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During the process of becoming aware of the needs of those people with serious mental illness, it was pointed out to us by representatives of the NAMI Chapter of Cleveland that housing is a crucial and most urgent need in the area of northeast Ohio, especially around Cleveland. Much of this need is related to a general shortage of low income and affordable housing in the country as a whole, but more specifically for those with serious mental illness. This is still a residue from the time of institutionalization as the predominant housing model for this population. The integration of the fallout from this system still has not been fully addressed.

This survey brings to light a variety of examples of housing designed for this specific population and also shows that we have far to go in addressing the specific diagnoses of bipolar disorder, depression and schizophrenia in terms of supportive housing. In many ways, these parallel the housing needs for seniors and aging adults, and require a variety of care needs delivered at a single location. This population of mentally ill might very well adapt to these environments if they were legally open to receive them.

The Margaret Clark Morgan Foundation, in our efforts, hopes to provide an evolving guide and prototype that will highlight a new way of thinking about housing the severely mentally ill, and may serve and support others with the same needs. Many of the solutions for healing environments apply to all people, though often in our culture, those with a mental illness have been treated as less than human and provided less than standard housing environments. The reality is they need healing places - a need greater than the general population who can better cope with less than standard environments.

We hope, by this study, to provide awareness of the issue of housing for those with serious mental illness and initiate a thinking process that ought to be utilized when providing housing for this population.

Foreword by Suzanne Morgan
Overview: Best Practices and Design Guidelines

Living environments support people with severe mental illnesses in their paths to recovery. This document focuses on the design of housing to meet the unique needs of people with mental illness, including architectural guidelines, landscape components, and neighborhood planning strategies. Housing can and should be an important component in promoting mental health and helping people with mental illnesses regain control over their lives. An integrated multi-disciplinary design team of architects, landscape architects, mental health providers, service recipients and families can help to ensure that residential environments are designed to serve the needs of people with severe mental illnesses. The guidelines are intended to promote the most effective and therapeutic residential design strategies to support the healing and recovery process.

Research Methodology The Urban Design Center of Northeast Ohio (UDC) developed this document with input and guidance from the Margaret Clark Morgan Foundation. The design guidelines and best practices are based on a detailed literature search and a series of interviews with housing developers, mental health service providers, and clinicians. A bibliography and list of those interviewed is located in the appendix on page 32.

Housing Types The single most important way that housing can promote the recovery process is by normalizing the environment and integrating people with mental illnesses into the mainstream population. This is difficult to accomplish, as people with mental illness are a stigmatized group who are often isolated from the larger community. These guidelines are intended to promote the idea that people with mental illness are valuable, respectable human beings with much to offer, though suffering from illnesses that can be treated and possibly cured. Housing choices can play a critical role in changing perceptions about mental illness.

Efforts to create a normal residential environment for people with mental illnesses can take the form of a dispersed, scattered site development consisting of group homes and independent living apartments and condominiums. In this approach, housing for the mentally ill is fully integrated into the community and generally indistinguishable from housing for the general population. An alternative approach is to develop a con-
Part 1 INTRODUCTION

A concentrated facility, such as an apartment complex or a residential campus that is primarily or exclusively devoted to housing for people with mental illness. This approach is geared toward providing a therapeutic community that enables residents to get the services they need while developing skills to promote independent living. There are divergent opinions about which approach is better or more successful. This document has been prepared with the viewpoint that both approaches are valid, but there are different ways that each can achieve the goal of a normalized environment and reduced social isolation. It is beneficial to provide choices in housing because there is tremendous diversity among people afflicted by mental illness and an array of different types of housing are needed to accommodate the diversity of this population. Multiple levels of care are also needed since some people adapt better to congregate care while others prefer independent units and least restrictive environments appear to be most conducive to the recovery process.

Supportive housing combines residential accommodation with support services aimed at allowing people with mental illnesses to live as independently as possible. Supportive housing is an option for people who want more independence than an assisted living environment or a nursing home, but are unable to live completely on their own. Permanent supported housing is preferable to transitional housing because stability is helpful to the recovery process. The goal is to find the best match for each person and to provide wrap-around services that can be adapted as the his or her needs change.

Design Characteristics of Living Environments Many different terms are used to describe housing designed to improve mental health outcomes such as supportive environments, therapeutic environments, healing environments, life-enhancing design, evidence-based design, etc. We have chosen to use the term “living environments” because these guidelines emphasize environmental conditions that can support residents with mental illness to experience improvements to their health and life.

Location is a key factor in developing housing for people with mental illness, but architectural considerations and landscape features can also support the healing process. Housing should be designed to reinforce a sense of home and to de-emphasize the institutional aspects of residential facilities.
Gardens and other landscaped areas can provide places for socialization and contemplation, as well as opportunities for residents to exercise, garden or work. Architectural strategies and landscape design techniques can also be used to integrate housing for people with mental illness into the broader community and to provide opportunities for residents to interact with their neighbors.

