	989
1941	715	440	275	613	34	68	2,852.8	1914	414	323	91	1,010
1940	603	397	206	486	37	80	2,299.5	1913	435	318	117	1,110
1939	515	359	156	399	29	87	1,948.3	1912	476	350	126	1,160
1938	406	262	144	317	18	71	1,583.9	1911	501	376	125	1,010
1937	336	218	118	267	16	53	1,382.4	1910	505	382	123	1,150
1936	319	211	108	244	14	61	1,271.0	1909	573	380	193	1,130
1935	221	117	104	183	8	30	757.4	1908	438	277	161	920
1934	126	49	77	109	5	12	368.4	1907	433	284	149	980
1933	93	45	48	76	5	12	285.4	1906	464	302	162	990
1932	134	64	70	118	7	9	407.0	1905	459	288	171	880
1931	254	174	80	187	22	45	1,104.6	1904	416	256	160	790
1930	330	236	94	227	29	74	1,494.5	1903	411	191	220	620
1929	509	400	109	316	51	142	2,453.0	1902	327	176	151	560
1928	753	594	159	436	78	239	3,613.0	1901	303	191	112	470
1927	810	643	167	454	99	257	3,910.0	1900	204	149	55	350
1926	849	681	168	491	117	241	4,112.0					
1925	937	752	185	572	157	208	4,475.0					
1924	893	716	177	534	173	186	4,065.0					
1923	871	698	173	513	175	183	3,775.0					
1922	716	574	142	437	146	133	2,957.0					
1921	449	359	90	316	70	63	1,771.0					
1920	247	196	51	202	24	21	1,068.0					
1919	405	303	102	(⁴)	(⁴)	(⁴)						

Series H 48.—NUMBER OF NONFARM DWELLING UNITS DEMOLISHED PER DECADE: 1890 TO 1939

[In thousands of units]

DECADE	Number
1930-1939	397
1920-1929	580
1910-1919	414
1900-1909	297
1890-1899	208

¹ Includes both public and private units.

² Estimates for 1945 shown in series H 40-46 have been adjusted to allow for lapsed building permits and lag between issuance of permits and actual start of construction. These factors were not particularly significant prior to 1945.

³ Bureau of Labor Statistics estimated totals for these years are (in thousands):

1919, 330; 1918, 120; 1917, 230; 1916, 480; 1915, 475; 1914, 445; 1913, 455; 1912, 490; 1911, 480; 1910, 475. Urban-rural distribution not available separately for these years.

⁴ Not available.

⁵ Includes public residential construction amounting to 28 million dollars.

Series H 49-50.—CONSTRUCTION MATERIALS—VALUE OF OUTPUT, DESTINED FOR DOMESTIC CONSUMPTION: 1869 TO 1939

[In thousands of dollars. Compilation method changed in 1919]

YEAR	In current prices		YEAR	In 1913 prices		YEAR	In current prices		YEAR	In 1913 prices		YEAR	In current prices		YEAR	In 1913 prices	
	49	50		49	50		49	50		49	50		49	50		49	50
1939	3,701,600	2,328,050	1923	4,793,800	2,894,807	1918	3,217,450	1,843,811	1907	2,111,498	2,090,592	1897	963,431	1,435,814			
1938	3,159,000	1,986,792	1927	4,845,200	2,908,233	1917	3,058,556	1,974,536	1906	1,911,099	1,978,363	1896	880,291	1,226,032			
1937	3,945,800	2,358,518	1926	5,111,500	2,910,877	1916	2,627,755	2,208,197	1905	1,578,033	1,813,889	1895	1,033,166	1,461,338			
1936	3,331,500	2,188,896	1925	4,950,400	2,773,333	1915	2,010,682	2,125,457	1904	1,394,254	1,706,553	1894	1,004,085	1,402,353			
1935	2,375,000	1,585,447	1924	4,465,300	2,487,632	1914	2,043,846	2,195,323	1903	1,447,378	1,712,873	1893	1,074,342	1,424,857			
1934	1,909,900	1,261,493	1923	4,647,300	2,440,309	1913	2,384,390	2,384,390	1902	1,493,613	1,810,440	1892	1,335,549	1,759,617			
1933	1,536,100	1,129,485	1922	3,568,900	2,090,217	1912	2,154,101	2,200,307	1901	1,306,269	1,618,673	1891	1,075,974	1,341,613			
1932	1,862,700	1,074,685	1921	2,956,700	1,717,015	1911	1,942,803	2,002,890	1900	1,222,689	1,425,045	1890	1,216,529	1,443,095			
1931	2,552,100	1,820,328	1920	4,777,100	1,823,321	1910	2,049,729	2,100,132	1899	1,006,800	1,246,964	1889	838,857	986,891			
1930	3,779,800	2,336,237	1919 ¹	3,508,100	1,730,686	1909	1,992,504	2,101,797	1898	937,757	1,341,569	1879	444,234	545,742			
1929	5,007,500	2,984,207	1919 ²	3,708,160	1,826,917	1908	1,820,139	1,950,846	1869			1869	377,392	351,389			

