

could and would lick all of the other obstacles, such as delayed delivery of materials or shortages resulting from strikes in plants of building material suppliers. Naturally, the elimination of weather conditions as a factor in construction progress will not automatically solve all the other delay problems that beset the construction industry. It might, however, reverse the trend which seems unmistakably clear—which is that in all construction scheduling, more and more time is allowed as a necessary factor of safety because of all the delays seemingly beyond one's control that plague all our building activities.

It might be useful to spell out some of the savings that could and should be made if all unnecessary delays could be eliminated. At least this will give us a goal toward which we might work and will remind us of possibilities that most of us have forgotten. To be as specific as possible, I propose to take as an example the construction of an 18- to 20-story apartment building with a total estimated completed cost of about \$7 million, including a land cost of \$700,000.

Starting off with land assembly, one should—if one could plan on an optimum basis—secure a 90-day option to purchase the site, during which time all the necessary market surveys, financial analyses, and preliminary plans could be completed. Allowing nine months as a reasonable time to complete plans and specifications, the optimum cost of carrying the land up to the development period might be around \$15,000 for the option and \$35,000 for taxes and interest-carrying charges for the six months of ownership. Here, then, is a total cost of carrying the land up to the beginning of construction of about \$50,000. Very often as much as a year and a half elapses between the time the land is acquired and the construction contract is awarded. In such a case and using our assumed example, this would entail a carrying cost of about \$105,000 if you assume that real estate taxes and interest-carrying charges are about 10% annually—which is on the low side. Here, then, is a possible savings of about \$55,000 which, of course, has nothing to do with time economies during the construction period.

Next comes financing, a procedure which typically is very time-consuming. First, one usually arranges a commitment for the permanent financing with or without an FHA insurance provision. This traditionally involves much red tape and an excessive time delay but let us not belabor this or try to put a dollar cost on this phase. It should be noted, however, that very often the permanent financing arrangements require a 70% to 90% occupancy rate before the permanent financing can become effective.

The costs of construction financing naturally vary with the times and with the credit rating of the owner-developer. During construction there is the greatest risk, and the loan rate generally reflects this. In addition, the cost of the construction includes the payment of such normal costs as title insurance premiums, attorneys' fees, inspection and certification fees to engineers, architects, etc. Frequently, the interest rate is equal to the note rate on the entire note amount from the date of closing to the take-out by the permanent mortgage financing. For instance, in our assumed example, if a construction loan of \$6 million was negotiated at a current rate of $7\frac{1}{2}\%$, the developer would pay interest equal to $7\frac{1}{2}\%$ on the entire \$6 million, commencing on the date of closing even though the \$6 million would be funded over a period of time as construction proceeds. The effective yield of such a construction loan would be determined by the average daily balance during its term. Because of slow starts and low initial draw-downs, it would be rare if on the average the average daily balance would be 50%, which is to say that on the average, \$3 million would be outstanding during the entire term. This, of course, would mean that the effective yield would be 15%. To the developer, however, the yield rate is not nearly as important as the absolute dollar cost which would be \$450,000 on a one-year basis, \$675,000 on a year-and-a-half basis, and \$900,000 on a two-year basis.

Let us leave for a moment these construction financing costs. What is pertinent for our discussion is the construction time period. Ideally—and this is admittedly a highly controversial judgment, one could assert that our assumed apartment project could and should be completed in one year. On the basis of our present average performance in the northeastern portion of the United States, at least two years would be required or at least must be planned from the time construction starts until the date of tenant occupancy. This is a terrific gap between what is and what might be. In our assumed example the difference in construction financing costs varies from \$450,000 for a one-year construction period to \$900,000 for a two-year period. Percentage-wise, this of course means that here is a potential cost savings of 7.5% or \$450,000 if we