Architecture, landscape architecture, and neighborhood planning decisions can only improve mental health outcomes if they are thoroughly integrated into therapy, treatment, and support services for residents. In this context, design considerations can help people with serious mental illnesses achieve their goals for living fulfilling and productive lives. These guidelines and best practices address a range of housing types and aim to make each housing alternative as successful as possible.
SCATTERED SITE or CONSOLIDATED HOUSING DEVELOPMENT

Scattered site housing works well because it avoids concentrating a large population of people with mental illness in one location. Also, scattered site housing is often indistinguishable from other housing in the neighborhood so residents may feel more like a part of the broader community. However, it is still possible for residents in scattered site units to feel socially isolated unless efforts are made to integrate these residents into their neighborhoods. Housing in dispersed locations may make it more difficult and expensive to provide services to residents. Group homes often address this issue by offering an array of services “in-house.” Group home residents typically have good access to services but also have less privacy and control than they would in more independent housing alternatives. Basic services, such as monitoring medical adherence, helping residents pay rent and utilities, finding in-home services to clean and cook, providing job coaching or assistance with shopping are among the support services that enable residents to live independently.

Consolidated housing development, in the form of a multi-unit apartment building, condominium complex, or residential campus can foster a sense of community among residents, provide greater flexibility and a continuum of care, and make it easier to provide support services since more residents are concentrated in one location. However, residents may feel stigmatized or isolated from the surrounding community, unless opportunities are available for them to interact with their neighbors through programming or more informal neighborhood interactions.

Either model can be effective, provided that services, outreach, programming and community integration are factored into the housing development.
Part 2  DESIGN GUIDELINES AND BEST PRACTICES

Residential campus with a variety of housing options—Kent, Ohio
(Coleman Professional Services)

Multi-unit residential complex (Community Housing Network, Columbus)
LOCATIONS within the REGION

People with severe mental illnesses live in all parts of the region and housing designed to provide support to this population should be similarly dispersed, with housing options in urban, suburban, and rural settings to accommodate the preferences of individuals.

*Urban locations* can be therapeutic if they have good access to public transportation, which can greatly enhance autonomy and independence for residents. Public transportation can provide access to employment opportunities for residents who are unwilling or unable to drive. Employment has been shown to have a strong therapeutic benefit for many people living with mental illnesses.

Urban locations are also more likely to have dense, mixed use developments enabling residents to walk to shopping, neighborhood parks, and other destinations, allowing for a natural and spontaneous integration between residents with mental illness and the surrounding community. Although dense, vibrant and convenient, food costs can be much higher in urban settings and often more entry-level jobs exist in the suburbs. Housing for people with mental illness is often concentrated in unsafe inner-city locations. A neighborhood where residents will feel safe is an important criterion to consider when locating housing for people with mental illness. Feeling unsafe in a neighborhood can undermine the recovery process and lead to poorer social functioning.

- A positive urban neighborhood is safe, accessible, and offers a variety of nearby amenities. These areas tend to have high real estate values and locating housing for the mentally ill in these locations may engender opposition from existing residents. However, the potential benefits of living in safe, vibrant, and well-connected neighborhoods may justify higher initial property acquisition costs for housing development.
- A negative urban environment is one with decayed infrastructure and buildings, high levels of unemployment and crime, limited job opportunities, and a concentration of people with social problems.
Urban locations that lack social support and shopping facilities, and are isolated from employment opportunities and civic amenities should be avoided. Unfortunately, much of the existing housing for people with mental illnesses is located in negative urban environments.

Suburban areas are also suitable for housing for people with mental illness, provided that public transportation is available or private transportation can be provided for residents who do not drive. Scattered site group homes, apartments, and condominiums can be developed in suburban locations. Residential campus facilities can also be developed in the suburbs, provided that adequate land is available.

Suburban locations may offer greater safety and less environmental stress (such as noise and congestion often associated with inner city locations). But “suburban neurosis” can occur if people relocate from more central areas and experience stress from social isolation, lack of convenient access to employment, and loss of familiar surroundings. Mixed land use models offer maximum potential for interaction between residents and the larger community.

- A positive suburban location is one that provides access to support services and employment and opportunities for community engagement. Programming can provide a level of integration with the surrounding community.

- A negative suburban location is one where residents feel stigmatized and isolated from the surrounding community or lack access to services, shopping, and employment opportunities.

Rural Locations The need for contact with living nature has been the object of much speculation and research. While there appears to be no conclusive support for the view that urban living as a whole is less healthy than life in the country, there are people who prefer a more rural residential setting. Rural locations are most suitable for residential campus environments that allow for the efficient provision of support services and reduce the risk of isolation for residents with mental illness. Mental health service providers and clinicians are largely concentrated in urban areas so access to adequate care and support can be challenging for people

Safe Haven—Cleveland, Ohio

Independent living—Kent, Ohio
in rural areas. A campus setting can provide mental health services and treatment internally for residents and on an out-patient basis, as needed, for residents of the surrounding community.

- A positive rural location is most often a residential treatment facility that offers a range of housing options, access to therapeutic and support services or services that travel to the resident, opportunities for productive work within the campus setting, convenient transportation, and engagement with the surrounding community.

