

# Special Topic: Elevator Doors

## THE EVOLVING RESIDENTIAL-ELEVATOR DOOR

*by Louis Blaiotta, Sr.*

The rapidly-evolving demographics of the Western world, and particularly the U.S., are having a dramatic effect on the vertical-transportation industry. Healthy growth in general population, combined with demographic shifts among the generations, has resulted in the escalation of high-density real-estate development. For example, the "graying" of America has swollen the ranks of the "Empty Nesters."

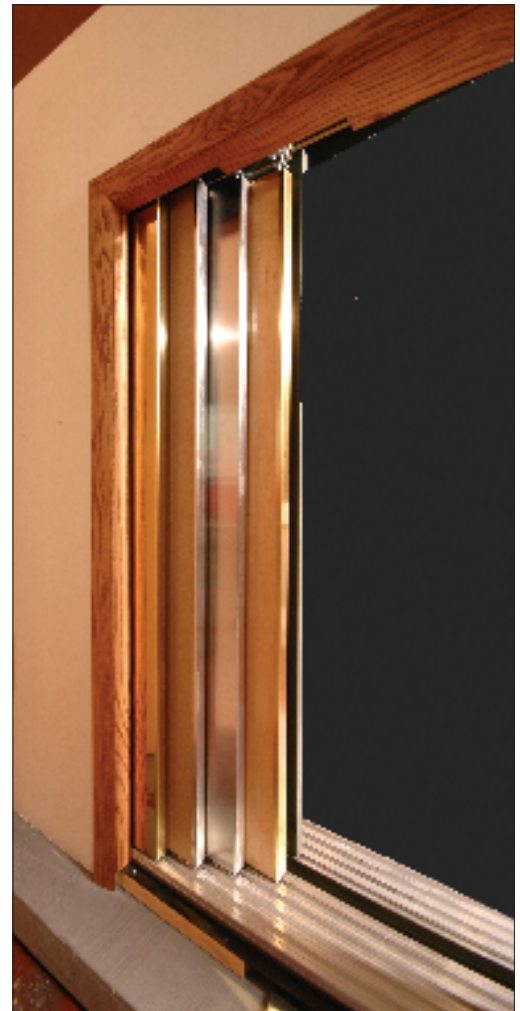
These older Americans are living longer, remaining active later in life, and increasingly building their own downsized "dream houses" instead of populating retirement communities. Likewise, as the highly consuming Baby Boomers have entered their peak earning years, the construction of second homes and vacation houses has increased. The well-to-do of all ages are building custom, in-town homes instead of – or in addition to – the conventional "big house in the 'burbs." And the less-well-to-do are occupying ever-more vertical-community housing in the cities, suburbs and exurbs.

With each passing year, residential space comes at more and more of a premium. As land prices skyrocket and as zoning in many communities is being restructured to limit "suburban sprawl," the need to build in a vertical direction becomes readily apparent.

What does all this have to do with elevator doors? Simply, for all the reasons above (plus many others) the demand for residential elevators is increasing dramatically among the general population (instead of its traditional market, the ultra-wealthy or physically handicapped.) This presents a challenge: to build more residential elevators for those who want or need them, while making it practical (or even possible) by having such elevators consume a minimum of precious residential space. Traditionally, this was accomplished though the use of the combination of a swinging landing door and a collapsible car gate. However, modern sensibilities plus today's disability-accessibility requirements are strongly framing the need for power-operated elevator doors.



*Home-elevator  
doors, closed*



*Four-speed  
home-elevator  
doors, partially open*

Continued

New advances in compact, multi-paneled door operators – and new fire-door procedures that allow sliding shaft doors to retract within the wall cavity – have ushered in the age of practical power-operated elevator doors for the residential elevator. These advances allow for a smaller hoistway footprint and larger inside-cabin square footage. Additionally, along with other emerging technologies, they are paving the way for a boom in residential elevators that can be worked into new construction and even retrofitted into existing housing.

Gone is the need for the corridor space required by swing doors, or the shaftway space typically required of the traditional sliding elevator door. Gone are the pinching hazards of the collapsible gate, as are the days when home stair-climbing devices, lifts and mini-elevators were installed almost exclusively for the benefit of the ill and infirm. Gone also are the days when only the very rich have the space to accommodate a full-blown home elevator.

Instead, a home environment featuring a fully power-operated elevator cab, until now found only in the commercial world, is currently possible. In short, the residential elevator may be on its way to becoming as standard as many common features of today's homes.

While all this is a boon to homeowners and apartment dwellers, opportunities abound for the real-estate developer as well. In the luxury-apartment market, instead of one or two owner/tenant spaces on each floor, apartments can be duplexed and triplexed with residential elevators in each unit and 30-foot-high vista-view windows in each apartment. In any apartment building, there can be a reduction of floor space dedicated to the elevator and stair-core area. Best of all, by placing individual private elevators within the rented tenant spaces, a building's public areas can be minimized, while its percentage of marketable space is maximized.

Society's shifting demographics have evolved the elevator industry to an exciting new level. It is up to our industry to serve this need effectively and avail itself of this outstanding opportunity!



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