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ADAPTIVE RE-USE AND RETRO-FITTING

Description:
In today's climate of escalating development costs, many areas characterized by limited development space, and emphasis on sustainability, saving buildings from abandonment or demolition and incorporating a new use is a growing worldwide practice. Communities can use adaptive reuse to modify buildings for new uses while retaining their historic features. For example, an elementary school was converted into senior housing on Staten Island. Another school was converted to luxury apartments in Schenectady, New York. An old factory became an art studio in Virginia; a shuttered power plant is now the Gallery of Modern Art in London; an unused YMCA turned into law offices in Alabama; a church became a restaurant in Manhattan; a chapel was made into a modern home in The Netherlands; and a department store was converted into a community center and Whole Foods Market in Chicago. In many areas of this country and abroad, housing has been a particularly successful outcome of the adaptive reuse approach, with apartment buildings becoming the new use for nearly any type of abandoned building, including mills, hotels, opera houses, office buildings, and warehouses.

New York has underdeveloped or unused building stock in cities, towns, and villages across the State, and adaptive reuse of these structures for housing for seniors, people with disabilities, and families may be an ideal way to better utilize these resources. Renovation of existing buildings can provide a green, environmentally friendly, and universally designed alternative to new construction. Adaptive reuse provides an opportunity to bring a building up to current codes, to make the layout and building systems much more appropriate and efficient, and to contribute to revitalizing the neighborhood.

When considering adaptive reuse for housing, several considerations are critical:

Location: Are there basic services (bank, grocery, pharmacy, etc.) within a half mile radius of the site, or does the potential exist that these will be developed in the near future? The nationwide trend to create livable communities stresses the benefit of walkable distances for all citizens; but this is especially critical for those with disabilities or with aging-related frailties, for whom the ability or desire to drive an automobile has declined. In addition, walkable distances have become even more important as sustainability, energy savings, and decreasing use of fossil fuels have become a growing focus of communities' planning efforts.

Public transportation: Are there existing public transportation stops near the site? If not, can this be negotiated with the local municipality? Availability of transportation, as well as easily accessible transit stops, is important in an urban
area or a town center, but is an even more important planning consideration in suburban and rural areas, where public transit is limited or non-existent.

**Zoning:** It is imperative that the owner or developer check the zoning of the chosen site. Are different types of housing-use permitted, such as multi-unit, supportive housing, staff housing, or mixed-use housing? Will the local planning or zoning board entertain making the necessary variances to make the project feasible?

**Building's former use:** The prior use of the building is a primary issue for feasibility and the costs associated with adaptive reuse. While a building previously used as multi-family housing would be ideal, a former office building or factory space may be surprisingly appropriate, and would sometimes offer a bonus of higher ceilings and existing elevators.

After such general parameters have been investigated, an architect or engineer should inspect all physical aspects of the existing building. This process will help to establish a preliminary budget and cost estimate, informing the owner or developer of the building's condition and supporting the decision of whether or not to move forward. Specific items to be investigated, which have an impact on cost, include:

- The condition of the building (roof, windows, exterior walls, cellar floor slab, foundation, etc.), which should be assessed to determine the extent of renovation required;

- The quality of the existing structure, floor by floor, should be assessed to determine the need for upgrade or replacement. In the current economy, extensive replacement of an inadequate existing structure could be a prohibitive cost item;

- Interior walls and stairs should be assessed as these could remain in place if they are sturdy;

- Building systems (HVAC, plumbing, sprinklers, etc.) need a close look to determine if they can be upgraded or need complete replacing;

- Any existing building should be inspected for hazardous materials (asbestos, lead paint, etc.), and remediation should take place prior to the start of construction;

- Older buildings often lack elevators. New York State code allows some multi-family housing without elevators, but this is not an advisable scheme for senior populations, individuals with disabilities, or people with special circumstances, such as pregnant mothers or very young children. Adding elevators for multi-story buildings, then, becomes another cost consideration; and

- A building with historic significance can be a real asset both to the developer and to the community. If the building has achieved landmark status, costs for
renovation may rise due to approvals required from the local historic buildings commission. However, property values for such a building will also rise, making the building a more marketable asset. There may also be grants or tax credits for historic renovation available.

**Benefits:**
- An existing but underutilized asset can be used to full advantage in the proposed new use as housing for various community populations. This is especially true for the senior population, as the number of older people will increase for much of this century, and increasing numbers of older people are living longer lives.

- Adaptive reuse, as an approach for creating multi-family housing, including supportive housing for older people and other special needs populations, can be a catalyst for revitalizing neighborhoods and attracting additional development to towns and urban centers throughout New York State.

- Adaptive reuse can be successfully implemented in rural, suburban, and urban areas.

- There may be savings in retrofitting vs. new construction, depending on the age of the building and its condition.

- The existing structure is already in place, saving the cost of excavation, foundation, footings, and erection of the structural system.

- A community’s built heritage is preserved.

