



# Creating Restorative Settings: Inclusive Design Considerations

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The Elizabeth and Nona Evans Restorative Garden  
Cleveland Botanical Garden, Cleveland, Ohio

When designers turn their attention to special needs populations, there is a temptation to focus on particular, often restrictive aspects of the project rather than explore the expanse of possible experience. To think of design as providing for all people, it may help to look at health and ill health as a continuum. Some of us have severe restrictions or progressive decline while others have temporary problems or minor, “normal” mobility restrictions. These may range from being in a wheelchair with cerebral palsy to the neuropathy of aging, and from a sprained ankle to maneuvering a baby stroller. When we **design for those with disabilities**, we are, of course, designing for ourselves—or who we may become. In this context, it may be easier to project what we *want* to provide rather than what we *can’t* provide.

Public gardens increasingly seek opportunities to provide more inclusive garden experiences, specifically addressing individuals with special needs. While such opportunities may include programmed activities, such as horticultural therapy, the broader challenge is to accommodate the needs of all visitors in a context that enhances everyone’s enjoyment of the garden. One example of a garden that was created to accommodate the full range of the human condition is the Elizabeth and Nona Evans Restorative Garden in the Cleveland Botanical Garden (CBG).

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1100 Bergen Street Garden in Brooklyn shows the site in its neighborhood context.  
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Left:  
Window portal opening into the contemplative garden invites exploration.  
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The Elizabeth and Nona Evans Restorative Garden was completed in 2005 on a site created to honor the memory of Nona Evans, a young girl who died in 1958 while she was a student at Sarah Lawrence College. On the death of her mother Elizabeth, the Evans family asked that this lovely, mature “Reading Garden” be redesigned and expanded to provide a garden experience for those with disabilities and that it include space for horticultural therapy.

### **The Charrette**

The first step in this process was a design charrette, hosted by the Cleveland Botanical Garden. It brought together people interested in the garden’s design, use, and maintenance, as well as its plant collections, display, and education. Participants included the donor family, key members of the CBG staff including the garden’s first-ever horticultural therapist, and a local Cleveland landscape architecture firm that would be involved in the garden’s construction. Patricia Owen, who was CBG’s current horticultural therapist coordinated the event. Leading the charrette were four landscape designers: Martha Tyson, Vince Healy, Nancy Gerlach-Spriggs, and David Kamp. The charge was to gather and synthesize enough information to develop a design concept for the new garden.

The board of directors, staff, and donors agreed during the design charrette that the garden should be “beautiful, natural, lush, green; a setting that offers a range of opportunities, choices and experiences; a setting engaging and enriching for all who visited.” While thoughtfully creating a comfortable environment with a range of uses for all to enjoy, the garden was also to reflect the warm and welcoming spirit of Elizabeth’s own garden and terrace.

The charrette set the tone for the project through its collaborative atmosphere and overall vision. During the 2-day work session, important relationships, opportunities, and constraints were identified between the site’s unique characteristics, the locations for proposed activities, and the desired ambiance. The resulting concept design addressed these parameters through a strategy of creating three distinct garden settings.

Perhaps most important, the charrette addressed the new garden’s context. The garden’s 12,000-square-foot area was to fit quietly into the surrounding gardens of CBG as part of a cohesive experience and

not as a separate or special encounter. The result is a garden that sits comfortably in its surroundings. As the garden visitor enjoys magnificent views of the surrounding collections, so the surrounding gardens share views of this new, restorative garden.

The charrette also addressed the realities of the site. The space designated for the new garden had 6 feet of grade change and contained a mature plant collection. It incorporated an important view from the library and is located adjacent to what would become a busy dining terrace. Finally, construction would be coordinated with a major building renovation and expansion project under way.



The site plan reveals unique gardens for contemplation, learning and exploration, and horticultural therapy. IMAGE USED WITH PERMISSION BY DIRTWORKS, PC

## Design Development and Considerations

Under the direction of David Kamp, the landscape architecture firm Dirtworks, PC designed the garden based on the design strategy developed during the charrette. It responded to several parameters:

- The site's particular opportunities and constraints
- The specific physical and psychological needs of visitors
- The requirements of desired activities and levels of maintenance
- The protection of existing plant material and new plant acquisitions
- The creation of a setting that offers a range of opportunities, choices, and experiences

A close collaborative relationship between the botanical garden staff and the landscape architect were critical to achieving the Restorative Garden's sensitive and responsive design. Dirtworks worked particularly closely with CBG's horticultural therapist and director to identify critical considerations in the design, including program requirements, material selections, safety and privacy issues, and maintenance. This dynamic and productive collaboration was maintained through the project, allowing the designer to consider and incorporate refinements in a timely and cost-effective manner right through construction. For example, grade changes were made to walkways just prior to construction and later on, special stones with interesting textures, colors, and shapes selected by CBG were added to several stone walls.