- A negative rural environment is one that is isolated from treatment and support services and offers few opportunities for people with mental illnesses to interact with their neighbors.

Regardless of the location, housing for people with mental illness should focus on improving outcomes and supporting each individual’s goals for his or her recovery process. Urban, suburban, and rural locations each offer distinct advantages and disadvantages. Housing in each location needs to be geared toward providing a normalized environment for residents that is well integrated into the surrounding community, regardless of the location.
Architectural Guidelines

In designing housing for people with mental illness, it is necessary to have an understanding of residents’ basic human needs. In general, many of the design factors that contribute to increased well-being in populations with mental illness tend to be universal rather than specific, meaning that well-designed housing for people with mental illness is fundamentally the same as housing for the general population. However, there are several areas where residential design can be specifically tailored to address the unique needs of mentally ill, including:

1. Safety and durability
2. Functional criteria
3. Home-like environment
4. Personalization and individual choice
5. Privacy / opportunities for socialization
6. Reducing environmental stress
7. Community integration

Each of these topics is discussed in detail in the following sections.

1. SAFETY and DURABILITY

1.1 Interior design details such as lighting, hardware, and furniture represent a relatively small part of the budget, but they have an enormous impact on a building’s appearance and durability and quality of life. In selecting interior finishes, two principles are of primary importance: a material’s durability, and its contribution in creating a “homelike” atmosphere.

1.2 Furniture can be used as a weapon and although it should not be easy to lift or throw; it should not be too heavy to allow easy movement.

1.3 Laminated safety glass in group rooms can open up the interior and provide a visual connection to the outside.

1.4 Avoid the construction of blind corners
1.5 Door closers, latch handles and hardware should be residential in look, but of commercial grade.

1.6 Shatterproof windows, breakaway curtain rods, and tamper-proof electrical outlets are recommended.

1.7 Provide adequate internal bracing and blocking for toilet facility grab bars, wall mounted fixtures, accessories, and fixture controls.

1.8 Consider concealed sprinkler heads with covers to reduce tampering. Sprinkler system piping should not be exposed.

1.9 HVAC components, and access panels should be tamper-resistant.

1.9 Tempered glazing or safety glass should be used for window openings.

1.10 Wall surfaces should be easy to clean and repair, and suitable to the functions of each area.

1.11 Floor surfaces should be easy to clean and suitable to the functions of each area; non-skid surfaces should be installed at entrances and other areas subject to traffic when wet.

1.12 Vinyl composite tile (VCT) is the preferable flooring material due to its durability and ease of maintenance; carpeting and wood flooring are much more difficult to maintain. Area rugs can allow for personalization and are easy to remove and clean.

1.13 Smoke detectors are required by code. In kitchen areas, a smoke detector should be installed that is not directly above the cooking area or which is specifically designed for kitchens. Hard wired detection systems are preferable.

1.14 Residents should be given the greatest level of control and independence in accessing their own units but exterior cameras, key cards, and access restrictions for visitors are typically beneficial to residents because they provide a heightened sense of security and comfort.

1.15 Site lighting is important for walkways and parking lots; lights should lead from the front door to the end of the parking lot and/or sidewalk where residents are picked-up and dropped-off.
2. **FUNCTIONAL CRITERIA**

*For all housing types:*

2.1 The minimum door width for bedrooms and other rooms should be 3 feet wide.

2.2 Jamb clearances on the doorknob side need to allow for wheelchair access. All spaces should take accessibility onto consideration.

2.3 Residents need adequate storage space. A 5’ wide closet is the minimum size to meet the minimal storage needs of each resident.

2.4 Closet doors should be 8’ high to take full advantage of the storage in the upper part of the closet.

2.5 A small, separate broom closet is useful so that cleaning products can be separated from a resident’s clothing.

2.6 Kitchens in supportive housing units are often small. A small, separate area for food storage (pantry) is also useful.

2.7 Front loading washers and dryers are more accessible to residents who use wheelchairs. A laundry room should include at least some front loading machines.

2.8 Corridors should be laid out to allow for easy wayfinding.

2.9 Rooms need to be large enough so that residents are comfortable and do not feel claustrophobic. Post-occupancy evaluations of existing supportive housing indicate that 110-120 square feet of open living area per resident is a minimum standard to achieve.

2.10 Central housekeeping facilities and storage should be considered.

2.11 Stairways in prominent locations near entries promote physical activity by making it easier for residents to choose the stairs rather than an elevator.

2.12 A convenient waiting area, with a window that looks out onto the driveway or the street provides residents with a comfortable place to wait for a ride.

2.13 Provide opportunities for physical exercise. Many medications promote weight gain. Convenient exercise facilities reduce the risk of obesity and weight-related illnesses among residents.
Part 2  DESIGN GUIDELINES AND BEST PRACTICES

For apartments and single room occupancy (SRO) facilities:

2.14 The minimum size of an apartment should be approximately 235 square feet. 540 square feet is the maximum apartment size for supportive housing funded by the HUD 811 program.