¹ Figures comparable with those for 1920 and later years.² Figures comparable with those for 1918 and earlier years.

Series H 51-57.—CONSTRUCTION—CONTRACTS AWARDED (DODGE): 1925 TO 1945

[Includes both new and alteration work]

YEAR	CONSTRUCTION CONTRACTS AWARDED						
	Value of construction (thousands of dollars)				Floor space of buildings (thousands of square feet)		
	Total	Residential building	Nonresidential building	Public works and utilities	Total floor space ¹	Residential	Nonresidential
	51	52	53	54	55	56	57
	In 37 States ²						
1945	3,299,303	563,467	1,850,445	885,391	412,423	111,244	236,132
1944	1,994,016	348,443	899,434	746,139	234,549	73,955	155,559
1943	3,273,990	867,815	1,424,260	981,915	448,244	200,647	244,656
1942	3,255,061	1,817,733	3,896,725	2,540,603	1,314,220	449,454	847,529
1941	6,007,474	1,953,801	2,315,671	1,738,002	956,719	502,676	440,292
1940	4,003,957	1,596,944	1,294,640	1,112,373	690,459	420,531	268,062
1939	3,550,543	1,334,272	965,638	1,250,633	513,380	332,656	178,802
1938	3,196,928	985,787	1,072,137	1,139,004	429,023	240,568	185,743
1937	2,913,060	905,293	1,156,161	851,606	446,084	235,515	204,071
1936	2,675,298	801,626	959,789	913,883	409,676	222,514	182,764
1935	1,844,546	478,843	680,976	684,727	251,558	135,416	114,150
1934	1,543,109	248,839	551,208	743,062	152,394	64,255	86,043
1933	1,255,709	249,264	417,462	588,983	147,053	72,783	72,609
1932	1,351,159	280,069	487,622	583,468	155,577	73,607	80,176
1931	3,092,849	811,389	1,140,663	1,140,797	365,841	190,274	170,521
1930	4,523,115	1,101,316	1,822,372	1,599,427	510,382	230,040	271,905
1929	5,750,791	1,915,729	2,425,308	1,409,754	791,099	387,670	397,626
1928	6,628,285	2,788,318	2,438,184	1,401,783	966,558	568,332	394,071
1927	6,303,056	2,573,317	2,438,520	1,291,219	850,578	494,565	350,560
1926	6,380,916	2,671,119	2,417,695	1,292,102	883,794	521,062	355,724
1925	6,006,428	2,747,730	2,201,747	1,056,951	936,226	559,499	362,329

¹ Includes also a small amount of floor space reported for public works and utilities.² For list of States see text.