## Design Considerations

Design considerations for the Restorative Garden were based on a simple objective: to provide opportunity and choice for visitors to engage with nature in their own way, on their own terms, and at their own pace. The task was to balance very specific needs with the **simple pleasures of being in nature**. The considerations extend a sense of welcome for every individual, regardless of ability. They offer a sense of familiarity as well as a sense of surprise and delight. The considerations are not intended to look forced or obvious. They are often subtle details, easily overlooked except by those who need them.

While some design considerations were specific responses to complement the garden's distinct settings and individual programs,

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the list below addresses general concerns and patterns that, taken together, help to shape an inclusive garden.

- Consider a range of physical limitations when determining the width of pathways, areas for features or activities, seating types and arrangements, and cues for the vision impaired. Visitors may use motorized vehicles, walkers, or wheelchairs and may have vision impairment, or strength, stamina, or mobility concerns. Throughout the garden, changes in pavement, texture, material, and gradient provide cues to note changes.
- Consider path materials for their durability, aesthetic quality, glare, and accessibility, balancing the need for slip resistance with the degree of texture to minimize fatigue. Path gradients were carefully calibrated to minimize fatigue and provide subtle places to pause and rest and enjoy a fragrance or admire a focal point. Using a paving system that incorporates native crushed stone and pine resin, the pathways provide a unified, natural looking, secure and smooth, low glare surface that connects the garden's various settings.
- Consider what accommodations are necessary to create a sense of welcome and conduct activities without distractions. Depending upon the physical, emotional, and developmental needs of a particular group of visitors participating in a program activity, consider the space needed by caregivers, support people, and volunteers, who might assist participants. Besides specific areas for activities, the garden has several places in which to welcome groups and to talk about a particular feature or activity. These places are generous in size and adjacent to—but outside of—general circulation allowing visitors to pass by (and perhaps listen in) without intruding.

### Three Distinct Garden Settings

One of the greatest challenges of this or any fully accessible garden is to provide for all of the just mentioned needs without an overwhelming amount of paving. CBG's Restorative Garden considers all of the above

while it remains first and foremost, a garden. It is a place where plants and the supporting elements of water and sky prevail.

The garden is composed of three settings, each with a distinct character and level of activity: one for quiet contemplation, one for individual exploration and teaching large groups, and one for horticultural therapy.

### **A Garden for Contemplation**

The Contemplative Garden serves as the entry point for all three garden settings. Its location adjacent a busy dining terrace requires clear separation. An 8-foot-high vine-covered wall screens the terrace and frames the entry. A “window” in the wall reveals the reflecting pool, magnolia, and lawn, hinting at what is beyond. The space is easy to comprehend and inviting to first-time visitors who discover smaller more private spaces within. This verdant, quiet garden is gracious and welcoming. It is lush; its colors calm and serene. The design reflects the proportion, scale, and fine detailing of the adjacent handsome modern limestone library. The four symbolic “walls” that contain this garden are the floor-to-ceiling windows of the library; an edge of mixed shrubs and two limestone walls; a low retaining wall with a fountain and pool; and the vine covered entry wall. A mature Yulan magnolia (*Magnolia denudata*) stands at the head of a long reflecting pool that sits in a panel of evergreen groundcover. The height of the pool in relation to the adjacent path was carefully considered to allow visitors to see reflections of trees and sky whether sitting or standing. Behind it a fountain flows from the top of the low wall into a basin. The width of the water channel, the distance it falls, and the depth of the basin combine to create a deep, soothing sound that softens nearby conversations. An elegant lawn panel is contained by large sandstone paving stones saved and restored from the original garden. The stone walk connects the entry to seating areas, water features, and an overlook with a view to a deep ravine.

Details were carefully considered to provide seamless accommodation as well as moments of delight. The lawn panel uses a species of grass, supine bluegrass (*Poa supine*), that provides accessibility to individuals in wheelchairs and walkers without the need for in-ground support systems. The horticultural therapist assists



Width, texture, the slope of paths; height of planting beds; and views through the garden are some design considerations that allow all visitors to feel safe and welcome.