2.15 Minimum ceiling height should be 7 feet 10 inches. A height of 9 feet is recommended.

2.16 Living and dining areas within a SRO unit should be separated so that a resident and guest can sit together without being in the “bedroom.”

2.17 Locate the bed so it is not visible from the entry door.

2.18 Locate the kitchen or kitchenette so it is not visible from the bed.

2.19 The kitchen or kitchenette should have a refrigerator adequately sized for storing and freezing one to two weeks worth of food, a conventional oven or a large toaster oven-broiler, or convection oven that can be placed on a shelf.

2.20 Storage cabinets should be provided for utensils, cooking implements, food and a separate storage area should be considered for cleaning supplies, vacuum, brooms, etc.

2.21 A 5’-6” wide by 7’-6” deep bathroom is a minimum.

2.22 A series of shelves for towel storage is recommended.

2.23 In order to maximize storage space, a vanity cabinet installed below the sink can be removed when necessary to make the bathroom ADA-accessible.

Following the idea that “good housing is good housing”, this 540 square foot unit is modeled after a new market-rate apartment located in Atlanta, Georgia.
2.24 As a general rule, there should be at least one parking space for each employee normally present during one weekday shift plus one space for every five beds. This ratio may be reduced when a facility is near public transportation and/or public parking. Many zoning codes require more parking than is needed and acquiring a variance is often difficult. Keeping parking spaces to minimum results in reduced costs for land and construction cost. These savings can be used to provide additional amenities facility-wide, increase the total number of residential units or add green space.

Additional capital dollars were raised to increase the unit size of this individual apartment to 650 square feet. Bigger is not necessarily better, but providing unit choice as well as location choice is beneficial. As more families are impacted by mental illness, consideration should be given to units that can accommodate families or how individual units could be renovated and joined.
Part 2  DESIGN GUIDELINES AND BEST PRACTICES

UNOBTRUSIVE CARE
Residents will not feel they are in a facility in which others are caring for them because the office is small and out of the way.

HEALTH
Residents will frequently use main stairs near entry and it will be healthy for them.

PREVIEWING
Residents will stop at the midway stair landing to decide if they want to join activity below.

SOCIAL EXCUSE
Residents will wait for the elevator as an excuse to be part of the activity in the central hallway.

SOCIAL MIX
Two-person units with baths will attract more active residents and couples, making the building seem less like a nursing home.

DROP-OFF WAITING
A window overlooking the car drop-off from inside will help residents feel at ease waiting inside to be picked up.

PROXIMITY
Because the entry is visible from Main Street, residents walking home will not feel it is a long walk.

HOMEINESS
Having an eat-in kitchen for group coffee will be an integral part of residents seeing the whole house as a “home”.

IDENTITY
The house “front porch” will be central to residents’ image of the building and will be used to describe it to others.

SUPPORT
One hot meal a day in a common dining room will enable residents to be independent the rest of the time with minimal help.

SHARED BACKSTAGE
Residents will use the living rooms of the old house extremely informally like their own apartment to wait for laundry to dry or to watch TV.

This modular furniture system allows flexibility in room arrangement as well as options for storage that can be personalized. Maintenance costs are reduced over time as individual pieces can be replaced when broken vs. replacing the entire piece of furniture. Photo provided by Jonathan Kirschenfeld Architect

from Inquiry by Design by John Zeisel
3. HOME-LIKE ENVIRONMENT

Housing for people with mental illnesses should have a home-like, non-institutional appearance since this type of atmosphere has been associated with enhanced emotional well-being. Use the home as a template; avoid the institutional model.

3.1 Housing should be residential in scale, compatible with community context, and friendly and approachable in appearance.

3.2 The entrance should transmit a sense of friendliness, human warmth, and emotional security. The entry should reflect the design standards and environmental quality that is carried through the entire facility.

3.3 Multiple windows with views of nature or neighborhood activity are a valuable design feature; corner windows can be used to capture views in two directions.

3.4 Bay windows allow light to enter the building from three directions also providing a more enhanced viewing platform.

3.5 Variations in window shape and placement (punched openings, corner windows, large windows, low sills) can be used to vary the amount and direction of light.

3.6 Corridors illuminated with natural light appear larger and wider.

3.7 Color specifications for corridors and individual units should be geared toward eliminating the “institutional look.”

3.8 Furnishings should reinforce a familiar, home-like atmosphere. Upholstered furniture should be included whenever feasible.

3.9 Porches and overhangs provide sun-control and create pleasant places to sit.

3.10 Offices and support areas should be small and out of the way to de-emphasize the institutional aspects of a residential facility.

3.11 An eat-in kitchen provides opportunities for information interaction and reinforces the home-like character of a residential facility.

3.12 Hard wiring individual apartments for cable, phone and internet increase residents opportunities for information and entertainment.
4. PERSONALIZATION AND CHOICE

People with severe mental illnesses have often experienced a loss of control in their lives. Restoring a sense of control and choice in terms of housing alternatives can have a therapeutic benefit. ‘A place of my own’ and ‘a space of my own’ are recurrent desires expressed by residents so it is beneficial to provide opportunities for residents to personalize their own living spaces to whatever extent is feasible. It is important to respect the preferences of prospective residents for safety and privacy.

