

application of universal design concepts

■ By Michael Leite, P.E.

Universal Design calls for the construction and/or modification of living environments to make them accessible to individuals of all ages and abilities. Applying Universal Design concepts to real-world living spaces often requires careful planning and expert knowledge.

Most Universal Design modification projects involve the retrofitting of an existing space with all of its limitations, rather than the construction of a new space in which the designer has an empty palette. To be more affordable, the design must accommodate the specific needs and disabilities of the intended occupant, rather than meeting the needs of the general population. Expert designers can create customized, functional spaces that improve the lifestyles of occupants by following the principles of Universal Design.

The first consideration in creating a universally designed space is mobility. This involves the selection of flooring that allows the resident to move with-

out tripping and falling. It also includes the installation of grab bars in strategic locations to enable residents to get up and down and maintain their balance.

Lighting is also an important consideration when designing accessible spaces. Individuals with impaired vision often require special task lighting, in addition to quality general illumination. A thorough analysis can determine both the amount of light needed and the best light source. Different individuals need different light sources and varying light levels to achieve optimum vision.

Having addressed the issues of mobility and lighting, Universal Design specialists will next review bathroom fixtures and controls. The installation of a comfort height toilet with an integral bidet function can facilitate personal hygiene. The shower and bathtub should have accessible controls. Other fixtures, like the sink, should be positioned to allow residents to move about freely.

Universal Design principles can also improve functionality in the kitchen. Appliances should be selected based on

the user's physical limitations. This includes both the major appliances and the portable appliances. The design should be based on workflow in the kitchen, as well as personal safety considerations.

When designing a space that is accessible for all, the final consideration should be the general living area. Using a variety of sensors, remote controls and alarms can ensure the comfort and safety of residents. From heating and cooling controls to universal remotes and emergency response systems, these electronic devices are easy-to-use and can help simplify daily tasks.

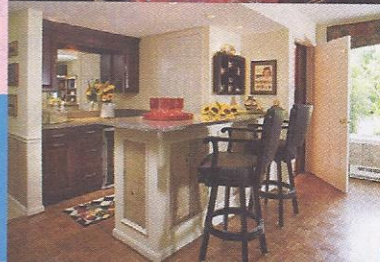
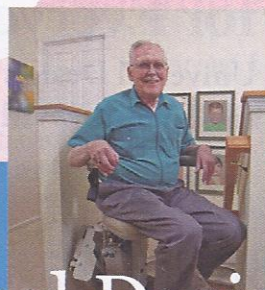
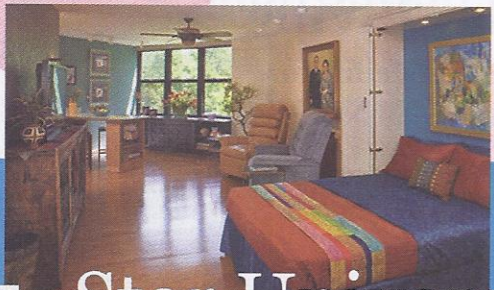
Applying the principles of Universal Design can make the home environment safer, more accessible and more enjoyable to live in. With the help of a design expert, most individuals can retrofit their existing homes to incorporate features that will enhance their daily life. **GRL**

Michael Leite is a Test and Evaluation Engineer for DigiFlight, Inc. and co-owner of M. Quinn Designs.

Aging in Place
Beautiful Accessibilitysm
Relocation and Staging
Lighting and the Aging Eye

30 **M. Quinn Designs**
INCORPORATED

703-354-6359
www.MQuinnDesigns.com



5-Star Universal Design

© Copyright 2012 M. Quinn Designs Inc. All rights Reserved