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visitors to remove their shoes and explore the grass with their toes as they exercise their legs and feet. The path incorporates a raised edge that serves as a subtle guide for those with wheelchairs, walkers, canes and strollers. Large stone paving slabs are laid in a pattern that minimizes joints in the direction and location of wheelchair and walker wheels, thus minimizing the “bump” and fatigue of negotiating joints. An overlook incorporates a custom handrail to accommodate arthritic hands and Braille insets for the visually impaired. The insets feature poems given by friends of CBG and are on the backside of the rails for comfort. The location of the Braille behind the rail adds an element of surprise for those who discover them – both for individuals who read Braille and for those who don’t. Outside of the featured magnolia, seasonal color and fragrances in this garden are minimized, creating a relaxing setting with specific but limited sensory stimulation.

Railings with Braille inserts of poetry and garden descriptions.

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## **A Garden for Learning and Exploring**

Behind the Contemplative Garden's stone wall is a space with an unusual sense of intimacy. Intended for both individual exploration and group activities, the space is defined by a 6-foot-high stone wall designed in close collaboration with the horticultural therapist and director. It also represents a successful collaboration with the contractor in its detail, craftsmanship, and in the careful placement of interesting stones and planting.

The wall provides privacy and accommodates the grade change between the two gardens and is itself a participatory feature offering many opportunities for touching, smelling, and hearing. Selected native stones, a variety of plants with sensorial interest, and water features — a waterfall, pool, and water trickling over moss-covered stone — engage users whether they sit or stand. The sound of moving water is used strategically here as well. Falling in thin rivulets from the top of the wall into a shallow basin, the water creates a bright, lively sound to screen nearby traffic noise. Plants cascade over the wall and grow in niches. The wall itself steps in height to encourage exercise and develop motor skills while visitors engage in the simple pleasures of smelling and touching as they explore and enjoy this garden. One of the values of the wall and water elements is that it is part of the garden where vision impaired individuals can explore and discover plants independently. The configuration of the wall and water features also creates distinct microclimates providing cues with changes in humidity and temperature.

## **A Garden for Horticultural Therapy**

The space designed for horticultural therapy programs is dynamic. It is sunny, constantly changing, and overflowing with color, scent, and sound, emphasizing sensory stimulation. Therapy clients, some with severe disabilities, work with and enjoy carefully selected plants and activities. Health care professionals and other groups are welcomed in this area to learn about horticultural therapy, plants, and gardening. The general public also has opportunities to participate in programs here.

The organic, curved shapes of the raised plant beds offer generous and easily maneuverable spaces for individuals and groups. Participants have a choice of planter widths, heights, and special displays. Generous



work surfaces provide areas for tools and supplies. The higher raised beds have indented toe spaces so participants can be closer to work areas. Large individual planters enable several participants to work together while allowing easy access for the horticultural therapist, caregivers, and support people. One special feature enjoyed by all is the “Basil Walk”. This is a narrow walkway between raised beds containing a dozen varieties of basil that provide a long growing season and dramatic display with cascading plants of various heights and blooms. Visitors, whether walking or sitting in wheelchairs, have the same experience of fragrant basil at eye and nose level.

CBG provides horticultural therapy activities for individuals with cerebral palsy; aging populations with physical challenges or dementia; individuals with vision impairments; adults with severe and multiple physical challenges; autistic youths; and mentally challenged youths and adults. The dynamics of conducting and participating in a therapy activity in such a public setting was carefully considered and is another example of the collaboration between the garden staff and landscape architect. The use of planter walls and planted berms create interest and privacy from nearby paths, allowing the general public to enjoy this garden without distracting groups or activities.

## Conclusion

The Elizabeth and Nona Evans Restorative Garden is an integral part of the Cleveland Botanical Garden’s mission to blend education, social responsibility, cultural and environmental stewardship helping people of all ages, backgrounds, and abilities appreciate and benefit from the positive role that plants play in their lives. It educates and entertains visitors with sensory rich experiences and programs. It supports and extends the organization’s purpose by providing a setting for the collection and display of plants. And most important, the garden does these things discreetly, comfortably, for people of all abilities.

Woman and her guide dog  
both enjoy the aromas of  
the planted wall.

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