4.1 Allow for personalization of individual units if individual residents have preferences about paint color, fixtures, or other changeable components of their living environment.

4.2 Units should be designed to be adaptable for different residents or for the changing needs of each resident at different ages and points in his or her healing process.

4.3 If possible, give residents a voice in the initial design process. Establish a residents committee or advisory board to help make decisions about the upkeep and enhancement of the facility.

SMOKING

A large number of people with mental illness smoke. The smoking rate in the general population is just over 20% (Glassman 1999), while the proportion of people with schizophrenia who smoke may be as high as 90% (Glassman, 1993).

People with mental illness may find good effects from smoking. Positive effects of smoking for people with mental illness include increases in alertness and enhanced concentration, reduced anxiety, tension and anger. Smoking may also help people with mental illness deal with stressful situations.

Many service providers and housing developers affirmed the reality of a high rate of smoking amongst client/members in the research phase of this paper. This is not to ignore the known medical complications that can be caused by nicotine addiction, nor advocate for smoking.

Building design can have an impact on personal choice for smoking while also playing a role in separating smokers from non-smokers, lowering the concentration of indoor air pollutants:
4.4 Increase the amount of outdoor air coming by bringing fresh air indoors mechanically.

4.5 Make sure individual apartments have operable windows and doors.

4.6 Consider attic fans.

4.7 Bathroom and Kitchen fans should exhaust directly outdoors to remove contaminants from the room where the fan is located. This also increases the outdoor air ventilation rate.

4.8 Individual outdoor porch areas give residents a place to smoke outside of their apartment, away from other residents and staff, creating an additional opportunity for personal choice.

4.9 Recently, there has been some suggestion that houseplants might reduce levels of some chemicals in laboratory experiments. Caution: over-watered plants, because of overly damp soil may promote the growth of microorganisms which can affect allergic individuals.

4.10 Special ventilation systems should be installed for any common area where residents are aloud to smoke indoors.

5. PRIVACY / OPPORTUNITIES FOR SOCIALIZATION

Facilities should be designed to balance residents’ need for privacy with their need for support. Appropriate support enables residents to live their lives productively and independently. Social support is an important factor in recovery from mental illness. Facilities should be designed to provide residents with opportunities for social and family interaction if they seek this kind of interaction. Design arrangements that blatantly promote interaction are less beneficial than those that allow residents to choose when and how to interact with others. Engagement is more effective than coercion.

5.1 Individual entrances for each unit are typically preferred over common entrances and hallways, because this enables each resident to choose when and if he or she will socialize with others. However, a common entrance and lobby can enhance security and provide opportunities for interaction.
5.2 A central place that is visually connected to all the main communal spaces provides an opportunity to create a powerful social nexus—one that connects to external and internal views of interesting activities, and provides access to food or snacks, proximity to a major circulation pathway, and comfortable seating.

5.3 Visible, open views to common spaces can reduce the feeling of surprise and help residents before they enter community spaces.

5.4 A common porch provides opportunities for socialization and informal interaction among residents, staff, and visitors.

5.5 A common computer room in many cases acts as a “hub” for a multi-unit facility and can increase resident socialization.

5.6 Include places where families can visit or gather informally.

5.7 Housing should be designed to promote residents to have a normal social life. People with severe mental illness usually retain their desire for romantic and sexual relationships. Housing should provide privacy to accommodate these kinds of relationships.
6. REDUCING ENVIRONMENTAL STRESS

Stress contributes to mental illness and can trigger psychotic symptoms. Limiting stress for residents’ lives can reduce the reoccurrence of symptoms but for healing to occur, residents need to develop skills for coping with stress. These skills are best developed as part of psychological treatment and therapy, rather than through architectural design features. Housing should be designed to reduce environmental stress and to provide comfort and security so residents can focus on the challenges of daily life and their recovery process. Familiarity, stability, and predictability are key components of stress reduction. Housing should be designed to accommodate residents throughout their recovery process, so they need to relocate as infrequently as possible. People with severe mental illnesses often suffer from personal difficulties related to primary changes in perception and thinking; building design needs to minimize additional sources of distortion such as echoes and light patterns in corridors.

Scientists have long known that the human body runs like clockwork, guided by a circadian system that responds to daily patterns of light and darkness. Along with this, Sleep deprivation is known to hinder a range of functions, including neurocognitive processes, such as learning and memory. It is believed through recent research that a lack of sleep affects the human emotional brain response to negative stimulation. The research suggests that a night of sleep may ‘reset’ the brain to better handle next-day emotional challenges; building design should accommodate and promote consistent, normalizing pattern of light and darkness.

6.1 Provide natural light in all areas of client/member occupancy, especially corridors. Large, low windows have been found to reduce delirium and paranoia.

6.2 Long corridors, especially those that create echoes, are discouraged because they can create perceptual distortions in some mentally ill people.

