

Construction Codes and Regulatory Concerns

Old historic buildings were constructed long before the establishment of modern building regulations. When they undergo rehabilitation, therefore, they are likely to be subject to more restrictive building code requirements than were in effect when they were built. Some of these regulations create hardship to owners of historic properties. It is important to understand these potential problems before proceeding with rehabilitation.

Fire and panic codes

In the past, fires in one structure could result in entire blocks of downtown buildings being lost. As a result, over the decades stricter fire safety regulations have been enacted to give better protection. Although these regulations help in protecting property, their primary purpose is to allow for the safe exit of occupants.

Two means of egress: The primary goal of modern safety regulations is to provide for alternate means of egress (exit) for occupants of a building in case of fire. This means a building needs to include two ways out. Older buildings often had just one stairway connecting floors. When these buildings are updated, a second “fire-separated” stair must be added. The exception to this rule is small two-story buildings, which may require only one stairway.

Older commercial buildings (for instance, stores and hotels) often had a large open staircase leading to upper floors. Such a stair opening can draw fire rapidly upward like a chimney. Fire code regulations typically insist on the enclosure of such open stairs, often substantially changing the character of a historic interior.

Sprinkler systems: In older buildings, fire codes allow for some variance from their strictest provisions if developers install a sprinkler system—a thermally activated system of sprinkler heads that spray water when temperatures in a room reach a certain level. However, these systems can add considerable cost to even a small rehabilitation project and may also require the installation of a new main water supply line as well as new piping throughout the structure.

Other fire and panic code regulations may also apply, depending on how spaces are used and their occupancy level. All regulations should be interpreted by an architect or code official.

Accessibility

A movement to provide easier access to buildings for people with disabilities arose in the 1970s. People in wheelchairs and with other physical limitations often were not able to enter public buildings, restaurants, offices, and residential units. Accessibility (barrier-free) codes were adopted by many states, based on the principle that all persons should have full access to and use of buildings open to the public. With the passage of the Americans with Disabilities Act (ADA) of 1991, barrier-free laws were adopted nationally. Both new and rehabilitated buildings must now meet these requirements.

New buildings can readily allow for universal access in their initial designs, but barrier-free regulations often make the rehabilitation of older structures challenging. A common requirement is to provide a ramp for wheelchair access to an entry located a few steps above grade. Because older buildings often feature raised entrances with stairs, the construction of ramps has become common on historic buildings. The maximum permissible slope of such a ramp is 1 foot vertical for every 12 feet horizontal (if a handrail is used; without a handrail, the maximum slope is 1 foot for every 20 feet). For example, an entrance three steps above grade level requires a ramp as long as 24 feet. Obviously, maintaining the historic character of the front entrance while adding such a prominent feature is a significant design challenge for architects and owners of historic properties.

To provide universal access to all floors inside, the installation of elevators often is necessary. This can be an expensive proposition, sometimes prohibitively so, especially if no section of the older building allows for the vertical openings required for an elevator shaft. One solution is to include elevators in an

addition to the building that allows for such space. Sometimes, however, the rehabilitation of a historic building is prevented by the difficulty of satisfying access requirements.

Barrier-free codes also require spacious restroom facilities, with toilet stalls and open space large enough for the turning of a wheelchair. New buildings can be designed to accommodate these spatial needs, but the facilities of older buildings are usually much too tight, requiring tearing out walls and existing plumbing fixtures and installing new ones.

To the greatest extent possible, historic buildings must be made as accessible as nonhistoric or new buildings, but without threatening or destroying their significance. State Historic Preservation Offices can be helpful in determining whether full accessibility requirements would threaten or destroy a structure's significance and in finding acceptable alternatives. If full compliance is not possible, minimum requirements typically include all of the following:

- One accessible route from a site access point to an accessible entrance
- One accessible entrance
- If toilets are provided, one accessible rest room (may be unisex)
- Access to public spaces on the level of the accessible entrance; access to other public levels whenever practical
- Displays and written information located for viewing by a seated person