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## APPENDIX F

### DESCRIPTION OF ADJUSTMENT FOR LAPSES IN PERMIT APPLICATIONS

THE DATA in the permit records for New York City, used in this project, relate to permits applied for. Both Wickens and Long indicate that the number of multifamily structures in New York for which permits were requested but which were never built was very large in some years.<sup>1</sup> Wickens, therefore, made a special adjustment to exclude such lapses from his dwelling unit estimates for 1920-29. A similar adjustment was made in deriving the estimates for this study, covering the entire period for which data were available. The procedure employed followed that used by Wickens, although the present estimates of lapses during the 1920's differ slightly in magnitude and timing from his.

From the 1914, 1929, and 1930 Annual Reports of the New York City Tenement House Department, a series on dwelling units in multifamily structures erected each year between 1902 and 1930 in each of the five boroughs was obtained.<sup>2</sup> Following Wickens' procedure, it was assumed that a six-month average lag existed between start and completion. By shifting to the previous year one half of the dwelling units completed in a year, a new series of the estimated number of dwelling units in multifamily structures started annually between 1902 and 1929 was derived. The starts series for each borough was then compared with the permits applied for series, obtained from the WPA transcriptions. In most years, the number of dwelling units for which permit applications were made exceeded the estimated number of units started; the surplus was considered to represent lapsed applications. In several years, however, the number of units started exceeded the number of units in permit applications. In these cases, it was assumed that permits authorizing such units had been carried forward from the previous year. Accordingly, the surplus starts were subtracted from the estimated lapses of the previous year to yield an estimate of net lapses for that year. If the lapses of the previous year were less than the surplus starts, the remainder was subtracted from lapses for the next previous year, on the assumption that some permits had been carried forward from that year as well. This procedure was followed until the surplus starts were exhausted.

From the net lapse series for each borough, estimates were derived of the

<sup>1</sup> David L. Wickens, *Residential Real Estate* (National Bureau of Economic Research, 1941), pp. 45-46; Clarence D. Long, Jr., *Building Cycles and the Theory of Investment* (Princeton University Press, 1940), p. 98.

<sup>2</sup> The records of this department do not extend back of 1902. Therefore, no adjustment for lapses could be made prior to that year.

permit valuation of the lapsed units. It was assumed that the lapsed units had the same average value as the units actually started. Therefore, the ratio of dwelling units lapsed to total dwelling units applied for also defined the ratio of the aggregate permit valuation of lapsed units to the permit valuation of all units applied for.

The five boroughs, which were treated as independent cities throughout this study, were then classified in terms of city size class and the lapse series for the boroughs within each class were summed. The resulting series are presented in Table 24. The estimated annual number and permit value of lapsed units for each size class were deducted in all calculations from the sample data as reported. Therefore, the sample data for the several size classes in the Middle Atlantic division were exclusive of estimated lapses in New York City, 1902-29, in both the expansions based on population relationships and the expansions based on population growth relationships.

Table 24  
ESTIMATED NUMBER AND PERMIT VALUE OF LAPSED UNITS IN  
MULTIFAMILY STRUCTURES, NEW YORK CITY BOROUGHS,  
BY CITY SIZE CLASSES, 1902-1929

	LAPSED DWELLING UNITS			PERMIT VALUE OF LAPSED UNITS (IN THOUSANDS)		
	<i>Size Class I</i>	<i>Size Class II</i>	<i>Size Class III</i>	<i>Size Class I</i>	<i>Size Class II</i>	<i>Size Class III</i>
1902	3,043	597	..	\$ 7,658	\$ 1,220	\$..
1903	5,501	322	..	11,134	628	..
1904	11,225	4,388	..	21,318	8,276	..
1905	10,133	5,403	..	17,394	8,530	..
1906	3,859	45	12	6,280	61	33
1907	...	...	7	...	...	14
1908	...	...	..	...	...	..
1909	4,901	3,808	..	21,598	8,184	..
1910	...	2,308	..	...	4,859	..
1911	...	223	..	...	350	..
1912	...	1,006	..	...	2,033	..
1913	85	570	..	365	833	..
1914	2,764	362	..	5,041	565	..
1915	9,088	82	..	19,171	141	..
1916	2,245	553	..	5,924	944	..
1917	...	...	..	...	...	..
1918	...	...	..	...	...	..
1919	2,552	665	..	11,785	2,446	..
1920	529	60	..	3,920	233	..
1921	5,550	901	..	25,501	3,370	..
1922	9,433	3,098	..	43,753	16,852	..
1923	5,345	...	..	29,039	...	..
1924	701	58	..	6,217	256	..
1925	20,669	46	..	85,985	182	..
1926	20,401	194	..	85,664	690	..
1927	2,328	...	..	8,061	...	..
1928	23,638	253	..	114,160	940	..
1929	10,053	...	..	82,957	...	..

Source: Derived from building permit data and 1914, 1929, and 1930 Annual Reports of the New York City Tenement House Department.

In the calculations for Florida for the 1920's, the building rates for 1925 and 1926, as derived from the sample data, seemed unreasonably high. The volume of building in Florida during these two years, the peak of the land boom, was undoubtedly very great. But it appears that the sudden collapse of the boom, which occurred in late 1925 in some areas and in middle 1926 in others, frustrated many intentions to build as evidenced by permit authorizations.<sup>3</sup> It was accordingly assumed that there was an unusually large number of permit lapses in Florida during these two boom years, and the estimates were arbitrarily reduced by 25 per cent.

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<sup>3</sup> Homer P. Vanderblue, "The Florida Land Boom," *Journal of Land and Public Utility Economics*, May and August 1927.