6.3 Long corridors may be color sequenced. In long corridors the end wall should always be color differentiated.

6.4 Shiny surfaces should be avoided. Mirror reflections of faces in glass partitions, glass doors, or other shiny surfaces may convince the resident that he or she is “seeing things.”
6.5 Patterns, especially on the flooring, such as checkerboard, lines, grids, etc. should be avoided.

6.6 Air conditioning is critically important in housing for people with mental illnesses. Research shows that high temperatures (above 90°F) impair mental performance and can lead to aggressive behavior.

6.7 Good air quality with fresh air and adequate ventilation is also necessary.

6.8 Ambient noise levels should be considered in determining a housing location because noise is a chronic environmental stressor that can influence the ability to process information and affect behavior.

6.9 Excessive noise can lead to increased aggression.

6.10 Using two layers of drywall on interior partitions makes them more durable and adds a layer of sound control.

6.11 All walls surrounding apartments from each other and from corridors and common rooms should be acoustically insulated and sealed.

6.12 Use insulated entry doors into individual apartments to reduce sound transmission.

6.13 The use of high-performance sound-absorbing acoustical ceiling tiles in individual units will prevent sound from bouncing off the ceiling to adjoining spaces.

6.14 Furniture design and layout can also be used to reduce sound transmission.

6.15 Ample natural daylight is beneficial because light appears to synchronize disturbed biological rhythms.

6.16 Lighting can be used to reduce the effects of seasonal affective disorders.

6.17 Soft, indirect, and full-spectrum lighting is recommended. Spotlight-type recessed lighting should be used sparingly and carefully placed so as not to focus directly on individuals.

6.18 Fluorescent lighting when used, should be an indirect light source.

6.19 Provide variety of light sources; table lamps, floor lamps, scone lighting, down lighting and indirect cove lighting.

6.20 Exercise can be an effective stress reliever; conveniently located exercise space promotes physical activity among residents.
7. COMMUNITY INTEGRATION

Numerous service providers and housing developers were interviewed in the preparation of this document. Their advice for working with communities is incorporated into the following list possible strategies.

7.1 When going through the housing development process, a specific approach should be tailored to each community; there is not a single best approach for community engagement.

7.2 Design with community involvement. Begin meeting with public officials and community residents when a project is in the planning phase, rather than waiting until a project is seeking final approvals.

7.3 It helps to let neighbors know who the housing will serve. It is often helpful to encourage neighbors to tour other sites.

7.4 Neighborhood residents often need to be educated on resident rights and fair housing laws, if they are resisting a housing project in their community.

7.5 The most effective way to achieve community support is to move forward with a project; neighborhood opposition will subside once the housing is in place, occupied and well maintained.

7.6 Continued involvement is important after construction is complete. One strategy is to give housing development an advisory board, including neighbors, consumers, and family members. An effective technique used by Community Housing Network (CHN) is to prepare a Good Neighbor Agreement where periodic neighborhood surveys are conducted to promote a good relationship between housing development and adjacent neighbors.

7.7 Community events and activities help to integrate residents with their neighbors. Providing opportunities for positive contact reduces the stigmatization and social isolation of people with mental illnesses.

7.8 Join and participate with local community development corporations. An ongoing relationship provides a vehicle for continuous education about housing for people with mental illness.
Part 2 DESIGN GUIDELINES AND BEST PRACTICES

For new construction:

7.9 Building designs should reflect the architectural vernacular and scale of the neighborhood to encourage integration and community acceptance.

7.10 Choose durable exterior materials such as brick, glass, and asphalt shingles, preferably in earth tones. These materials can help the building to blend with most residential neighborhoods, are easily maintained, and establish a warm, non-institutional look.

7.11 For larger buildings, break down facades into smaller components to give a multi-unit facility a house-like appearance.

7.12 Maintain the setback of adjacent properties so the new building(s) will have a similar relationship to the street edge.
8. STANDARDS BY HOUSING TYPE

While the previous guidelines address an array of issues and features to consider when designing housing for people with mental illnesses, and apply to all types of residential facilities. The following guidelines are more specific standards for different types of residential facilities.

Group Homes

8.1 No more than 16 people should live in a group home.

8.2 Each sleeping room must be directly accessible from a corridor or a common use activity room and have an exterior window.

8.3 Provide at least one accessible shower and toilet. 5% of restrooms should be ADA accessible.

8.4 Ideally, every room would have an individual restroom, without sharing. There should be a minimum of one toilet and lavatory for every four residents and one shower or tub for every eight residents. When facility serves more than four residents; separate accessible toilet facilities should be provided for each gender.

8.5 Provide at least 25 square feet per resident for dining, social, educational, recreational, and group therapy. There should be at least one room that provides privacy for interviewing and counseling of residents on an individual basis.

8.6 An office with adjacent apartment facilities should be provided for on-call staff.

8.7 Providing multiple group spaces within one group home can give residents more options for social interaction and the variety of spaces provides choices for residents, thus providing an increased sense of control.

