

# Carol Woods Cluster Home and Child Day Care Center

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**AIA** Design for Aging

## Project Information

EVALUATION SITE: ..... Carol Woods Cluster Home and Child Day Care Center

COMMUNITY TYPE: ..... Assisted Living and Child Day Care Facility  
24 Assisted Living Apartments  
Child Day Care for 64 Clients

REGION: ..... Mid Atlantic

ARCHITECT: ..... Dorsky Hodgson + Partners

OWNER: ..... Carol Woods Retirement Community

DATA POINTS:

Resident Room: ..... 378 gsf/assisted living

Total Area: ..... 804 gsf/assisted living apartment  
19,300 gsf/assisted living overall  
108 gsf/child day care client  
6,900 gsf/child day care overall

Overall Total Area: ..... 26,200 gsf

Project Cost: ..... \$175.57/gsf  
Total Project Cost: ..... \$4,600,000

Investment/ resident or client: ..... \$52,273

Occupancy: ..... 99% as of May 2002

FIRST OCCUPANCY: ..... May 2002  
DATE OF EVALUATION: ..... August 2007

EVALUATION TEAM: ..... Kevin Parries, Ingrid Fraley, ASID, Curtis Jennings, AIA  
Marvin Nisly, Tom Mullinax, AIA



## Introduction

Carol Woods Retirement Community is set in a park-like campus set on 120 acres of rolling woodlands in Chapel Hill, North Carolina. What started as a vision to develop “a retirement center that would be the envy of the industry, but affordable to many people – academic people, business people, professional people,” became a reality in the fall of 1979. Unlike most retirement communities, Carol Woods was founded by a small group of Chapel Hill residents who actually planned to live there, thus raising the stakes on personal commitment and involvement, a characteristic which continues today.

Life long learning is embedded deep within the community and residents access the programs offered by UNC and other Triangle area universities by auditing classes, attending campus workshops and seminars. Some residents even continue to teach.

As noted in their semi-annual publication “The Spirit of Carol Woods,” forward-thinking management with resident support can be credited with planning for the future while building on their past successes to expand the campus and maintain its attractiveness and vibrancy. Quoting from that publication: “A genuine spirit of community pervades Carol Woods and it is home to those who want to expand their horizons, preserve their individuality, to make a difference in the lives of others.”

Housing options at Carol Woods vary by type and location. Independent cottages dot the campus perimeter and create neighborhood clusters. For those who prefer closer proximity to the heart of the campus, apartments are available for independent living.

Apartments are also available for assisted living and the continuum of care is completed by the services of the health center and skilled nursing environments.

Of particular interest and the subject of this evaluation, is the “garden assisted living” complex, one of the most recent campus additions, constructed on the edge of Harkins Circle, the vehicular drive which loops around the campus.

While site and floor plans would suggest two group homes adjacent to a child development center, the programming for these two buildings would suggest otherwise.

What would be the characteristics of a “one size fits all” home? Could residents achieve and maintain maximum function and quality of life in the same environment while requiring different levels of support?

In response to these issues, the plans for the “garden” homes encompassed the most stringent design requirements of dementia care, with the thought that anyone requiring less assistance or supervision would find the same environment appealing and supportive.

Hence, the construction of two group homes with 12 resident rooms in each and with front entry porches confined to a secured courtyard and back of the house entries adjacent to the road. In addition, the secured courtyard shares space with a children’s daycare building having a capacity of 64 clients in the hopes of developing intergenerational connections between residents and children.

At the time of the evaluation, the two houses were occupied by assisted living residents, some with early stages of dementia. Although rooms were designed for single occupancy, couples were living there as well.

A distinct design goal of this project was to create a “state-of-the-future,” intergenerational center that would meet the high mission standards for this innovative retirement community which is known for their shifting of traditional care paradigms. A key guiding goal was that the project would create a unique resident focused setting. The intergenerational center is envisioned as a supportive care setting where domestic routines are maintained on a day to day basis, where residents can prepare food as an activity, where outdoors is just outside the door and the typical household arrangement of a home provides a familiar setting. The center of activity is the kitchen, dining, and living rooms that draw residents into the hub of home life. Adjacent to the home is a child development center and playground which is visible from the cluster home porches. The daily life of both programs will encourage frequent interaction.



### Designers' and Owners' Stated Objectives and Responses

*Objective: To create a familiar residential setting where residents can fulfill the need to be physically active and to find purpose in daily life.*

**Design Intent:** By creating two, twelve-suite cluster homes, a more intimate architectural scale is provided. Staff can tailor programming and daily activities around the needs and desires of a few residents instead of many. The design also has a variety of smaller rooms for those residents who prefer singular activities instead of group activities.