Series H 58-63.—CAPITAL OUTLAYS IN 145 MUNICIPALITIES: 1900 TO 1937

[Covers both private and public ownership projects]

YEAR	CAPITAL OUTLAYS IN 145 MUNICIPALITIES					
	Millions of dollars					Total per capita (dollars)
	Total	Highways	Education	Water-works and sewer ¹	Other ²	
	58	59	60	61	62	63
1937 ³	586.4	124.5	84.3	157.7	219.9	14.66
1936 ³	479.8	97.7	81.9	130.2	170.0	12.04
1935 ³	386.5	75.7	39.3	108.8	162.7	9.73
1934 ³	331.4	92.9	21.0	96.3	121.2	8.38
1933 ³	281.5	94.1	28.4	61.8	97.2	7.14
1932 ³	576.5	166.0	84.2	116.0	210.3	14.68
1931	911.0	265.4	141.3	194.7	309.6	23.29
1930	1,071.5	375.6	158.5	248.0	289.4	27.52
1929	936.1	337.4	150.3	179.0	269.4	24.47
1928	989.9	340.1	149.0	210.7	290.1	26.36
1927	1,020.0	334.1	168.6	219.7	297.6	27.75
1926	890.5	284.7	181.4	196.6	227.8	24.66
1925	873.1	276.1	182.7	190.5	223.8	24.62
1924	718.2	210.1	189.1	177.4	141.6	20.61
1923	570.0	172.5	152.3	136.2	109.0	16.65
1922	540.9	162.9	133.0	144.9	100.1	16.11
1921	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
1920 ⁵	376.0	142.7	62.7	94.4	76.2	11.51
1919	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
1918	235.1	77.3	37.0	65.6	55.2	7.52
1917	250.1	99.2	36.7	61.2	53.0	8.08
1916	262.6	99.3	42.9	64.4	56.0	8.68
1915	267.8	93.5	44.5	76.5	53.3	9.07
1914	306.0	109.2	45.8	90.2	60.8	10.62
1913	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)	(⁴)
1912	284.1	94.4	39.0	93.1	57.6	10.37
1911	296.0	100.1	38.1	92.7	65.1	11.06
1910	269.4	86.4	35.5	82.1	65.4	10.41
1909	258.1	82.4	36.5	77.7	61.5	10.29
1908	271.3	85.9	39.5	70.5	75.4	11.12
1907	241.0	81.7	35.6	65.8	57.9	10.45
1906	192.8	62.0	33.6	49.6	47.6	8.87
1905	185.6	63.1	32.5	43.0	47.0	8.46
1904	183.4	65.7	26.8	44.5	46.4	8.57
1903	173.3	56.0	23.3	46.3	47.7	8.32
1902	128.0	36.2	18.1	34.1	39.6	6.29
1901 ⁷	94.7	(⁴)	(⁴)	(⁴)	(⁴)	4.77
1900 ⁷	82.7	(⁴)	(⁴)	(⁴)	(⁴)	4.27

¹ Figures for 1933-1937 include construction expenditures of Metropolitan Water District of Southern California directly assessable against the city of Los Angeles, which were added to the waterworks outlay totals of the Bureau of the Census.² See text for categories included. Figures for 1924-1931 include capital outlays of New York City for the Independent Subway System, which were added to the totals reported by the Bureau of the Census. Bureau of the Census included these expenditures in its outlay figures for later years.³ Estimated on basis of 83 cities.⁴ Not available.⁵ Estimated on basis of 107 cities.⁶ Partially estimated.⁷ Estimated on basis of 124 cities.