8.8 The kitchen should have a designated area accessible to residents for snacks.

8.9 Laundry facilities should be provided in a room other than in the kitchen/dining areas.

8.10 When a facility serves children, provide a playroom and a secured playground area.

8.11 In facilities caring for infants and young children, all unused electrical outlets within 36 inches from the floor must be covered by an Underwriters Laboratories listed electrical safety cap.
**Part 2  DESIGN GUIDELINES AND BEST PRACTICES**

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**Apartment buildings**

8.13 Each apartment should include toilet and bathing facilities and living, sleeping, food preparation, eating areas, and storage.

8.14 Individual entries are preferable to a common entrance and hallway.

8.15 For additional safety, some developers have installed pull cords in each apartment, hard wired into EMS. Each unit should have an exterior light so that EMS can determine which resident is having an emergency.

8.16 Provide a community room for individual and small group meetings, family entertaining and parties.

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**Residential campuses**

8.17 Residential campuses should provide a range of housing alternatives from independent living to congregate care and other supportive options.

8.18 Residential campuses can be especially suitable for promoting community engagement and integration. Neighbors may be more willing to participate in activities and events within the controlled setting of a residential campus than more dispersed or informally organized housing facilities for the mentally ill. Simple strategies such as decorating for the holidays or conducting public lectures and other programming on the campus can be very effective in fostering relationships between residents and their neighbors.

8.19 In residential campus settings, staff play a larger role in normalizing the environment for residents. Staff and residents’ activities should be integrated as much as possible. As such, dedicated staff lounges should be avoided and shared dining areas, community spaces, and restrooms are encouraged.
Design Principles for Therapeutic Landscapes

Research has shown that access to nature has therapeutic benefits for people with physical and mental illnesses, but the extent of the benefit has not been directly quantified. Empirical evidence suggests that therapeutic environments can lead to improvements in self-reported positive and negative mood states, and psychological indicators such as reduced blood pressures and lower levels of stress hormones. Access to nature can also provide positive distractions for people with mental illnesses and exposure to nature may reduce stress and fatigue.

Gardens can be stimulating environments both mentally and physically and can be designed to provide a rich sensory experience. Sight tends to dominate, but touch, sight, sound, smell, and taste can all be addressed as each can play a significant role in maintaining health.

Careful planning is necessary when considering a garden, particularly daily and seasonal maintenance. If the intention is for residents to use and maintain the garden, remember over time as tenancy changes, not all residents will have the same interest.

1. **SAFETY and DURABILITY**

   1.1 Green space must be affordable to install and easy to maintain both for safety and therapeutic benefits. Use materials that are durable over time.

   1.2 Choose insect- and disease-resistant plant varieties to eliminate the need for pesticides.

   1.3 Consider drought tolerant and low maintenance species for all planting areas.

2. **FUNCTIONAL CRITERIA**

   2.1 Green space needs to be designed to accommodate the limitations of the users of the space.

   2.2 Paved plazas or courtyard gardens near dining areas are likely to be well used, since they can provide a welcome alternative to dining indoors. Consider planting trees to provide shade in these areas.
3. **HOME-LIKE ENVIRONMENT**
   3.1 Plant materials should dominate; paved surfaces should be balanced with abundant plantings.
   3.2 Furniture and other decorative items can add color when plants are lacking. Paving in red brick, golden gravel, yellow stone, or blue slate can harmonize or contrast with the chosen hue.

4. **PERSONALIZATION AND CHOICE**
   4.1 Provide opportunities for residents to maintain their own flower or vegetable gardens.
   4.2 Engage residents in decision-making about outdoor environments and landscaping.

5. **PRIVACY / OPPORTUNITIES FOR SOCIALIZATION**
   5.1 Create spaces for both group and solitary occupancy. A variety of spaces provides choices for residents, thus providing an increased sense of control.
   5.2 Create a planting buffer between people in the garden and any windows looking out into the garden to avoid a “fishbowl” effect.

6. **REDUCING ENVIRONMENTAL STRESS**
   6.1 Encourage exercise; walking as a form of exercise has been correlated with lower levels of depression and stress.
   6.2 Minimize intrusions; noise, smoke, and artificial lighting should be screened or buffered.
   6.3 Water features can be designed to fit any space and create soothing sounds.
   6.4 Minimize ambiguity; a clear garden layout will minimize confusion.

*Individual front door garden spaces were provided at this HUD 811 (Coleman Professional Services, Kent, Ohio)*
6.5 While familiarity tends to reduce stress, landscape design can provide opportunities to introduce novelty and change in residents’ environments; small changes can provide healthy challenges that aid in the healing process.

6.6 Scented plants within their garden can provide the benefits of aromatherapy.

6.7 Air quality is affected by dust, fungal spores, and pollen: these natural pollutants can contribute to allergies, but their effects can be reduced by appropriate garden management and careful plant selection.

6.8 Avoid poisonous plants and plants that are irritating to the touch.

7. COMMUNITY INTEGRATION

7.1 Green space can provide opportunities for programmed or spontaneous interaction between residents and their neighbors.

7.2 Where space permits, a community garden or a playground can be installed that is open and accessible to residents of the surrounding community. Consider areas for residents to picnic/barbecue.