*Objective: The life of the home revolves around normal household activities and social life.*

**Design Intent:** The cluster home is designed similar to a house with public rooms facing a front porch and bedrooms being reached by short hallways. A key focus of the plan is the kitchen, which will be the center of most daily activities. The living room, dining room and kitchen have an open plan so residents can easily find this space and are encouraged to join in activities. Under North Carolina regulations, the amount of open areas to the corridor is restricted in a Residential Care Use Group. The decision was to construct the building under the Institutional Use Group Category, which allows much more flexibility for open areas when the building is sprinklered.

*Objective: Gardening is a major program element.*

Design Intent: A large “front” porch facing a pleasant courtyard is a key programming and design element. All household public spaces face the porch and the courtyard, which will offer residents an opportunity to participate in gardening activities. This front porch area is the residents’ front door into the cluster home while visitors and staff will enter from the back door which is discreetly located.

*Objective: Children and interested residents spend time together every day in the home, the garden and the child development center.*

Design Intent: The cluster home was carefully sited, so it views the play area for the children. Both the play area and the cluster home courtyard flow together to encourage daily interaction

*Objective: Staff moves around the home constantly engaging residents in the home life.*

Design Intent: While there is an enclosed staff area in each cluster home for paperwork, private conferences and a quiet retreat, staff will spend the majority of their time among the residents.

## Field Observations: Meeting the Objectives

*Objective: To create a familiar residential setting where residents can fulfill the need to be physically active and to find purpose in daily life.*

Field Observation: The arrival sequence was difficult for all evaluators due to the lack of directional guides and signs, and must certainly also be for first-time visitors. Once located, the view of the building, as well as the access to it, is actually the “back of the house.” There is no defined welcoming entrance and the door used was definitely the back door of the building both visually and psychologically. The covered driveway does enable residents to have shelter during inclement weather but the presence of parked scooters and golf carts takes up physical as well as visual space and they do not present a “home-like” image. The walkway to the back door is lined with storage and utility rooms which, on the day of the visit, were the source of some unpleasant odors.

The first room upon entering is the pantry in one building and a staff office which has been “reclaimed’ from its originally intended use in the other. The next space, “the welcome alcove,” housed the campus activity board and event schedule as well as the mail boxes for the residents. Further along, the first common space was visible along with the preparatory kitchen. It was at this point that the first familiar residential spaces appeared, being the kitchen, dining and sun porch. The kitchens were well appointed and the refrigerator could be easily accessed by residents. Meals were served buffet style and only the breakfast was prepared in this kitchen. Lunch and dinner was provided by the campus main commercial kitchen and brought to the houses by means of a cart.

The dining and sun porch spaces were interchangeable and in one house the residents had collectively decided to move their tables to the windows in order to have a better view of the outdoors and birds.

There is a parlor but it is too small for the residents to congregate for such activities as watching movies. It is being used as a storage area for resident possessions and as a staff area for paperwork and equipment. The diagonal juxtaposition of the living room and parlor provides some privacy to the apartment units, but in reality these spaces are nothing more than large “bump-outs” with open corridors and are routes that residents use to move throughout the house. They are difficult to furnish and to identify with a specific function, hence the conversion to staff and/or resident storage overflow. There is sadly not a single, larger space that could serve to be more functional for resident activities or other, multipurpose uses.



*Objective: The life of the home revolves around normal household activities and social life.*

Field Observation: Due to the shift in resident acuity, the residents were very complementary of the various services that they received on a daily basis. While residents can participate in kitchen duties, the overwhelming majority preferred their meals to be prepared and served. Housekeeping, maintenance, and laundry services provided by staff are preferred by residents so that they may have time to attend other campus programs.

*Objective: Gardening is a major program element.*

Field Observation: At the time of the evaluation in late August, there had been a prolonged drought in the North Carolina. As a result, the gardening was not perceived to be a major program element during the evaluation. However, there were raised planting beds designed in the courtyard for resident use and residents were welcome, under normal weather circumstances, to participate in both the tending of these raised planters as well as the grade level plantings.

*Objective: Children and interested residents spend time together every day in the home, the garden and the child development center.*

Field Observation: Both homes have courtyards with plenty opportunity for colorful plantings, including the raised planters, aside from the drought that was being experienced at the time of the evaluation. A gazebo stands tall in the center providing space for shaded and screened outdoor activities as well as the access to the child care play area. However, it also seems to be placed at the low point of the courtyards allowing water and dirt to collect and detract from the use of the courtyard. The play area for the children seemed to be of an insufficient size, lacking adequate storage for children's playthings and forcing the children to utilize the space in shifts. The addition of child care in close proximity

to these homes, however, provides a youthful side to the campus while providing a service to staff seeking day care for their children and the opportunity for intergenerational programs.