Series H 64-73.—CONSTRUCTION—COST INDEXES: 1910 TO 1945

YEAR	Engineering News-Record, construction, 1913 = 100	Turner, building, Eastern cities, 1913 = 100	Boeckh, residential construction (20-city average), 1926-1929 = 100	I.C.C., railroad construction, total road, 1910-1914 = 100	HANDY PUBLIC UTILITY CONSTRUCTION		Highway construction (composite mile), 1925-1929 = 100	FARM CONSTRUCTION		American Appraisal Company, buildings, 1913 = 100
	64	65	66	67	Gas plants, ¹ 1911 = 100	Electric light and power plants, ² 1911 = 100	70	Dwellings, 1910-1914 = 100	Service buildings, 1910-1914 = 100	73
1945	308	263	147.4	197	266	228	112.0	260	235	271
1944	299	244	137.6	187	260	228	115.5	239	224	261
1943	290	257	126.7	186	258	239	126.9	219	202	252
1942	276	245	121.1	175	254	232	109.9	193	180	241
1941	258	215	114.8	151	243	235	81.8	169	158	218
1940	242	193	106.1	140	233	230	71.6	151	143	204
1939	236	182	102.8	137	229	227	72.6	146	141	201
1938	236	188	100.9	138	229	225	72.8	145	141	199
1937	235	192	98.0	142	226	224	79.4	155	146	198
1936	206	169	87.7	133	207	208	82.9	144	137	170
1935	196	162	84.7	131	201	205	80.6	140	134	162
1934	198	160	86.9	131	196	205	84.0	141	133	161
1933	170	140	80.0	127	177	191	76.7	124	119	150
1932	157	136	79.9	131	177	186	61.0	123	120	155
1931	181	145	94.4	143	192	195	76.8	142	137	178
1930	203	165	102.5	152	199	198	85.7	166	157	200
1929	207	185	105.1	160	201	202	92.1	173	164	217
1928	207	190	100.7	161	198	191	95.3	172	163	217
1927	206	190	100.4	164	204	186	101.9	178	164	217
1926	208	195	101.8	168	210	189	103.4	177	167	217
1925	207	195	100.8	166	212	189	107.5	177	169	217
1924	215	194	101.8	171	219	188	113.1	180	169	222
1923	214	196	103.2	171	204	178	117.9	186	170	224
1922	174	175	92.2	157	188	179	105.8	174	160	200
1921	202	183	100.2	175	229	234	-----	181	172	216
1920	251	252	124.7	214	246	194	-----	265	232	283
1919	198	196	96.7	178	229	176	-----	202	194	229
1918	189	166	83.2	159	212	151	-----	168	172	177
1917	181	147	69.9	134	182	127	-----	140	143	143
1916	130	120	59.8	110	134	114	-----	114	119	116
1915	93	103	56.2	101	110	103	-----	103	105	101
1914	89	100	54.8	-----	-----	-----	-----	100	100	98
1913	100	100	54.5	-----	-----	-----	-----	102	102	100
1912	-----	-----	56.5	100	-----	-----	-----	100	99	-----
1911	-----	-----	55.2	-----	100	100	-----	100	99	-----
1910	-----	-----	55.9	-----	-----	-----	-----	99	99	-----

¹ Total construction and equipment. Average for 5 geographic divisions.
² Electrical plant. Average for 5 geographic divisions.

³ Estimated by interpolation on the basis of movements in the Handy utility building cost index.

Series H 74-79.—CONSTRUCTION—BUILDING PERMIT INDEXES, NUMBER AND VALUE:
1856 TO 1939

YEAR	NUMBER OF PERMITS (LONG), 1920-1930 = 100			PERMIT VALUES			YEAR	NUMBER OF PERMITS (LONG), 1920-1930 = 100			PERMIT VALUES		
	Total, new building	Residen- tial	Nonresiden- tial	Long, 1930 = 100	Newman			Total, new building	Residen- tial	Nonresiden- tial	Long, 1930 = 100	Newman	
					In current prices, 1920-1930 = 100	In 1913 prices, 1913 = 100						In current prices, 1920-1930 = 100	In 1913 prices, 1913 = 100
74	75	76	77	78	79	74	75	76	77	78	79		
1939	-----	-----	-----	78.8	-----	-----	1920	58	37	75	87.6	50.9	58
1938	-----	-----	-----	70.6	-----	-----	1919	67	65	70	81.9	47.9	70
1937	-----	-----	-----	67.0	-----	-----	1918	23	14	32	24.1	14.5	27.1
1936	-----	32	35	59.4	-----	-----	1917	36	34	36	49.7	26.2	59
1935	23	18	28	39.8	-----	-----	1916	52	69	41	74.2	37.2	100
1934	15	7	23	21.4	-----	-----	1915	48	69	34	62.8	31.2	94
1933	15	7	22	19.0	10.8	22	1914	42	61	29	56.1	29.9	92
1932	20	10	29	18.0	14.0	23	1913	43	60	28	62.3	33.1	100
1931	43	31	52	78.8	40.5	71	1912	46	66	29	69.2	35.6	108
1930	48	32	60	100.0	56.5	87	1911	46	71	29	65.5	33.2	104
1929	67	54	80	187.3	100.3	149	1910	46	72	28	64.9	34.5	109
1928	89	87	93	199.1	114.3	170	1909	46	79	20	65.6	38.8	125
1927	102	101	106	214.4	118.5	176	1908	37	60	19	57.6	27.3	89
1926	128	133	122	239.6	130.9	194	1907	39	65	21	50.4	31.4	98
1925	144	164	128	252.3	137.7	205	1906	42	72	21	57.9	34.6	109
1924	139	149	129	213.3	119.9	173	1905	39	66	20	56.1	31.9	106
1923	133	143	121	212.7	116.3	167	1904	29	48	17	41.6	22.9	80
1922	112	123	103	167.6	94.4	151	1903	24	36	16	36.3	19.8	71
1921	81	75	83	107.6	61.1	90	1902	22	33	14	36.0	18.4	69
							1901	28	36	13	35.3	17.0	66