- Historic and older buildings offer character not found in newer construction.

- Federal, state and/or local funding may be available for revitalizing an historic structure or locating in an emerging neighborhood.

- Site location in an urban or town center with walkable distances reduces our nation’s use of fossil fuels and augments the health and fitness of residents.

**Impediments or barriers to development or implementation:**
- Neighborhood opposition to a higher-density use could cause delays in, or stop, a project's implementation.

- Initial community opposition can also be experienced when developing a mixed-use or mixed-income housing project, but usually proves to be an asset to all concerned when development is completed.

- Dated and often inoperable mechanical systems are expensive to replace.

- Mechanical systems that may be operable often need replacement due to new code requirements or due to new floor plan layouts.
- It is sometimes more costly to renovate than to build new, depending on the extent of renovation required. Benefits, however, often override this concern.

- Hazardous materials may exist in the building, and must be removed prior to construction.

- Existing low floor-to-floor heights, if this is the case, will restrict options for locating air conditioning ductwork.

- Zoning law or ordinance may prohibit the proposed use—requiring a use variance or other type of special zoning permission.

- The existing property may not have readily perceived areas for conversion into desired features, requiring more creativity in design— for example, the desire for a courtyard on the site of a senior housing project, to afford residents the opportunity for exercise without leaving the premises, could be accomplished through the development of a sky-lit atrium space.

- Local laws may not be designed to encourage innovative thinking in the reuse of buildings, especially for mixed uses.

**Resource—examples:**

- Mill River House Condominium, Stamford, CT: This age-integrated condominium, which also includes an affordable housing component, is a good example of an adaptive reuse project that is located in a formerly blighted town center area and which is serving as a catalyst for further development in the area. [http://www.adamsmillriverhouse.com/AMRH-PhotoGallery.html](http://www.adamsmillriverhouse.com/AMRH-PhotoGallery.html). [http://www.hannahrealestateinvestors.com/pprojects_MillRiver.html](http://www.hannahrealestateinvestors.com/pprojects_MillRiver.html).

- Patrolia Loft, Boston, MA: Architects designed this interior fit-out of an existing concrete-shell apartment for their client who uses a wheelchair. This project received the Alan J. Rothman Award for excellence in accessible design, as well as the 2007 AIA Housing Award. [http://www.boston.com/ae/theater_arts/articles/2007/04/15/a_design_that_is_indeed_lofty/](http://www.boston.com/ae/theater_arts/articles/2007/04/15/a_design_that_is_indeed_lofty/).

- K Lofts, San Diego, California: A mixture of very-low-income affordable and market-rate rental units on a 9,000 sq. ft. urban property, which integrated the adaptive reuse of a former convenience store and gas station on the property to minimize deconstruction; built at a cost of $82 per sq. ft. This project received the 2006 AIA Housing Award. [http://www.architectureweek.com/2008/0730/news_1-3.html](http://www.architectureweek.com/2008/0730/news_1-3.html).

- Swanton Elderly Housing, Swanton, VT: Built in 1910, the Swanton School was abandoned for school use and boarded up in the early 1990’s. In a mixed-use adaptive reuse project completed in 2000, the school was converted into senior

- The Wis Tavern Building, Chicago, IL: An old neighborhood tavern was renovated into a 3,800 sq. ft. private home for the owners, as well as offices for the owners' company, Smog Veil Records. This was the first Gold certified LEED-H home in Illinois. [http://www.jetsongreen.com/2007/11/wis-tavern-le.html](http://www.jetsongreen.com/2007/11/wis-tavern-le.html).

- Russell Boniface (July 8, 2008), "Historic Chamberlin Hotel Converts to Luxury Senior Apartments," *AI*Architect This Week: Design. Chamberlin Senior Apartments, Hampton, VA, an historic, storied hotel on Chesapeake Bay was converted to a 200,000 sq. ft. luxury senior rental community, which includes numerous amenities, plus housekeeping, transportation services, and a dining program. [http://www.druckerandfalk.com/seniorLiving/pr/071108HistoricChamberlinHotelConvertstoLuxurySeniorApartments.pdf](http://www.druckerandfalk.com/seniorLiving/pr/071108HistoricChamberlinHotelConvertstoLuxurySeniorApartments.pdf).

**Resource—written and web:**

- U. S. Department of Housing and Urban Development: [http://www.hud.gov/](http://www.hud.gov/). Using the search button, type in "adaptive reuse" to see an extensive list of successful experiences, and the derived benefits, of adaptive reuse projects in various states around the country.

- U. S. Department of the Interior: The Department's ten guidelines for the rehabilitation of historic properties. [http://architecture.about.com/od/preservation/a/historicrestore.htm](http://architecture.about.com/od/preservation/a/historicrestore.htm).


http://www.fmlink.com/ProfResources/BestPractices/article.cgi?GSA:1204b.htm. For more information, contact Carlos R. Escobar: (816) 701-3026; carlos.escobar@med.va.gov.