*Objective: Staff moves around the home constantly engaging residents in the home life.*

Field Observation: As a result of the change in resident profile, residents were engaged in the events scheduled for the community at large and were not isolated within their cottage or dependent upon house programs to support their interests. While the small scale of the households is certainly commendable, the interaction between residents and staff is somewhat diminished due to a resident acuity level differing from that which was originally conceived.

## Field Observations: Themes and Hypothesis

### *Creating Community*

The culture of education at Carol Woods is commendable and remarkably reaches out to include staff development as well as resident programs. In 2007 more than fifty trips were planned to attend off-site cultural events in the greater Chapel Hill community and grants were provided to staff for continuing education purposes.

For the residents at the Garden Cottages, their location off the main route on Harkins Circle makes these homes special. Although set apart from the core of the community, point-to-point transportation is easily arranged by a simple phone call to security and these residents are not shy about participation in any on site or off campus activities. In fact, residents were more likely to go to one of the central buildings to interact with other residents, than to socialize spontaneously among each other.

### *Making a Home*

To make the building homelike, the designers worked hard to only use institutional items when necessary and to be creative in their responses to local, state, and federal regulations. The concept of “furniture surfing” was implemented to meet state requirements for handrail placement. The success of the visually open living room and parlor is due to the presence of case goods, bolted to the floor, to which handrails had been attached on the backside.



Each resident room has a large bay or bow windows to provide substantial natural illumination. New residents are allowed to choose their paint colors and carpet, an important step in making this facility their home. However, the rooms seemed to be small and rather generic in their layout and available options for furniture placement. Although a window seat creatively provided an area for storage, this feature was not available in every room. The overwhelming complaint from residents, when interviewed by the evaluation team, was the lack of storage space.

The bathrooms were institutional in design and finish. Beside the sink and toilet was a bed pan washer, hose and controls. Most residents used it for storage of towels and washcloths. The shower heads are located on the side wall and often cause water to spill out into the bathroom.

While overall satisfaction remained high, residents did complain, when asked by the evaluation team, about details that were important to them. These included small closets, insufficient number of electrical outlets, lack of multiple phone jacks, lack of access to the internet, difficulty in operating the folding doors, seven day programming of the thermostat which is too complicated for resident use, noisy mechanical systems, lack of light control, lack of locks on their doors, lack of space for scooters, poor accessibility to the call system and lack of heat in the bathrooms. Other “wish list” items included by the residents were side lighting at bathroom mirrors for shaving, addition of tea kitchens that had microwave, refrigerator, and coffee maker, and accommodations suitable for couples.

It is important to remember that the buildings were designed to meet the needs of a special care population and that some of the above short-comings viewed by the current resident population, would indeed be more appropriate for a dementia care facility. Hence the discussion in the introductory remarks challenging the notion that the built environment can be designed to meet all of the needs of all of the residents, all of the time.

The residents and staff continue to be pleased with the overall design and programming and feel that these cottages are a great addition to Carol Woods. In any case, it offers an environment in which one can successfully age in place.

### *Regional and Cultural Design*

The original design was to meet the needs of a special needs population and those with dementia. At the time of the evaluation the building was not being used for this specific purpose, but for assisted living. The established goal of residents using the common spaces within the household a majority of the time was not realized by this differing group of residents. In contrast, a big concern for the residents was not enough room in the individual apartments. Had the original building program targeted the assisted living population that currently lives in these households, a differing design that provided less space in the common areas and more within the individual apartments, an ideal facility could have been established. However, as time passes and the needs of the residents change, these households will be ready to provide adequate support for their aging in place.

### *Environmental Therapy*

The forward thinking management of Carol Woods was visionary in their desire to design and build two group homes in conjunction with a child day care. Indeed, the adjacent child day care center appears to add positively to the life of the community. However, it also appears that the children do not necessarily have more of a relationship with the residents in the two houses than their interaction with the rest of the Carol Woods community.

### *Outdoor Environment*

Lack of water connections to easily hydrate plants, shrubs, and trees seemed to be the largest problem from a staff perspective. Porches were underused by the residents, especially during the hotter months. With their location focused on the courtyard of the child day care center, residents who desired a more peaceful experience were often in conflict with the children playing in the adjacent yard. The use of large windows is to be commended as they provide a connection to the outdoors that is clearly enjoyed by residents observing the deer, birds, and other wildlife.