Series H 74-79.—CONSTRUCTION—BUILDING PERMIT INDEXES, NUMBER AND VALUE:
1856 TO 1939—Con.

YEAR	NUMBER OF PERMITS (LONG), 1920-1930=100			PERMIT VALUES			YEAR	NUMBER OF PERMITS (LONG), 1920-1930=100			PERMIT VALUES		
	Total, new building	Residential	Nonresidential	Long, 1930=100	Newman			Total, new building	Residential	Nonresidential	Long, 1930=100	Newman	
					In current prices, 1920-30=100	In 1913 prices, 1913=100						In current prices, 1920-30=100	In 1913 prices, 1913=100
	74	75	76	77	78	79		74	75	76	77	78	79
1900	17	28	9	22.5	11.6	46	1877	26	37	9	5.5	4.5	19
1899	24	38	11	30.0	16.7	70	1876	25	34	12	6.4	4.6	18
1898	20	36	10	23.0	12.7	58							
1897	26	55	11	25.3	14.5	67	1875	29	41	12	7.5	5.4	20
1896	25	49	13	23.4	13.3	60	1874	30	41	13	8.4		
1895	27	56	13	28.0	16.5	73	1873	47	58	26	12.6		
1894	24	46	13	21.0	12.2	55	1872	52	58	37	14.1		
1893	26	50	12	24.3	12.6	55	1871	62	78	26	21.4		
1892	35	65	16	34.2	19.3	84	1870	52	64	26	17.5		
1891	30	56	13	31.3	17.6	76	1869	54	66	26	20.3		
1890	34	70	15	29.5	17.5	75	1868	47	56	26	17.4		
1889	36	74	16	29.0	15.4	63	1867	38	44	26			
1888	30	61	14	21.0	11.2	46	1866	29	31	28			
1887	34	64	15	25.1	11.8	47							
1886	37	60	12	22.5	12.9	51	1865	22	22	23			
1885	33	53	12	19.5	11.2	47	1864	16	16	16			
1884	27	42	11	17.3	10.5	44	1863	23	31	23			
1883	24	37	10	17.1	10.4	39	1862	26	32	12			
1882	20	30	9	16.5	8.9	33	1861	18	22	4			
1881	18	27	9	15.3	6.7	27							
1880	14	19	8	11.5	5.4	22	1860	27	30	12			
1879	19	23	12	8.9	4.1	19	1859	22	25	16			
1878	19	26	10	6.1	4.0	17	1858	18	19	12			
							1857	18	19	16			
							1856	21	23	16			

Series H 80.—CONSTRUCTION—EMPLOYMENT, AVERAGE OF MONTHLY AVERAGES OF
NUMBER OF PERSONS EMPLOYED FOR THE YEAR: 1929 TO 1945

[In thousands]

YEAR	Number	YEAR	Number	YEAR	Number	YEAR	Number
1945	967	1940	1,916	1935	1,292	1930	2,102
1944	762	1939	1,909	1934	1,151	1929	2,508
1943	1,338	1938	1,524	1933	976		
1942	2,214	1937	1,778	1932	1,165		
1941	2,446	1936	1,763	1931	1,759		