7.3 Locating benches near the public sidewalk gives residents a place to sit when someone is picking them up and can help promote informal interaction with neighbors.

7.4 While rural areas in many parts of the region are rapidly becoming suburbanized, a residential campus in a rural setting can be designed to preserve the agricultural landscape. This can help to foster positive relationships between residents and their neighbors.
Currently, there is not enough housing to adequately meet the needs of people with severe mental illnesses. Too many people with mental illness live in neighborhoods where they do not feel safe. Increasing the supply of housing and expanding the range of alternatives are key to promoting recovery and better integrating this population into the broader community.

Design considerations can improve mental health outcomes if residents are willing and able to use their environments for positive change. Although many of these guidelines are based on empirical observations rather than measurable outcomes, a small architectural change can trigger a significant and innovative process. The idea of change as a continuous process rather than an exceptional event should be incorporated into the development of housing for people with mental illnesses. Cooperation between Architecture and Behavioral Health and Rehabilitation is essential if the environment is to be used to help achieve therapeutic goals. An interdisciplinary team of architects, administrators, and mental health professionals may serve as a central instrument for change.

In the past, housing was designed to isolate and care for people with mental illness and to reduce the occurrence of psychotic symptoms. The emerging model is geared toward recovery, not just caretaking. Better housing alternatives can promote independent living and support people with mental illnesses to live richer and more satisfying lives.

The preceding guidelines and recommendations were prepared with the input of housing developers, service providers, clinicians, and architects with experience in residential design for the mentally ill. Additional research is needed to determine the extent to which environmental factors can assist in the recovery process and provide therapeutic benefits.
Post-occupancy evaluations of housing can contribute to this research. Following John Zeisel’s model (*Inquiry by Design*, 2006), research can be conducted by observing physical traces and environmental behavior, conducting focused interviews with residents, and using standardized questionnaires to assess whether specific architectural features, landscape elements or planning factors contribute to healing and to gauge the relative impacts of specific interventions. Through direct observation, researchers can determine how residents use the spaces they live in and the extent to which their environment enables them to engage with the community around them. Interview questions can address public spaces, private units, and services. Focus groups can be used to supplement individual interviews. Surveys can be developed for residents, staff, families and visitors to assess the value and impact of specific design features. Over time, the body of knowledge about residential needs and therapeutic strategies will continue to grow, improving the range and quality of housing for people with severe mental illnesses.
Appendix

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INTERVIEW AND SITE VISITS

Paulla Gates - Coleman Professional Services, Kent, Ohio
• Toured 811 Apartment Complex on June 12, 2007

Steven Friedman, Executive Director - MHS, Mental Health Services, Cleveland, Ohio
• Toured two residential facilities – a 6 unit facility and a 45 unit facility

Steve McPeake – North Coast Community Homes, Cleveland, Ohio

Kathy Kazol, Terry Grdina – EDEN, Inc. Emerald Development and Economic Network, Cleveland, Ohio
• Toured new Madison Avenue Facility on Thursday May 17, 2007

Zev Goldberg – Bridgeway, Inc. – Living Miracles Program Facilitator
• Met with Dr. Goldberg in a work session with his support group.

Ron Rett – NAMI, Ohio Mental Health housing Leadership Institute, Columbus, Ohio

Carol Duncan – ICAN, Canton, Ohio

Nancy M. Docherty, Professor of Psychology, Kent State University – Kent, Ohio

Ken Fogle – Fogle Stenzel Architects, Cleveland, Ohio

Valeria Harper, Chief Operating Officer, Cuyahoga County Community Mental Health Board, Cleveland, Ohio

Jeannette Welsch, OHMH - Housing Coordinator, Columbus Ohio

Michael Jenks, Medina County ADAMH Board, Medina, Ohio

Kim Kehl, The Ohio Department of Youth Services

Dennis W. Langley, Architect - Weese Langley Weese, Chicago, Illinois

David B. Baker, Director, Archives of the History of American Psychology
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LIVING ENVIRONMENTS FOR PEOPLE
WITH MENTAL ILLNESS - BUILDING DESIGN PRINCIPLES

1. Carefully consider site selection to allow the greatest access to transportation, services and supports

2. Create a Home-like, non-institutional environment.

3. Treat circulation as a room with more than a connective role.

4. Create multiple public spaces to balance residents’ need for privacy and social interaction.

5. Provide maximum exposure to natural light for residents’ personal and group spaces.

6. Create visual connections between certain functions to maximize opportunities for social interaction and reduce environmental stress.

7. Design resident sleeping rooms/apartments to allow for the greatest flexibility of furniture arrangement, enhancing personal choice.

8. Carefully consider construction, material and finish selections to provide the greatest level of safety and durability.

9. Provide maximum fresh air exposure.

10. Carefully select HVAC systems.

11. Noise is a significant environmental stressor; provide acoustical separation through construction measures.

12. Provide meaningful outdoor open space for residents.

13. Provide opportunities for exercise and recreation.

14. Design the building(s) to fit into the surrounding context.

15. Create opportunities for client/family involvement in the design process.