

firm move-in dates and a complicated move-in schedule if your renting or selling promotion has gone well.

Just to round out the picture, let me mention briefly some other building construction costs that are needlessly increased when weather or other circumstances delay construction progress. Even though this intrudes on what other speakers have covered, it is worth repeating the list of costs that continue when construction is stopped or delayed. These are:

1. Supervisory, field engineering, and timekeeping staff costs;
2. Watchmen, standby electricians, plumbers, steamfitters, and hoisting engineers;
3. Equipment rental;
4. Electric power, water, fuel, and telephone costs;
5. Insurance, storage charges, and miscellaneous;
6. Cost of protecting from the elements partially completed construction.

Obviously, there is tremendous room for improvement in shortening the construction period. No one expects that perfection can be achieved or that human beings will not continue to act like human beings instead of infallible machines. Nevertheless, the point that I would like to emphasize is that with interest rates at an all-time high and with little prospect of their going lower, there are greater rewards today than ever before in reducing the construction period by improving all-weather construction techniques. Finally, if substantial improvement can be achieved in this area, one might look forward with considerable optimism to similar improvements in scheduling, in eliminatng delays resultng from material shortages or delivery failures, and in reducing work stoppages resulting from either direct or indirect labor disputes.

Mr. WHITLOCK. I think in the interest of time I would like to point out about four or five points in my statement that I would like to call the committee's attention to.

In the first place the producers of building materials like labor and the contractor have a great deal of interest in this whole question of seasonality and are greatly affected by the seasonality of construction.

Sometimes overlooked is the fact that a producer has to produce his materials and be ready to supply the building industry when they are needed. We find ourselves having a winter slowdown in production which means layoffs of workers.

We also have to gear up again in the spring when this rather wasteful and traditional way of the industry begins to take place and our gearing up of course is costly and we have to find labor to replace those laid off.

To try to overcome that we build inventories about which we have to do a lot of guessing because you don't know exactly what your requirements are going to be.

All of this adds labor difficulties, cost difficulties, and business difficulties. If our demand could be spread over the whole year to eliminate seasonality would be very helpful.

Another important point that I want to call to your attention is an exhibit which is a statement by the Department of Commerce which says that the total U.S. dollar loss due to weather was quantitatively evaluated at a minimum of \$3 billion annually. The maximum dollar loss was estimated as high as \$10 billion. This is a governmental developed cost figure that the Department of Commerce in their document on weather in the construction industry has furnished us.

Now a third point is that we in the masonry industry have had a great deal of interest in seasonality for a great length of time. We have research facilities. We have research personnel. We have engineering personnel. We have had them all studying ways and means of improving masonry construction and trying to make it a year-round operation.

We have been studying the lightweight materials of the plastic