Series H 81-83.—HOUSING—AVAILABLE HOUSING UNITS AND
TOTAL FAMILIES, NONFARM AREAS: 1900 TO 1938

[In thousands, except ratio]

YEAR (Jan. 1)	Total available housing units	Total nonfarm families	Ratio of families to available units (percent)	YEAR (Jan. 1)	Total available housing units	Total nonfarm families	Ratio of families to available units (percent)
	81	82	83		81	82	83
1938	25,779	25,832	100.21	1918	17,451	16,809	96.32
1937	25,494	25,377	99.54	1917	17,117	16,323	95.36
1936	25,302	24,922	98.50	1916	16,714	15,872	94.96
1935	25,252	24,467	96.89	1915	16,301	15,462	94.85
1934	25,248	23,952	94.87	1914	15,873	15,032	94.67
1933	25,213	23,601	93.61	1913	15,415	14,581	94.59
1932	25,078	23,510	93.75	1912	14,942	14,188	94.95
1931	24,858	23,303	93.74	1911	14,478	13,840	95.59
1930	24,472	23,028	94.10	1910	13,964	13,477	96.51
1929	23,906	22,538	94.28	1909	13,480	13,052	96.82
1928	23,222	22,104	95.19	1908	13,074	12,761	97.61
1927	22,441	21,623	96.35	1907	12,647	12,289	97.17
1926	21,598	21,065	97.55	1906	12,231	11,855	96.93
1925	20,761	20,519	98.83	1905	11,804	11,494	97.37
1924	19,959	19,987	100.14	1904	11,426	11,199	98.01
1923	19,212	19,337	100.65	1903	11,077	10,849	97.94
1922	18,673	18,739	100.35	1902	10,758	10,519	97.78
1921	18,331	18,161	99.07	1901	10,497	10,264	97.78
1920	17,978	17,529	97.50	1900	10,285	10,025	97.47
1919	17,677	17,078	96.61				

Series H 84-88.—HOUSING—NONFARM DWELLING UNITS STANDING AND NET ADDITIONS TO SUPPLY: 1900 TO 1939

[In thousands of units. For gross annual additions to supply see series H 40]

PERIOD	Number units standing, beginning of decade	Net number of units added during decade ¹	UNITS BUILT DURING DECADE		Units demolished during decade
			New units ¹	Converted units	
	84	85	86	87	88
1980-1939	25,692	4,014	3,686	725	397
1920-1929	19,112	6,580	7,035	125	580
1910-1919	15,533	3,579	3,890	103	414
1900-1909	11,797	3,736	3,952	81	297
Average (mean) 1900-1939		4,477	4,641	259	422

¹ Includes makeshift units estimated at 952,000 during 1930-1939. Number for previous decades not available.