### *Quality of Workplace and Physical Plant*

Resident assistants reported that they enjoyed working in this setting although they do rotate shifts and locations depending on overall campus staffing needs. For staff that came from the more institutional health center, it was an adjustment to encourage and support resident independence rather than “doing it for them”. For those with children, there are financial incentives in place to assist in their placement in the day care facility which is a very nice benefit for the staff.



## Operator Perspective

As noted in “The Spirit of Carol Woods” publication:

“ As Carol Woods looks to the future, our objective is to be pro-active in making changes to meet the demands of the market, while continuing to stay true in preserving our core values. The continued success of Carol Woods will rely on its forward-thinking management, board and residents who have demonstrated over time both a clear understanding of our market and a willingness to change with the times. If the past can be used as an indicator of the future, Carol Woods is certain to build on its reputation of being a community for people who wish to continue a meaningful lifestyle of contribution and engagement.”



## General Project Information

*Project Address:*

Carol Woods Retirement Community  
750 Weaver Dairy Road  
Chapel Hill, NC 27514

*Project Design Team:*

Architect:	Dorsky Hodgson + Partners
Associate Architect:	DTW Architects and Planners, LTD
Interior Designer:	Dorsky Hodgson + Partners
Landscape Architect:	Beckwith Chapman
Structural Engineer:	Neville Engineers
Mechanical Engineer:	Knott Benson Spring Engineers
Electrical Engineer:	Knott Benson Spring Engineers
Civil Engineer:	Coulter Jewell Thames Associates
Acoustics Consultant:	Dewey T. Lawson, Ph.D
Contractor:	Clancey & Theys Construction Company

*Project Status:*

Completion date: May 2002

*Project Areas*

*Overall Project:*

Project Element	Included in this Project			
	Units, Beds or Clients	New GSF	Total Gross Area	Total on Site or Served by Project
Apartments (units)				146
Cottages/Villas (units)				134
Senior Living/Assisted Living/Personal Care (units)				30
Special Care for Persons with Dementia – Assisted Living	24	19,300	19,300	24
Skilled Nursing Care (beds)				60
Children's Day Care (clients)	64	6,900	6,900	64
Pool(s) & related areas (users)	1			1 / 280

*Dementia-Specific Assisted Living Models:*

Project Element	New Construction		
	No. Units	Typical Size	
Studio Units	24	370	GSF
Total; All Units:	24	9,900	GSF
Residents' Social Areas (lounges, dining & recreation spaces):		5,124	GSF
Medical, Healthcare, Therapies & Activities Spaces:		2,838	GSF
Administrative, Public & Ancillary Support Services:		860	GSF
Service, Maintenance & Mechanical Areas:		578	GSF
Total Gross Area:		19,300	GSF
Total Net Usable Area (per Space Program):		14,580	NSF
Overall Gross/Net Factor (Ratio of Line 9/Line 10):		1.3	

*Child Day Care:*

Project Element	New Construction		
	No.	Size	
Play Room	4	1,108	GSF
Total		4,430	GSF
Social Areas (Lounges, Dining & Recreation Spaces):		1,200	GSF
Administrative, Public & Ancillary Support Services:		688	GSF
Service, Maintenance & Mechanical Areas:		582	GSF
Total Gross Area:		6,900	GSF
Total Net Usable Area (per Space Program):		5,400	NSF
Overall Gross/Net Factor (Ratio of Line 10/Line 11):		1.27	

*Parking:*

Type of Parking	For this facility			For other facility			Totals
	Residents	Staff	Visitors	Residents	Staff	Visitors	
Open Surface Lot(s):		7	11				NA
Lot(s) under building(s):							
Carpools or Garages:							
Underground Garage:							
Parking Structure:							
Totals:		7	11				NA

*Site Location:*

Suburban

*Site Size:*

Acres: 3.6

Square feet: 156, 816

Area of entire campus: 120 acres

*Construction Costs:*

*Source of Cost Data:*

Construction bids as of May 2001

*Total soft costs for this project:*

\$1,000,000

*Building Costs:*

New construction except FF&E, special finishes, floor and window coverings, HVAC and electrical	\$2,600,000
Renovations except FF&E, special finishes, floor and window coverings, HVAC and electrical	N/A
FF&E, and small wares	Included in above
Floor coverings	Included in above
Window coverings	Included in above
HVAC	Included in above
Electrical	Included in above
Medical equipment costs and FFE and window coverings	N/A
Total building costs	\$2,600,000

*Site Costs:*

New on -site	\$1,000,000
New off -site	N/A
Renovation on -site	N/A
Renovation off -site	N/A
Landscape	Included in above
Special site features or amenities	N/A
Total site costs	\$1,000,000

*Total Project Costs:*

*(including all fees and costs, except financing)*

\$4,600,000