Series H 89-112.—HOUSING—OCCUPIED DWELLING UNITS OR FAMILIES, AND TENURE OF HOMES: 1890 TO 1945

YEAR	Total occupied dwelling units or families	TOTAL POPULATION		TENURE OF HOMES					
		Number of persons ¹	Per occupied dwelling unit or family	Occupied units reporting tenure	Owner occupied		Tenant occupied		
					Number	Percent	Number	Percent	
Tota									
		89	90	91	92	93	94	95	96
1945 ²	37,600,000	140,186,237	3.73	37,600,000	20,009,000	53.2	17,591,000	46.8	
1940	34,854,532	131,669,275	3.78	34,854,532	15,195,763	43.6	19,658,769	56.4	
1930	29,904,663	122,775,046	4.11	29,321,891	14,002,074	47.8	15,319,817	52.2	
1920	24,351,676	105,710,620	4.34	23,810,558	10,866,960	45.6	12,943,598	54.4	
1910	20,255,555	91,972,266	4.54	19,781,606	9,083,711	45.9	10,697,895	54.1	
1900	15,963,965	75,994,575	4.76	15,428,987	7,205,212	46.7	8,223,775	53.3	
1890	12,690,152	62,947,714	4.93	12,690,152	6,066,417	47.8	6,623,735	52.2	
Nonfarm									
		97	98	99	100	101	102	103	104
1945 ²	31,281,000	(⁴)			31,281,000	15,878,000	50.8	15,403,000	49.2
1940	27,665,684	101,122,381	3.66	27,665,684	11,358,218	41.1	16,307,466	58.9	
1930	23,235,982	92,329,696	3.97	22,854,935	10,503,386	46.0	12,351,549	54.0	
1920	17,600,472	74,096,351	4.21	17,229,394	7,041,283	40.9	10,188,111	59.1	
1910	14,131,945	59,895,306	4.24	13,672,044	5,245,380	38.4	8,426,664	61.6	
1900	10,274,127			9,779,979	3,566,809	36.5	6,213,170	63.5	
1890	7,922,973			7,922,973	2,923,671	36.9	4,999,302	63.1	
Farm									
		105	106	107	108	109	110	111	112
1945 ²	6,319,000	(⁴)			6,319,000	4,131,000	65.4	2,188,000	34.6
1940	7,188,848	30,546,894	4.25	7,188,848	3,837,545	53.4	3,351,303	46.6	
1930	6,668,681	30,445,350	4.57	6,466,956	3,498,688	54.1	2,968,268	45.9	
1920	6,751,204	31,614,269	4.68	6,581,164	3,825,677	58.1	2,755,487	41.9	
1910	6,123,610	32,076,960	5.24	6,109,562	3,838,331	62.8	2,271,231	37.2	
1900	5,689,838			5,649,008	3,638,403	64.4	2,010,605	35.6	
1890	4,767,179			4,767,179	3,142,746	65.9	1,624,433	34.1	

¹ Figure for 1945 is estimate as of November 1; figures for 1890 to 1940 are for decennial census dates.

² These figures are not exactly comparable with 1940 since in 1940, 83,265 urban-farm units were included in the farm rather than in the nonfarm figures. Furthermore, data for 1945 are based on a sample survey conducted by the Census Bureau in November 1945 in connection with Monthly Report on the Labor Force.

³ Revised. ⁴ Not available ⁵ Estimated; see text.

Series H 113-127.—NONFARM HOUSING CREDIT—ESTIMATED VOLUME OF HOME MORTGAGE LOANS MADE AND OUTSTANDING, AND OF FORECLOSURES: 1925 TO 1945

[All figures in millions of dollars, except number of foreclosures]

YEAR	MORTGAGE LOANS MADE ON ONE-TO-FOUR-FAMILY NONFARM HOMES							MORTGAGE LOANS OUTSTANDING ON ONE-TO-FOUR-FAMILY NONFARM HOMES							Number of foreclosures
	Total	Savings and loan associations	Life insurance companies	Mutual savings banks	Commercial banks ¹	HOLC	Individuals and others ²	Total	Savings and loan associations	Life insurance companies	Mutual savings banks	Commercial banks ¹	HOLC	Individuals and others ²	
	113	114	115	116	117	118	119	120	121	122	123	124	125	126	
1945	4,701	1,913	209	184	840	4	1,551	19,991	5,376	2,258	2,530	2,575	852	6,400	14,436
1944	3,830	1,454	300	140	601	31	1,304	19,523	4,799	2,458	2,570	2,410	1,091	6,200	17,547
1943	3,133	1,184	272	120	515	54	1,038	19,542	4,584	2,410	2,660	2,450	1,338	6,100	25,699
1942	3,155	1,051	374	130	606	40	954	19,908	4,556	2,255	2,700	2,480	1,567	6,350	42,331
1941	3,810	1,379	371	171	798	63	1,028	20,095	4,562	1,976	2,730	2,470	1,777	6,590	59,036
1940	3,290	1,200	324	133	689	143	801	19,103	4,084	1,758	2,700	2,095	1,956	6,510	76,011
1939	2,873	986	274	112	610	151	740	18,216	3,758	1,490	2,680	1,810	2,038	6,440	100,961
1938	2,455	798	242	105	560	81	669	17,646	3,555	1,320	2,670	1,600	2,169	6,332	118,505
1937	2,499	897	232	120	500	27	723	17,844	3,420	1,246	2,700	1,400	2,398	6,180	151,366
1936	2,158	755	140	100	430	128	605	17,225	3,237	1,245	2,750	1,230	2,763	6,000	185,439
1935	2,011	564	77	80	264	583	443	17,510	3,293	1,231	2,850	1,189	2,897	6,000	228,713
1934	3,070	451	16	80	110	2,263	150	17,857	3,710	1,379	3,000	1,189	2,379	6,200	230,350
1933	865	414	10	99	110	132	100	17,878	4,437	1,599	3,200	1,810	132	6,700	252,400
1932	1,092	543	54	150	170		175	19,242	5,148	1,724	3,375	1,995		7,000	248,700
1931	2,175	892	169	350	364		400	20,685	5,890	1,775	3,375	2,145		7,500	193,800
1930	3,536	1,262	400	484	670		720	21,259	6,402	1,732	3,300	2,425		7,400	150,100
1929	5,088	1,791	525	612	1,040		1,120	21,058	6,507	1,626	3,225	2,500		7,200	134,900
1928	5,778	1,932	525	915	1,156		1,250	19,605	6,060	1,445	3,125	2,375		6,600	116,000
1927	5,733	1,895	500	834	1,144		1,360	17,492	5,488	1,254	2,900	1,850		6,000	91,000
1926	5,321	1,824	465	809	943		1,280	15,272	4,810	1,062	2,650	1,250		5,500	68,100
1925	4,763	1,620	400	863	760		1,120	13,216	4,204	837	2,375	800		5,000	

¹ Includes loans made by trust departments of commercial banks.

² Includes fiduciaries, trust departments of commercial banks, real estate and bond companies, title and mortgage companies, philanthropic and educational

institutions, fraternal organizations, construction companies, RFC Mortgage Company, etc.

Series H 128-135.—NONFARM HOUSING CREDIT—SAVINGS AND LOAN ASSOCIATIONS:
1920 TO 1945

YEAR	OPERATING OF SAVINGS AND LOAN ASSOCIATIONS					FAILURES, BUILDING AND LOAN ASSOCIATIONS		
	Number of associations	Selected financial items (millions of dollars)				Number failed	Thousands of dollars	
		Total assets	Gross first mortgage loans	First mortgage pledged shares ¹	Private share capital		Liabilities	Estimated loss
	128	129	130	131	132	133	134	135
1945	6,149	8,747	5,521	145	7,365	0		
1944	6,279	7,458	4,983	183	6,305	5	2,503	155
1943	6,498	6,604	4,793	209	5,494	11	1,484	261
1942	6,540	6,109	4,783	227	4,910	18	8,919	1,789
1941	6,905	6,011	4,798	246	4,652	44	8,576	1,052
1940	7,184	5,672	4,374	290	4,272	129	69,560	6,744
1939	7,719	5,524	4,077	320	4,060	183	84,901	27,040
1938	8,289	5,543	3,908	353	4,005	277	36,025	11,231
1937	8,870	5,600	3,832	422	4,015	269	44,739	15,775
1936	9,663	5,688	3,760	523	4,131	144	20,316	9,052
1935	10,266	5,875	3,947	655	4,254	239	31,946	15,782
1934	10,744	6,406	4,593	883	4,458	68	34,728	10,174
1933	10,596	7,018	5,559	1,122	4,750	88	215,517	49,955
1932	10,915	7,737	6,407	1,259	5,326	122	52,818	20,337
1931	11,442	8,417	7,214	1,324	5,916	126	61,909	22,328
1930	11,777	8,829	7,760	1,358	6,296	190	80,438	24,676
1929	12,342	8,695	7,791	1,284	6,237	159		2,313
1928	12,666	8,016	7,267	1,207	5,762	23		568
1927	12,804	7,179	6,586	1,098	5,027	21		1,013
1926	12,626	6,334	5,842	1,032	4,373	12		381
1925	12,403	5,509	5,085	881	3,811	26		500
1924	11,844	4,766	4,289	770	3,153	18		398
1923	10,744	3,943	3,549	632	2,626	9		133
1922	10,009	3,343	3,009	541	2,210	4		159
1921	9,255	2,891			1,965	6		92
1920	8,633	2,520			1,741	2		1

¹ Mortgage loans made on one-to-four family nonfarm homes.